MINNESOTA CODE OF AGENCY RULES

RULES OF THE DEPARTMENT OF HEALTH

1982 Reprint

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DEPARTMENT OF HEALTH

Chapter One: Duties of Local Health Officers and County Boards of Health

MHD 1	Local health officers.
MHD 2	County boards of health.

Rules Relating to Vital Statistics

7 MCAR S 1.007	General provisions.
7 MCAR S 1.008	Birth registration.
7 MCAR S 1.009	Alterations and amendments of vital records.
7 MCAR S 1.010	Replacement of birth records.
7 MCAR S 1.011	Delayed registrations.
7 MCAR S 1.012	Certification.
7 MCAR S 1.013	Access to records.
7 MCAR S 1.014	Death registration.
7 MCAR S 1.015	Burial -- transit -- removal permits.

Chapter Three: Rules Relating to Morticians, Funeral Directors, and the Disposition of the Dead

7 MCAR S 1.021	Resident trainee in mortuary science.
7 MCAR S 1.022	Morticians -- examination and license requirements.
7 MCAR S 1.023	Communicable disease deaths -- private funerals.
7 MCAR S 1.024	Regulations governing transportation of the dead.
7 MCAR S 1.025	Arsenical embalming fluids.
7 MCAR S 1.026	Outside container.
7 MCAR S 1.027	Opening of sealed caskets.
7 MCAR S 1.028	Ashes of the dead.
7 MCAR S 1.029	Serving of foodstuffs in funeral establishments.
7 MCAR S 1.030	Permit for disinterment and reinterment.
7 MCAR S 1.031	Sanitary condition of mortuaries.
7 MCAR S 1.032	Itemization and authorization to embalm.

Chapter Four: Hospital Administrator Regulations

MHD 36	Definitions, general provisions.
MHD 37	Responsibility.
MHD 38	Hospital administrative experience.

Chapter Five: Regulations for the Licensing, Maintenance and Operation of Nursing Homes and Boarding Care Homes

7 MCAR S 1.044A	Foreword.
7 MCAR S 1.044	Definitions, general provisions, issuance

	of licenses.
MHD 45	Administration.
7 MCAR S 1.046	General policies.
7 MCAR S 1.047	Personnel.
7 MCAR S 1.048	Records and reports.
MHD 49	Medical and dental services.
MHD 50	Staffing and services.
MHD 51	Care of patients and residents.
7 MCAR S 1.052	Furnishings and equipment for care.
7 MCAR S 1.053	Medications.
MHD 54	Linen service and laundry requirements.
7 MCAR S 1.055	Dietary service and sanitation.
MHD 56	Housekeeping.
7 MCAR 1.057	Schedule of fines for uncorrected deficiencies.
7 MCAR 1.058	Allowable time periods for correction.
MHD 62	Licensing requirements for the physical plant.
MHD 63	-- The site.
7 MCAR S 1.064	Patient or resident areas.
MHD 65	Supportive service areas.
MHD 66	Construction details, chutes and elevators.
MHD 67	Mechanical and electrical systems.
MHD 68	Definition of intermediate care facility.

Chapter Six: Regulations for the Licensing, Maintenance, Operation, and Construction of Hospitals

MHD 76	Definitions, general provisions, issuance of licenses.
MHD 77	Administration, medical staff, personnel.
MHD 78	Records and reports.
MHD 79	Child welfare provisions.
MHD 80	Laboratory and X-ray services.
MHD 81	Accommodations, furnishings and equipment for care.
MHD 82	Food service and food sanitation.
MHD 83	Sanitation.
MHD 84	Physical plant.
MHD 85	Mental and psychiatric hospitals.
MHD 86	Institutions for the mentally deficient and epileptic.
MHD 87	Tuberculosis hospitals.
MHD 88	Chronic disease hospitals.
MHD 96	Definition, general provisions.
MHD 97	General hospitals.
MHD 98	Specialized units of the general hospital.
MHD 99	Chronic disease hospitals.
MHD 100	Details and finishes, general requirements for all hospitals.
MHD 101	Structural work -- all hospitals.
MHD 102	Mechanical work -- all hospitals.
MHD 103	Electrical installations -- all hospitals.
MHD 104	Elevators and dumbwaiters -- all hospitals.
MHD 105	Refrigeration -- all hospitals.
MHD 106	Kitchen equipment -- all hospitals.

MHD 107	Laundry -- all hospitals.
MHD 112	Plans and specifications.

Chapter Thirteen: Minnesota Plumbing Code

MHD 120	Basic plumbing principles.
MHD 121	Definitions.
MHD 122	General regulations.
MHD 123	Materials.
MHD 124	Joints and connections.
MHD 125	Traps and clean outs.
MHD 126	Interceptors, separators and backwater valves.
MHD 127	Plumbing fixtures.
MHD 128	Hangers and supports.
MDH 129	Indirect waste piping and special wastes.
MHD 130	Water supply and distribution.
MHD 131	Drainage systems.
MHD 132	Vents and venting.
MHD 133	Storm drains.
MHD 134	Inspection, tests and maintenance.
7 MCAR S 1.135	Water conditioning contractors and installers.

Chapter Eight: Water Supply Regulations

MHD 136	Water supply and sewerage systems.
MHD 137	(a) Unsafe water connections.
MHD 138	Flouridation.
7 MCAR 1.139	Plumbing.
MHD 140	Water supply contracts -- municipalities must obtain approval.
7 MCAR S 1.141	Public swimming pools.
MHD 142	On land disposal facilities for sewage and other wastes from marine toilets equipped with retention devices.
MHD 143	Approval of laboratories performing bacteriological examinations of water.
MHD 144	Water purification ann filtration plants grants program.

Public Water Supplies

7 MCAR 1.145	General information and definitions.
7 MCAR 1.146	Maximum contaminant levels.
7 MCAR 1.147	Monitoring and analytical requirements.
7 MCAR 1.148	Variances and exemptions.
7 MCAR 1.149	Record maintenance; reporting; public notification.
7 MCAR 1.150	Water haulers.

Chapter Nine: Requirements for Lodging Establishments

7 MCAR 1.151	Lodging establishments.
7 MCAR 1.152	Sanitation requirements.
MHD 154	Rescinding of existing regulations.
7 MCAR 1.155	Initial and renewal license fees: license expiration dates.

Chapter Ten: Requirements for Food and Beverage Establishments

7 MCAR 1.161	Scope.
7 MCAR 1.162	Definitions.
7 MCAR 1.163	Sanitation requirements.
MDH 164	Rescinding of existing regulations.
7 MCAR S 1.165	Initial and renewal license fees: license expiration.

Chapter Eleven: Maternal and Infant Health

MHD 171	Private baby homes and infant homes.
7 MCAR 1.172	Rules relating to tests of infants for inborn metabolic errors causing mental retardation.
MHD 173	Reporting of maternal deaths.

Rules Relating to the Approval of Early and Periodic Health and Developmental Screening Programs

7 MCAR S 1.174	General.
7 MCAR S 1.175	Minimum standards to qualify for MDH approval.
7 MCAR S 1.176	Application procedures for EPS program approval.
7 MCAR S 1.177	MDH responsibilities in relation to applicants and approved programs.
7 MCAR S 1.178	Approved program responsibilities.

Chapter Twelve: Regulations on Ionizing Radiation

MHD 181	General provisions.
MHD 182	X-ray uses.
MHD 183	Radium uses.
MHD 184	Special uses of electric equipment.
MHD 185	Nuclear facilities.

Chapter Thirteen: Regulations Governing Mobil Home Parks and Recreational Camping Areas

MHD 187	Mobile home parks and recreational camping areas.
MHD 188	Initial and renewal license fees; license

expiration dates.

Chapter Fourteen: Regulations Governing Children's Camps and Migrant Labor Camps

MHD 201	Children's camps.
MHD 204	Migrant labor camp regulations.

Minnesota Water Well Construction Code

7 MCAR S 1.210	Definitions and policies.
7 MCAR S 1.211	Licensing.
7 MCAR S 1.217	Location of wells.
7 MCAR S 1.218	General protection of ground water quality and resources.
7 MCAR S 1.219	Other water sources, cross connections and storage reservoirs.
7 MCAR S 1.220	Standards for construction of wells.
7 MCAR S 1.221	Well casing seals and connections.
7 MCAR S 1.222	Pump installation.
7 MCAR S 1.223	Records and samples.
7 MCAR S 1.224	Plastic well casing.
7 MCAR S 1.225	Rule relating to explorers and exploratory borings.

Chapter Seventeen: Enclosed Sports Arenas, Vending Machines, Roller Towels

MHD 231	Roller towels.
MHD 232	Vending machines.
MHD 233	Enclosed sports arenas.

License Fees and Expiration Dates for Ambulance Services

MHD 234	Fees for examinations, licenses and copying records; license expiration dates.

Minnesota Merit System

7 MCAR S 1.235	Definitions.
7 MCAR S 1.236	Statement of policy and means of effecting policy.
7 MCAR S 1.237	Organization.
7 MCAR S 1.238	Classification plan.
7 MCAR S 1.239	Preparation of compensation plan.
7 MCAR S 1.2391	Selection of salary ranges by local public health authority.
7 MCAR S 1.2392	Adjustment of the official salary schedule of the Minnesota merit system.

7 MCAR S 1.2393	Negotiation of salary schedule.
7 MCAR S 1.2394	Administration of the plan; minimum rates of pay.
7 MCAR S 1.2395	Salary adjustments and increases.
7 MCAR S 1.2396	Merit increases.
7 MCAR S 1.2397	Salary decreases.
7 MCAR S 1.2398	Work-out-of-class.
7 MCAR S 1.240	Recruitment and appointment.
7 MCAR S 1.241	Applications.
7 MCAR S 1.242	Examinations; general characteristics.
7 MCAR S 1.2421	Notice of examinations.
7 MCAR S 1.2422	Conduct of examinations.
7 MCAR S 1.2423	Rating of examinations.
7 MCAR S 1.2424	Rating traing and experience.
7 MCAR S 1.2425	Oral examinations.
7 MCAR S 1.2426	Notice of examination results.
7 MCAR S 1.2427	Examination records.
7 MCAR S 1.243	Registers.
7 MCAR S 1.244	Methods for fillng vacancies.
7 MCAR S 1.2441	Requisition for certification of certain individuals.
7 MCAR S 1.2442	Certification methods.
7 MCAR S 1.2443	County-option certification.
7 MCAR S 1.245	Appointments.
7 MCAR S 1.246	Probationary period.
7 MCAR S 1.247	Promotions.
7 MCAR S 1.248	Transfers and demotions.
7 MCAR S 1.249	Separation, tenure and reinstatement.
7 MCAR S 1.250	Leaves of absence.
7 MCAR S 1.251	Service ratings.
7 MCAR S 1.252	Employee training.
7 MCAR S 1.253	Other employment.
7 MCAR S 1.254	Appeals and hearings.
7 MCAR S 1.2541	Appeals and hearings.
7 MCAR S 1.255	Inter-agency operations.
7 MCAR S 1.256	Miscellaneous.
7 MCAR S 1.260	Salary adjustments and increases.
7 MCAR S 1.261	Salary computation provisions for full and part-time employment, vacation and sick leave pay upon termination, partial pay periods, overtime pay and part payment from another source.
7 MCAR S 1.262	Appointment, promotions, demotions, transfers and reinstatements.
7 MCAR S 1.263	Local public health agency regulations.
7 MCAR S 1.314	Compensation plan (public health) -- 1982.
7 MCAR S 1.315	Provisions for computing monthly, hourly, less-than-full-time, bi-weekly, and four week salary rates.

Chapter Twenty: Communicable Diseases

MHD 316	Reportable diseases.
MHD 317	Quarantine placard -- responsibility for removal.

MHD 318	Cases occurring in hotels.
MHD 319	Failure to disinfect premises.
MHD 320	Milk and other food from infected premises.
MHD 321	Special precautions during epidemic.
MHD 322	Reporting of sick school children.
MHD 323	Transfer of patients.
MHD 324	Securing laboratory specimens from typhoid and other germ carriers.
MHD 325	Contacts.
MHD 326	Additional control measures for certain communicable diseases.
7 MCAR S 1.327	Tuberculin.
7 MCAR S 1.328	Employees showing positive reactions.
MHD 329	Standards for community venereal diseases control clinics.

Chapter Twenty-One: Rules Relating to the Termination of Pregnancy

7 MCAR S 1.351	Internal records of the ambulatory facility.
7 MCAR S 1.352	Reports to the commissioner of health.

Chapter Twenty-Two: Rules Relating to the Certification and Regulation of Health Maintenance Organizations

7 MCAR S 1.366	Authority, scope and purpose.
7 MCAR S 1.367	Definitions.
7 MCAR S 1.368	Contents of application.
7 MCAR S 1.369	Operating requirements and requirements for issuance of a certificate of authority.
7 MCAR S 1.370	Governing body; consumer members; enrollee participation; complaint system.
7 MCAR S 1.371	Annual reports.
7 MCAR S 1.372	Other provisions.
7 MCAR S 1.373	Open enrollment.
7 MCAR S 1.374	Periodic filings.
7 MCAR S 1.375	Improper practices.
7 MCAR S 1.376	Planning grants.
7 MCAR S 1.377	General provisions.
7 MCAR S 1.378	Offer of the dual option to employees.
7 MCAR S 1.379	Employer contribution for dual option alternative.
7 MCAR S 1.380	Dual option on a self-insured basis.

Chapter Twenty-Three: Regulations for Construction Equipment, Maintenance, Operation and Licensure of Supervised Living Facilities

7 MCAR S 1.390A	Foreword.
MHD 391	Definitions.
7 MCAR S 1.392	General provisions.
MHD 393	Physical plant.
MHD 394	Food handling practices.

MHD 395	Nutrition.
MHD 396	Health services.
MHD 397	Resident's health record.
MHD 398	Medication handling procedures.
MHD 399	Safety.
MHD 400	Clothing and laundry services.
MHD 401	Housekeeping services.

Freestanding Outpatient Surgical Centers

MHD 411	Legal authority.
MHD 412	Definitions.
MHD 413	Licensure.
MHD 414	Administration.
MHD 415	Administrative areas.
MHD 416	Patient treatment areas.
MHD 417	General service areas.
MHD 418	Medical gases and flammable liquids.
MHD 419	General maintenance.
MHD 420	Mechanical and electrical systems -- general.
MHD 421	Emergency electrical service.
MHD 422	Air conditioning, heating and ventilation.
MHD 423	Special exhaust systems.
MHD 424	Handling and disposal of solid waste.
MHD 425	General laundry requirements.

Rules Relating to Clean Indoor Air

7 MCAR S 1.441	Authority, scope and purpose.
7 MCAR S 1.442	Definitions.
7 MCAR S 1.443	General provisions.
7 MCAR S 1.444	Categories of affected places.
7 MCAR S 1.445	Application for waiver of the law.
7 MCAR S 1.448	Formaldehyde in housing units.

Chapter Twenty-Seven: Rules Relating to the Awarding of Grants and Subsidies for Community Health Services and Establishing Standards Under the Community Health Services Act

7 MCAR S 1.451	Purpose, scope, and definitions.
7 MCAR S 1.452	Availability of funds and application process.
7 MCAR S 1.453	Review and disposition of applications.
7 MCAR S 1.454	Administration.
7 MCAR S 1.455	Special rules authorized by the act.
7 MCAR S 1.457	Family planning special project grants.

Rules Relating to the Maternal and Child Nutrition Act of 1975

MHD 461	General purpose and definitions.
MHD 462	Procedures and conditions for obtaining a

grant.
MHD 463 Duties of grantees.
MHD 464 Miscellaneous.

Chapter Twenty-Eight: Rules Relating to the Minnesota Hospital Rate Review System

7 MCAR S 1.471 Scope.
7 MCAR S 1.472 Definitions.
7 MCAR S 1.473 The Minnesota hospital rate review system.
7 MCAR S 1.474 Report requirements.
7 MCAR S 1.475 Experimental alternative reporting requirements.
7 MCAR S 1.481 Administrative procedures.
7 MCAR S 1.487 Investigations, analysis and review standards.
7 MCAR S 1.496 Approval for operation of the system.
7 MCAR S 1.504 Commissioner of health determination of allowable increase limit.
7 MCAR S 1.505 Acceptable increases in hospital gross acute care charges: exemptions from hospital rate review.
7 MCAR S 1.509 Fees.
7 MCAR S 1.510 Official offices.
7 MCAR S 1.511 Severability.

Chapter Twenty-Nine: Rules Relating to the Operation of Health Facilities Grievance Mechanisms

7 MCAR S 1.521 Applicability.
7 MCAR S 1.522 Definitions.
7 MCAR S 1.523 Minimum standard.
7 MCAR S 1.524 Procedural requirements.
7 MCAR S 1.525 Patient complaints.
7 MCAR S 1.526 Reports.
7 MCAR S 1.527 Schedule of fines.
7 MCAR S 1.531 Collection of information relating to health manpower.

Chapter Thirty: Human Services Occupations

7 MCAR S 1.536 General.
7 MCAR S 1.537 Identification of occupational groups, questionnaire contents, and processing priorities.
7 MCAR S 1.538 Regulatory decision process.

Registration of Emergency Medical Technicians

7 MCAR S 1.541 Purpose and definitions.
7 MCAR S 1.542 Registration requirements; career progression; diciplinary actions.

7 MCAR S 1.543 The Emergency Medical Technicians Advisory Council.
7 MCAR S 1.546 Purposes and definitions.
7 MCAR S 1.547 Registration requirements; career progression; disciplinary actions.
7 MCAR S 1.548 The Environmental Health Specialist-Sanitarian Advisory Council.

Basic and Advanced Life Support Transportation Services

7 MCAR S 1.601 Definitions.
7 MCAR S 1.602 Applications for licensure.
7 MCAR S 1.603 Standards for operation of basic life support transportation services.
7 MCAR S 1.604 Standards for operation of advanced life support transportation services.
7 MCAR S 1.605 Standards for the operation of scheduled life support transportation services.
7 MCAR S 1.606 Life support transportation services operated by a nonprofit entity and limited exclusively to providing service by contract for special events and meetings.
7 MCAR S 1.607 Life support transportation services provided by an employer for the benefit of its employment.
7 MCAR S 1.608 General provisions.
7 MCAR S 1.609 Emergency care course and emergency care refresher course approval.
7 MCAR S 1.610 Documentation.
7 MCAR S 1.611 License fees and expiration dates.

Chapter Thirty-One: Rules Relating to the Services for Children with Handicaps and Adults with Cystic Fibrosis and Hemophilia for Eligibility, Cost-Sharing and Reimbursement

7 MCAR S 1.651 General.
7 MCAR S 1.652 Applicant eligibility for diagnostic evaluation.
7 MCAR S 1.653 Applicant eligibility for treatment services.
7 MCAR S 1.654 Application and cost-sharing for applicant(s).
7 MCAR S 1.655 Reimbursement for service(s).
7 MCAR S 1.656 Administrative review procedures.
7 MCAR S 1.657 Responsibilities between SCH and service providers.

Rules Implementing, Enforcing, and Administering the Minnesota Certificate of Need Act

7 MCAR S 1.661 General provision.
7 MCAR S 1.662 Determination of applicability and waivers.
7 MCAR S 1.663 Review process, procedures, and criteria.

7 MCAR S 1.664	Post determination actions.
7 MCAR S 1.665	Applications from health maintenance organizations.
7 MCAR S 1.701	Licensure fees for hospitals, nursing homes.

MINNESOTA STATE BOARD OF HEALTH

CHAPTER ONE: MHD 1-6

Duties of Local Health Officers and County Boards of Health

MHD 1 LOCAL HEALTH OFFICERS The health officers of cities and villages, and the medical health officers of townships shall assemble at the call of the State Board of Health once a year to discuss general sanitary problems and to present at such conferences the special sanitary needs of their individual districts.

MHD 2 COUNTY BOARDS OF HEALTH

(a) The several county health officers shall make quarterly reports to the Minnesota State Board of Health as to the general sanitary condition of their counties. such reports bearing especially upon matters relating to communicable diseases. Special attention must be given to the reporting of rabies and glanders.

(b) The several county health officers shall keep close watch over apparent epidemic or endemic diseases existing within their jurisdiction, and if a question arises as to the proper care of such diseases, they shall notify the secretary of the State Board of Health in order that an investigation may be made.

(c) If a county health officer has knowledge of, or a reasonable belief that the returns of births and deaths for his county are not being made as required by law, he shall immediately report such fact or suspicion to the secretary of the State Board of Health.

(d) The several county health officers shall note the condition of slaughter houses, rendering establishments, starch factories and paper mills within their jurisdiction, and shall report such conditions to the secretary of the State Board of Health from time to time, as necessary, or upon the request of said secretary.

(e) County boards of health shall at all times bring to the attention of the secretary of the State Board of Health any conditions which they may deem in need of sanitary regulation.

(f) The county health officers shall assemble at the call of the Minnesota State Board of Health once a year to discuss general sanitary problems and to present at such conferences the special sanitary needs of their individual districts.

(g) County health officers shall make such investigations and reports, and obey such directions relating to sanitary problems, as shall be prescribed from time to time by the State Board of Health.

(h) Upon the application of not less than five (5) county health officers, the State Board of Health shall call a special conference to discuss special or local sanitary problems, the time and place of meeting to be determined by the State Board of Health.

MHD 3-6 Reserved for future use

RULES RELATING TO

VITAL STATISTICS

7 MCAR § 1.007 General Provisions.

A. Definitions.

1. "Live birth" shall mean the complete expulsion or extraction of a product of conception from his mother, irrespective of the duration of pregnancy, which after this separation shows any evidence of life, such as breathing, beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether the umbilical cord has been cut or the placenta is attached. Each product of such a birth shall be considered liveborn.

2. "Fetal death" shall mean death prior to the complete expulsion or extraction of a product of conception from his mother, irrespective of the duration of pregnancy. Death after such separation is indicated by the absence of any evidence of life, such as breathing, beating of the heart, pulsation of the umbilical cord, or definite movement of the voluntary muscles.

3. "Delayed registration" shall mean a certificate of birth or of death which is filed 1 or more years after the date established by law for such filing.

4. "Date filed" shall mean the date on which a certificate of birth or of death, acceptable for registration under the provisions of the vital statistics act and the rules promulgated thereunder, is first received and subscribed by a local registrar of vital statistics.

B. State Registrar to maintain agreement of records. It shall be the duty of the State Registrar to ensure that the record on file with the local registrar of the district in which a birth or death occurred agrees with the original of the birth or the death certificate in his office.

C. Time of birth or of death, procedure for recording. All references to time on vital records shall refer to the time in effect when the event occurred.

D. Providing information. Anyone possessing information concerning a birth, death, or fetal death shall furnish this information when requested by the State or local registrar. No person shall furnish false information in the preparation or the alteration of any vital record or any record used with the burial or the disposition of a human body.

E. Falsified records. The State Registrar may cancel a falsified record during the first 90 days after filing, provided that a correct certificate is filed in in its place.

F. Local registrar to keep his files in order. The local registrar shall maintain his files of birth and of death records in a form that permits him to immediately locate any record required by the State Registrar. The local registrar shall file and date all birth and all death certificates acceptable for

registration immediately upon their receipt. Local registrars, other than clerks of District Court and of the cities of Minneapolis and St. Paul shall record them within 3 days in the manner prescribed by the State Registrar, and transmit these certificates to the clerk of the District Court of the county in which the birth or death occurred.

G. Preparation of certificates. Each birth and death certificate shall be legibly and neatly prepared, preferably typewritten, or if handwritten using a black permanent ink. Each form shall be as complete as possible. The registrar to whom a certificate is submitted shall examine the certificate. He may refuse to accept for registration any birth or death certificate which is incomplete, inaccurate, illegible, or mutilated. When a certificate is unacceptable, the person responsible for the original filing shall prepare another certificate acceptable for filing, and submit it to the local registrar within 24 hours.

H. Determination of place of occurence. Whenever a birth, a fetal death, or a death occurs in a moving conveyance, the event shall be considered to have occurred at the place where the child, or the body is initially removed from the conveyance.

I. Transfer of record custody. Upon the written request of the State Registrar, any local official, or other person having custody of any official birth, death, or fetal death records (except as required by the Vital Statistics Act) shall transfer them to the State Registrar, or to the clerk of District Court, as appropriate.

J. The clerk of the District Court of each county and the local registrars of the cities of Minneapolis and St. Paul shall prepare a transcript of birth and death certificates received by him for births and deaths occurring in his registration district on which the place of residence of the mother of a child or that of the decedent is shown to be in another registration district of the state and, upon being satisfied that they are correct, shall immediately transmit such certified transcripts to the local registrars of the registration district shown on the original birth and death certificates to be the place of residence of the mother of the child or of the decedent. But, in any event, he shall transmit such certified transcripts to the local registrar of the registration district of residence not later than the 11th day of the following month. All such certified transcripts shall be filed and indexed. The facts appearing thereon shall be recorded in the registration district birth and death record as provided for original certificates by the Vital Statistics Act and the rules promulgated thereunder, which shall constitute a legal birth and death record. A certified copy of the facts contained in such record shall be considered for all purposes the same as the original certificate.

K. Transmit to State Registrar. On the 11th day of each month the local registrar of each county and of the cities of Minneapolis and St. Paul shall transmit to the State Registrar all original birth and death certificates received by him on or before the 10th day of that month for births and deaths which occurred during the previous month.

L. Subregistrars. Licensed morticians designated by the State Registrar to receive death certificates for filing, to issue burial permits, and to issue permits for the transportation of dead bodies or dead fetuses within a territory designated by the State Registrar shall be known for purposes of these rules as subregistrars. Subregistrars shall perform duties as prescribed by these rules.

M. Certificate forms. The form of birth and death certificates shall be determined by the commissioner. The form and use of such certificates shall be subject to the provisions of the Vital Statistics Act and these rules.

N. Fees.

4295-4328

1. Effective January 1, 1982, the fee for the issuance of either a certified copy of a birth, death, or marriage record or a certification that the record cannot be found shall be $5. No fee shall be charged for a certified copy needed in connection with service in the armed forces or the Merchant Marine of the United States or in the presentation of claims to the United States Veterans Administration or the official veterans administration of any state or territory of the United States or for any copy needed by the commissioner of public welfare in connection with the needs of state wards. No fee shall be charged for verification of information requested by official agencies of this state, local governments in this state, or the federal government.

2. The fee for the replacement of a birth certificate shall be $5.

3. The fee for the filing of a delayed registration of birth or death shall be $5.

4. The fee for the alteration, correction, or completion of a birth or death certificate when requested more than one year after the filing of the certificate shall be $5.

5. The fee for the verification of information from or noncertified copies of a birth, death, or marriage record shall be $5 when the applicant furnishes specific information to locate the record. When the applicant does not furnish specific information the fee shall be $8 per hour for staff time expended. Specific information shall include the correct date of the event and the correct name of the registrant.

7 MCAR § 1.008 Birth Registration.

A. Birth certificates – filing requirements.

1. A Certificate of Live Birth must be filed for every live birth.

2. The physician or other person operating under the supervision of a physician in attendance at the birth, or if not so attended, one of the parents, shall within 5 days subscribe and file a certificate of birth on a form prescribed by the commissioner for that purpose, with the local registrar of the

district within which the birth occurred.

3. The birth certificate shall be as complete as possible under the circumstances; however, in every case except for a foundling certain minimal information shall be required.

a. Date and place of birth.

b. Maiden name of mother.

c. Full name of father (except for out-of-wedlock births).

d. Signature of certifier.

4. If neither parent of the newborn child whose birth is unattended as above provided is able to prepare a birth certificate, the local registrar shall secure the necessary information from any person having knowledge of the birth and prepare, record, and file the certificate.

B. Confidential medical supplement. The confidential medical supplement to the birth certificate shall be completed and filed within 5 days after birth with the State Department of Health by the physician, or other person operating under the supervision of a physician in attendance at the birth. If not so attended, one of the parents shall within 5 days after birth complete and file the supplement.

C. Monthly hospital report. On or before the 10th day of each month, the hospital administrator shall submit to the State Registrar, on a blank provided by or approved by the commissioner for this purpose, a report of all births, deaths, and fetal deaths occurring in his institution during the previous month.

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D. Information confidential. No member of the hospital staff or employee of the hospital shall give information regarding a maternity patient or her child to anyone except an authorized representative of the commissioner or the commissioner of public welfare when the birth occurred out-of-wedlock.

E. Disposition of fetal remains. When a fetal death occurs in a hospital and the remains are cremated or disposed of by some other means within the hospital, the hospital administrator or other person responsible for this disposition shall be responsible for the preparation and the filing of the fetal death report.

F. Legitimacy.

1. When the natural father of a child was married to the natural mother at the time of birth or of conception, the birth of the child shall be recorded as legitimate, even when this marriage is established later to be null or bigamous. The birth of a child to a married woman shall be recorded as legitimate unless both the mother and her husband submit written statements to the contrary.

2. When the father's name is entered on the birth certificate of a child born out-of-wedlock before its official filing with the local registrar, an affidavit of paternity or a certified copy of the adjudication of paternity report must accompany the birth certificate.

G. Foundling registration. Whoever assumes custody of a live born infant of unknown parentage shall notify the local registrar immediately. A Certificate of Live Birth shall be prepared and "foundling" shall be plainly marked in the top margin. Information on parentage, legitimacy, and other items not specifically required by statute shall be omitted. The certification of the attendant shall be amended to read "I certify that this child was found alive at the place and on the date stated above and that parentage is unknown." The certificate shall be signed by the child's custodian.

7 MCAR § 1.009 Alterations and amendments of vital records.

A. Alteration limitations. To protect the integrity and accuracy of vital statistics records a certificate or record registered under the Vital Statistics Act may be altered or amended only in accordance with these rules.

B. Court orders. An alteration of a vital record shall be made whenever a court having jurisdiction specifically orders that an alteration be made.

C. Amendments.

1. Upon the receipt of a verification query within one year following birth, which contains information to correct or complete a record, the local registrar shall amend his record when the facts appear to be true.

2. During the first year following a birth or a death, the person responsible for completing or filing the certificate in the first instance may request that the record be corrected or completed. Upon receipt of such a request in writing the registrar shall amend his record when the facts appear to be true.

3. During the first year following birth, the given names of a child may be added to the birth certificate by the registrar, upon receipt of a supplemental report from a parent or the guardian of the child.

4. During the first year following a birth or death, the State Registrar may initiate queries and correct his record on the basis of a written response, when the facts appear to be true. After amending his record, the State Registrar shall immediately notify the local registrar, who shall amend his record.

5. Corrections and completions of records under the provisions of

7 MCAR § 1.009C. shall not be considered as alterations but rather shall be considered as amendments. The information shall be entered on the record in red ink, dated and initialed by the person making the amendment, and the record shall be marked "amended".

6. When a local registrar amends his record under the provisions of this rule, he shall transmit the written basis for the amendment to the State Registrar on or before the 10th of the following month. Upon receipt of the basis for the amendment, the State Registrar shall amend his record, when the facts appear to be true. However, when the State Registrar believes that the record should not have been amended, he shall immediately notify the local registrar who shall then reamend his record so that it agrees with the original record.

7. The provisions of 7 MCAR § 1.009C. shall not be used to correct or complete information on paternity, legitimacy, or age of decedent, (except that an inconsistency between age and birthdate may be corrected under these provisions) or to make a complete change in family surname without the approval of the State Registrar. The State Registrar shall consider any request for the correction or completion of a death certificate by a coroner or medical examiner as a request for an amendment. He shall also consider the receipt of an adjudication of paternity report as a request for an amendment.

D. Request for alteration. To alter a vital record a written application must be made, or an order from a court having jurisdiction must be submitted, to the State Registrar or local registrar of the district where the event occurred.

1. To alter a birth certificate, the application shall be made by the registrant when 18 years of age or older. When the registrant is less than 18 years of age, or otherwise unable to sign the application, it may be signed by one of the parents, the guardian, or legal representative.

2. To alter a fetal death certificate, the application shall be made by one of the parents.

3. To alter a death certificate, the application shall be made by the informant, or the nearest lineal relative to the decedent. Amendments of the medical certification may be requested by the attending physician, by the coroner, or by the medical examiner.

E. Certified copy required. Every application to alter a vital record shall be accompanied by a certified copy of the record to be altered. When the alteration is made, a certified copy of the altered certificate shall be issued to the applicant without additional charge. The registrar may waive the requirement for submitting a certified copy for individuals appearing in person or in other cases where he feels it is unnecessary.

F. Evidence required. Every application to alter a vital record shall be accompanied by the appropriate affidavit or statement and the supporting documentation as follows.

1. Place of birth or of death. A minor geographical error which does not involve a change in the registration district, may be altered on the authority of an affidavit. Any substantial change of the place of birth or of death shall be supported by a minimum of two documents in addition to an affidavit.

2. Date of birth or of death. No alteration of the date of birth or of death shall be made which conflicts with the filing date of the record. All alterations of the date shall be substantiated with documentation in addition to an affidavit. Alterations of the date of birth or of death of 30 days or more shall be supported by a minimum of two documents in addition to an affidavit unless the date of birth or of death is in conflict with the filing date.

3. Sex. To alter the sex designation, a statement from the medical attendant or the hospital administrator shall be required. When this statement cannot be obtained or is not based on records made at the time of birth, other documents, such as baptismal, circumcision, census, or school record, may be accepted. When the applicant requests a change in sex designation that conflicts with the gender implied by the given names on the record, additional documentation may be required. When a sex designation change is requested following surgery, e. g. pseudo-hermaphroditism or transexualism, the sex designation may be altered by the State Registrar to conform with a written statement from the surgeon who performed the operation.

4. Name of child. When the name has been omitted on the birth certificate, it may be added during the first 7 years on the authority of an affidavit signed by a parent or the guardian. After the first 7 years, documentation shall be required, in addition to an affidavit. When the name has previously been recorded on the birth certificate, minor spelling errors may be corrected on the basis of an affidavit. However, any substantial or complete change in the names shall be supported by documentation, in addition to an affidavit. This documentation for a complete change of name must prove that the original entry was erroneous or that the change in name was made prior to the registrant's seventh birthday. Otherwise, the change cannot be made without a court order or a legal change of name. A reversal of given names or a change where the replacement word is a nickname, a foreign equivalent or is similar in pronounciation shall not be considered a complete change but shall be supported by documentation in addition to an affidavit. The surname shall be altered only to conform with the parent's surname unless specified otherwise in these rules.

5. Legal change of name. Upon receipt of a certified copy of a court order changing the name of the registrant and upon request of such person or his parent, guardian, or legal representative, the birth certificate shall be altered to show the new name. Upon receipt of a certified copy of a court order changing the name of a parent, the birth certificate may be altered to show the new name when it is necessary to establish agreement with the surname of the child or when the legal change of name was made prior to the birth.

6. Other names. The following alterations may be made on the authority of an affidavit.

a. Correction of minor spelling errors.

b. On a birth certificate, the addition of parents' middle names. On a death certificate the addition of decedent's middle name, or the addition of his parents' or spouse's name.

Documentation in addition to an affidavit shall be required for any substantial or complete change in names, or for the addition of the mother's maiden surname on a birth certificate.

A minimum of two supporting documents in addition to an affidavit shall be required for a complete change of the father's given name on a birth certificate.

A certified copy of a court order from a court having jurisdiction shall be required for a complete change of the family surname on a birth certificate, or for a complete change of the decedent's name on a death certificate.

7. Paternity. Paternity information for a child born out-of-wedlock shall be entered on the birth or the death certificate by the registrar only when the father has acknowledged his paternity by affidavit or has been adjudged the father by a court having jurisdiction. Upon receipt of an adjudication of paternity report along with information necessary to identify and amend the birth certificate the registrar shall record the father's name in accordance with the report. Whenever any District Court shall determine that the man designated on a birth certificate or on a death certificate as the father of a child born out-of-wedlock is not, in fact, the father of that child, the clerk of District Court shall forward to the State Registrar a certified copy of that court's judgement. The State Registrar shall then correct the paternity designation of the birth certificate or the death certificate and permanently file a copy of this judgement.

8. Alias. When a person has established a second name through usage (this shall not include married names) or has used two different names interchangeably over a period of years, and when this additional information shall contribute to his personal identification, the second name may be added to the birth or the death record with the notation "also known as". The original name shall not be lined out or obliterated. Entries of this nature shall be supported by documentation in addition to an affidavit. Upon receipt of proof of marriage the State Registrar or local registrar may add the surname of the stepfather after the surname of a child born out-of-wedlock when the stepfather and the mother have given their consent in affidavit form and have indicated that the child is also known under the new surname. (The requirement for the mother's consent may be waived when the mother is dead.) Upon the recommendation of the Commissioner of Public Welfare, the State Registrar or local registrar may add the surname of the foster parent to the

birth certificate of a State ward when the foster parent has given his consent in affidavit form, and has indicated that the child is also known under the new surname.

9. Identification of an unnamed person. The death certificate of a person for whom the name is unknown at the time of its filing may be amended to record the name and personal particulars when the coroner or the medical examiner has identified the person. The amendment shall be made on the authority of a statement from the coroner or the medical examiner that identifies the record to be amended and states that the identity of this previously unknown person has been established.

10. Legitimacy. Upon receipt of proof that a birth has been erroneously recorded as legitimate, the State Registrar or local registrar shall alter or amend the birth certificate to reflect the true facts. Sufficent proof shall be:

a. An adjudication of paternity document showing that the father is someone other than the man recorded as the father on the birth certificate.

b. An affidavit of nonpaternity from the man recorded as the father accompanied by an affidavit from the mother that corroborates this affidavit.

Upon receipt of proof that a birth has been erroneously recorded as illegitimate, the State Registrar shall replace the birth certificate as in the case of a legitimation.

11. Color or race. Documentation shall be required to alter the color or race designation in addition to an affidavit.

12. Cause of death. The cause of death or any related items of the medical certification may be altered or amended on the basis of a statement from the attending physician, coroner or medical examiner who signed the original certificate. However, for any case in which the coroner or medical examiner has assumed jurisdiction, an amendment may be made on the basis of his statement even when he did not sign the certificate originally.

13. Age of the deceased. Documentation shall be required for an alteration in the age listed for the deceased, except that when the age and the birthdate shown on the record are inconsistent, either item may be altered to conform with the other on the basis of an affidavit.

14. Signatures. Signatures shall not be altered or obliterated.

15. Filing date. A filing date shall not be altered under any circumstances. However, when the presence of an error can be documented, the State Registrar may authorize the addition of a note to the record which summarizes the available facts related to the error.

16. Information previously altered. Any alteration of a delayed registration or a previously altered item of information (except for cause of death

information) shall be supported by a minimum of two documents, in addition to an affidavit, unless it can be shown that the previous alteration was made in error.

17. Other items. An alteration of information for which specific written evidence has not been prescribed may be altered by the authority of an affidavit.

18. Additional written evidence required. The State Registrar shall require additional documentation in support of any alteration the implementation of which would appear to threaten the integrity of the Vital Statistics System.

G. Documents. This documents used to substantiate the facts for an alteration of a birth certificate shall be the earliest documents available. When the earliest document supporting an alteration of birthdate or birthplace was established more than 7 years after birth, additional documentation shall be required. Additionally, the documents shall:

1. Be without any sign of erasure, alteration, or any change of the pertinent information.

2. Indicate the date and by whom the original document was made.

3. Be at least 5 years old, except when altering the birth certificate of a young child, this requirement may be waived.

H. Method of altering vital records. All alterations shall be made on the face of the record in red ink. One line shall be drawn through the original entry and the new information shall be entered above it. When a line is drawn through the original entry, it must not obliterate it. The record shall be marked "altered", dated, and endorsed. A summary statement of the evidence shall also be cited on the record. When the summary statement of the evidence, the date and endorsement cannot be shown on the record because of space limitations, the registrar shall file this information in a manner which will permit it to be readily matched with the altered record.

I. Abstract of documentation required. When convinced that the requirements for alteration have been met, the registrar shall abstract the facts of birth or of death, recorded in the documents. He shall also list the name and type of document, including by whom issued and signed, and the date of issue along with the date the original document was established. In addition, he shall certify that the documentation reviewed confirms the facts as cited.

J. Requirements for affidavits.

1. The affidavit supporting an application for alteration shall be submitted in duplicate (except when the birth or death occurred before 1900, the duplicate copy is not required). Unless otherwise specified, it shall be signed, when possible, by the nearest lineal relative. When there are no lineal

relatives having personal knowledge of the facts, the registrant when 18 years of age or older may write "no known living kin" on the affidavit and sign it himself. However, in these instances, additional documentation may be required to support the alteration.

2. Both the original and the duplicate copy of the affidavit shall bear the signatures of each attester. After the alteration has been made, the duplicate copy of the affidavit, and the required abstract of documentation shall be filed by the local registrar. The original affidavit and the abstract of documentation, shall be filed by the State Registrar.

K. Duties of the State Registrar. It shall be the duty of the State Registrar to ensure agreement of the records on file in his office with the record on file with the registrar in the district where the event occurred. Whenever an application for an alteration is approved, and whenever a record is amended as a result of the amendment procedure under 7 MCAR § 1.009C., the State Registrar shall notify the local registrar where the event occurred and approve the alteration of the local record. Except as he shall otherwise authorize, only the State Registrar shall make alterations or amendments of the original birth, death and fetal death records.

L. Duties of local registrars.

1. He shall ensure agreement of the records on file in his office and the records on file with any other local registrar within his registration district. When an alteration or amendment has been approved by the State Registrar, the local registrar shall notify any local registrar within his registration district and direct him to alter his record.

2. He shall ensure agreementof the records on file in his office and the records on file with another local registrar to whom a certified resident transcript has been sent. He shall notify the local registrar in the district of residence where the certified resident transcript was sent whenever an alteration or amendment has been approved by the State Registrar. Upon receipt of this notice, the local registrar in the district of residence shall alter or amend his record.

3. Upon the direction of the State Registrar, he shall alter the records on file in his office to conform with the records on file with the State Registrar.

4. He shall review applications for alterations of vital records, and alter his records when it appears that the legal requirements have been met. When the birth or the death occurred in 1900 or later, he shall transmit the appropriate statements or affidavits, and the abstract of documentation to the State Registrar for his approval.

M. Local referrals to the State Registrar. Whenever a local registrar is uncertain of the acceptability of the information presented in support of an alteration, the case shall be referred to the State Registrar for his review prior

to the actual altering of the local record. When an alteration of paternity, legitimacy, cause of death, or sex designation resulting from surgery, is requested, the local registrar shall immediately submit the request to the State Registrar unless the State Registrar has specifically authorized the local registrar to make these alterations without referral.

N. Duties of local registrar of a federal reservation and of a city other than one of the first class.

1. When directed by the clerk of the District Court, he shall alter or amend the records on file in his office in the manner provided by these rules.

2. He shall apprise the clerk of the District Court of any inaccuracies in the records on file in his office and refer each application for alteration to the clerk of the District Court or to the State Registrar, as the case may require.

7 MCAR § 1.010 Replacement of birth records.

A. Replacement certificate. A replacement certificate shall be made and filed only as prescribed in this rule. The fact of replacement shall not be shown on the replacement certificate. The date and the place of birth shall be transcribed from the original birth certificate. The original filing date, certificate number, and any information that is consistent with information appearing on the documents that serve as the basis for the replacement, shall also be transcribed. Following the replacement of a birth certificate, the original birth certificate and its related documents, which are on file with the State Registrar, shall be placed in an envelope and sealed. The local registrar shall file a copy of the replacement certificate and seal any previously filed local record, as directed by the State Registrar.

B. Adoption. Upon the receipt of a certificate of adoption, or a certified copy of a decree of adoption accompanied by the information necessary to identify the original birth certificate, the State Registrar shall prepare and file a replacement certificate. This replacement certificate shall include the new name of the child and the names and the personal particulars of the adopting parents.

C. Legitimation. When the natural parents of a child born out-of-wedlock marry each other subsequent to the birth of their child, and upon receipt of proof of paternity and of their marriage, the State Registrar shall prepare and file a replacement certificate. This replacement certificate shall include the new name of the child and the name and the personal particulars of the natural father.

1. Proof of marriage – a certified copy of the marriage record shall constitute proof of marriage.

2. Proof of paternity – an adjudication of paternity report shall constitute proof of paternity, or an affidavit of paternity shall constitute proof

of paternity when no other man has been recorded as father on the birth certificate. When some other man has been recorded as father on the basis of a paternity affidavit, the new affidavit of paternity can be accepted only with an affidavit of nonpaternity signed by the man originally named as father, and an affidavit from the mother agreeing with the legitimation.

D. Adjudication. After a court having jurisdiction adjudicates the facts of birth under the provisions of Minn. Stat. 144.218 subd. 4, and upon his receipt of a certified copy of the court judgment the State Registrar shall prepare and file a replacement certificate to show these findings. After a court having jurisdiction adjudicates the facts of birth without reference to Minn. Stat. 144.218 subd. 4, and upon receipt of a certified copy of the court judgment and a court order to replace the original birth certificate, the State Registrar shall prepare and file a replacement certificate in accordance with these findings.

E. Delayed Registrations. When no certificate of birth is on file for the person for whom a replacement certificate is to be made, a delayed registration of birth shall be filed with the State Registrar as provided in 7 MCAR § 1.011, before a replacement certificate is filed, except that when the date and place of birth and parentage have been established in court proceedings, a delayed registration shall not be required. However, the replacement certificate shall be marked "delayed", and shall show the abstract of documentation, as provided in 7 MCAR § 1.011.

F. Alteration of replacement certificate. A replacement certificate shall not be altered except on the basis of a legal change of name. When it can be shown that the replacement was erroneously completed, another replacement certificate shall be prepared and filed.

G. Foreign births. Each certificate prepared under the provision of Minn. Stat. 144.218 subd. 2 shall be plainly marked "This certificate was filed by the State Registrar under the provisions of Minn. Stat. 144.218 subd. 2 and is not evidence of United States Citizenship". Each certified copy or certification of such a certificate shall be similarly marked.

7 MCAR § 1.011 Delayed registrations.

A. Delayed registration of birth. The registration of a birth later than the time prescribed for filing but within 1 year after the time prescribed for filing shall be considered a "late birth registration". Filing shall be subject to the requirements of 7 MCAR § 1.011C., but shall not be labeled a "delayed registration". The registration of a birth subsequent to 1 year after the time prescribed for filing shall be considered a "delayed birth registration".

B. Who may apply for the establishment of a delayed registration of birth. Any person born in the State of Minnesota whose birth is not recorded, or his parent, his guardian, or his legal representative may apply for the establishment of a delayed registration.

C. Procedures and requirements for filing delayed registrations within 7 years of birth.

1. A delayed birth registration filed within 7 years of birth shall be completed and filed in the same manner of birth certificates filed on time except that it shall be plainly marked "delayed".

2. Delayed birth registrations filed within 7 years of birth shall be prepared and filed on the Certificate of Live Birth form being used at the time of filing. To be acceptable for filing, the certificate must be signed by the physician, or other person operating under the supervision of a physician in attendance at the birth; or when the birth occurred in a hospital, by the hospital administrator or by his designated representative. When the physician or other person who attended the birth is not available, or when the birth occurred outside a hospital, it may be signed by one of the parents or the guardian, if accompanied by an affidavit explaining why the certificate could not be signed by the attendant.

3. The State Registrar or the local registrar may require additional substantiation of the facts of birth or an explanation of the delay in filing when there appears to be adequate justification.

D. Procedures and requirements for filing delayed birth registrations 7 years or more after birth.

1. An application for an establishment of a delayed birth registration 7 years or more after birth shall be made to the local registrar district in which the birth occurred, except that applications for births which occurred out-of-wedlock and for cases where the names have been established by adoption or legitimation shall be made to the State Registrar. The application shall be accompanied by evidence that the record is not on file. For births occurring in 1900 or later, the application shall be made in duplicate.

2. These facts concerning the person whose birth is to be registered must be established:

a. The name of the person at the time of birth; however, the delayed registration may reflect a name established by adoption or legitimation when this evidence is submitted to the State Registrar.

b. The date and the place of birth.

c. The names of the parents; except when the birth occurred out-of-wedlock, the name of the father shall not be entered on the delayed birth registration unless the paternity has been determined.

3. Delayed birth registration 7 years or more after birth shall be prepared and filed on a form prescribed by the State Registrar. The form shall include an affidavit signed by the parent, guardian, or the nearest lineal relative who has personal knowledge of the facts of birth. When there are no

lineal relatives having personal knowledge of the facts and the registrant is 18 years of age or older, he may write "no known living kin" on the affidavit and sign it himself.

4. Documentation required to support the affidavit shall consist of the physician's record of the birth, or if the child was born in a hospital or ambulance service, a statement from the hospital administrator certifying the hospital record of birth. Either of these completed documents shall constitute sufficient evidence to establish a delayed birth registration when the record contains information on all the facts which must be established. When neither of these documents is available, other documentation may suffice.

a. In addition to the affidavit, the date and the place of birth shall be authenticated by a minimum of two supporting documents.

b. In addition to the affidavit, the facts of parentage shall be supported by documentation.

5. The documents used to substantiate the facts for the establishment of a delayed registration shall be the earliest documents available. When the earliest document supporting the establishment of birthdate or birthplace was established more than 7 years after birth, additional documentation shall be required. Additionally, the documents shall:

a. Be without any sign of erasure, alteration, or any change of the pertinent information.

b. Indicate the date and by whom the original document was made.

c. Be at least 5 years old, except that when filing a birth certificate for a young child, this requirement may be waived.

6. Abstract of documentation required. When convinced that the requirements for establishing a delayed birth registration have been met, the registrar shall abstract on the delayed registration form the facts of birth recorded in the document. He shall also list the name and type of document, including by whom issued and signed, and the date of issue along with the date the original document was established. In addition, he shall certify that this is theonly birth registration on file for this peson and that the documentary evidence submitted to determine the facts of birth has been reviewed, and that it confirms the facts as cited.

7. Filing delayed registrations. After the registrar has made the abstract and certification of documentation, he shall sign, date, and file the duplicate copy and immediately transmit the original copy to the State Registrar. (Delayed registrations of birth occurring prior to 1900 shall be filed only with the local registrar.) The State Registrar shall review the delayed registration certificate and when acceptable, he shall sign, date, and file the certificate. He shall also notify the local registrar of this action. When the State Registrar finds a delayed registration certificate to be unacceptable for filing, he shall

notify the local registrar within 10 days, giving a clear explanation for the rejection. Upon receipt of a notice of rejection, the local registrar shall not issue any certification or certified copy of the certificate until the cause for rejection has been removed.

E. Cancellation of records. When the State Registrar contends that a delayed registration was established through fraud, he shall notify in writing the person named in the certificate of his intention to cancel the certificate. The notice may be sent by registered mail to the person whom the record purports to certify, or in the case of a minor or incompetent, to his parent or guardian at his last known address. The notice shall permit the person to appear and dispute the cancellation. Unless this person responds within 30 days after the date of mailing, the State Registrar shall cancel the certificate.

F. Delayed registrations of death. The registration of a death after the time prescribed for filing but within 1 year after the time prescribed for filing shall be considered a "late death registration". Its filing shall be subject to the requirements of 7 MCAR § 1.011G., but it shall not be labeled a "delayed registration". The registration of a death subsequent to 1 year after the time prescribed for filing shall be considered a "delayed death registration".

G. Procedures and requirements for delayed death registration. Delayed registrations shall be completed and filed in the same manner as death certificates filed on time. To be acceptable for filing, the death certificate must be signed by the physician, the coroner, or the medical examiner and, if possible, by the funeral director, mortician, or by the other person responsible for the disposition of the body. When statements cannot be obtained from both the person responsible for the medical certification and the person in charge of the disposition, the case shall be referred directly to the State Registrar for his determination of other confirmatory evidence which may suffice. When neither the physician's, coroner's, or medical examiner's statement nor the statement of the person in charge of the disposition is available only a court finding as to the fact of death will suffice to establish a delayed death registration. The State Registrar or the local registrar may require additional substantiation of the facts of death or an explanation of the delay in filing when there appears to be adequate justification.

H. Manner prescribed by the commissioner for preservation of delayed registration evidence. The commissioner prescribes that written evidence used for establishing delayed registrations of birth or of death, or used in the alteration of certificates of birth or of death shall be preserved in one of the following forms: abstracts, certified copies, microfilm images, or photographic copies. These forms shall be completed by the officers empowered to issue delayed certificates of birth or of death or to make material alterations on certificates of birth or of death. When acceptable to all parties concerned, the original evidence may be preserved in lieu of a certified copy or an abstract.

7 MCAR § 1.012 Certification

A. Certification of altered records.

1. Certified copies and certifications of altered records which are certified to be "full and complete" or "true and correct" copies shall show the alteration and the statement, "any alterations shown were made under the authority of the Vital Statistics Act and the rules of the commissioner" shall be printed or typed on the certified copy or the certification.

2. Certifications of altered records which are not certified to be "full and complete" or "true and correct" copies need not show the alteration.

3. Certified copies and certifications of delayed registration records which are certified to be "full and complete" or "true and correct" copies shall include the basis for the establishment of the delayed registration including an abstract of the documentation supporting the establishment of the delayed registration. All certifications of delayed registration records shall include the statement, "This delayed registration was established under the authority of the Vital Statistics Act and the rules of the commissioner."

B. Abstract of birth in stepfather's name. The State Registrar may issue an abstract of birth under the surname of the stepfather for a child born out-of-wedlock, if the stepfather has given his consent in affidavit form. His wife shall join in the affidavit. Information of parentage and of legitimacy status shall not appear on the birth abstract.

C. Abstract of birth in foster parents' name. Upon recommendation of the Commissioner of Public Welfare, the State Registrar may issue an abstract of birth under the surname of the foster parents for a State ward when they have given their consent in affidavit form. Information of parentage and of legitimacy status shall not appear on the birth abstract.

D. Restricted Certification. Sections of the birth and fetal death record entitled "for medical and health use only" or "supplementary information" shall be excluded from certified copies, unless specifically requested by the applicant.

E. Prima facie evidence.

1. Birth and death certificates filed within 1 year of the event shall be prima facie evidence of the facts stated therein. Data pertaining to the father of a child are prima facie evidence only if the alleged father is the husband of the mother; if not, the data pertaining to the father of a child are not evidence in any proceeding adverse to the interests of the alleged father, or of his heirs, next of kin, devisees, legatees or other successors in interest, if the paternity is controverted.

2. A copy of a birth or death certificate when certified by the State Registrar or a local registrar shall be considered for all purposes the same as

the original and shall be prima facie evidence of the facts stated therein provided that the evidentiary value of a certificate filed more than 1 year after the event shall be determined by the judicial or administrative body or official before whom the certificate is offered as evidence.

7 MCAR § 1.013 Access to records.

A. Information for commercial use. The State Registrar, and local registrars shall not furnish gratis or for purchase information identifying persons recorded in a birth or death certificate to be used for commercial purposes (publication in official newspapers shall not be considered as a commercial purpose). Neither shall hospital administrators, nor funeral directors or morticians use or furnish vital statistics information for such purposes.

B. Unauthorized certification prohibited. No person shall prepare or issue any certificate which purports to be an original, certified copy, certification or certificate of birth, death, or fetal death, except as authorized by the Vital Statistics Act.

C. Upon receipt of a written request or completed application, the State Registrar or local registrar shall issue a copy of or verify information from a vital record. In determining whether or not to allow an applicant to do his own searching of the records, the registrar shall consider the physical condition of the records to be searched and whether or not a file contains private or confidentail data. The State Registrar may permit persons performing medical research access to information pertaining to out-of-wedlock births if those persons agree in writing not to disclose private data on individuals.

7 MCAR § 1.014 Death registration.

A. Death certificate. A death certificate must be filed for every known death by the mortician, funeral director or other person in charge of the disposition of the body with the local registrar of the registration district within which the death occurred or with a subregistrar designated by the State Registrar to receive death certificates for filing within that territory. If the place of death is not known the death certificate shall be filed with the local registrar of the registration district within which the body was found, or with a subregistrar, within 24 hours thereafter. The certificate shall be filed prior to interment or other disposition of the body or in any case within 5 days after the occurrence.

B. Fetal death report. A fetal death report must be filed for the death of each fetus for whom 20 or more weeks of gestation have elapsed. Each fetal death which occurs within the state shall be reported within 5 days to the State Registrar on a blank provided by or approved by the State Registrar for this purpose. The mortician, funeral director, hospital administrator, or other person in charge of the disposition of the remains, shall be responsible for making this report. He shall secure personal data for the report from the best source available. This source may be the next of kin, hospital records, or the records of a coroner or medical examiner. He shall obtain the medical

portion of the report from the physician or other person in attendance at the delivery of the fetus, or if not attended, from one of the parents or from the coroner or medical examiner.

C. Completion of death certificate. The mortician, funeral director, or other person in charge of the disposition of the body shall secure personal data from the best source available. This source may be, the next of kin, hospital or institutional records, or the records of a coroner or medical examiner. He shall secure the medical certification of cause of death from the physician last in attendance upon the deceased, or from the coroner or medical examiner having jurisdication. He shall notify the local registrar when it is impossible to obtain the medical certification from the physician last in attendance or from the coroner or medical examiner. The local registrar shall immediately refer the case to the local health officer for investigation and certification of cause of death upon the basis of information from the most reliable source available.

D. Referrals to coroner or medical examiner. The mortician, funeral director, or other person in charge of the disposition of the body shall notify the coroner or medical examiner before moving a body from the site of death in any case where he is unable to obtain firm assurance from the physician that the medical certification will be signed. In addition, the case shall be referred to the coroner or medical examiner whenever circumstances suggest that the death was caused by other than natural causes, or where the body is to be disposed of in some manner which prevents later examination, or when the decedent was an inmate of a public institution who was not hospitalized for organic disease.

E. Physician in attendance. The term "physician in attendance upon the deceased" shall mean the physician who treated the deceased for the illness or condition which led to death. When the "physician in attendance" is unavailable to certify the cause of death, an associate or another physician shall be authorized to certify the cause of death when he has access to the medical history of the case, provided that he views the deceased at or after death.

F. Medical certification. The physician, coroner, or medical examiner shall certify the cause of death and return the certificate or report to the mortician or funeral director promptly, so that a reasonable amount of time is available for the mortician or funeral director to obtain the necessary Permit for Disposition prior to disposition. When the physician, the coroner, or the medical examiner cannot complete his study and certify the cause of death before burial, cremation, or removal, but the body is no longer required for his diagnosis, the diagnosis may be deferred. (When the diagnosis is to be deferred, the certifier must date and sign the medical certification portion and check the deferred diagnosis space on the death certificate or the fetal death report). The deferred diagnosis procedure shall apply only when there is a reasonable expectation that an autopsy, other diagnostic method, or investigation may significantly change the diagnosis. This procedure shall not apply when he cause of death is in doubt, but where no further diagnostic procedures can be carried out. In this case, the "probable" cause shall be

entered on the basis of the facts available and the certification made in accordance with the best judgment of the certifier.

G. Deaths from undertermined circumstances. Deaths shall be classified as due to undertermined circumstances only when it is impossible to establish the circumstances of death.

H. Monthly report of deaths.

1. Every person providing a casket for any final disposition of a dead human body shall maintain a record showing the name of the purchaser, the purchaser's post office address, the name of the deceased, the date of death, and the place at which the death occurred. This record shall be open to inspection by the State Registrar at all times. On or before the 10th day of each month the establishment providing caskets shall report, on a blank provided for the purpose, to the State Registrar those facts that he shall require for the preceeding month. No person selling caskets solely to distributors, morticians, or funeral directors shall be required to keep this record.

2. Every person providing a casket at retail, and not having charge of the disposition of the body, shall enclose within the casket a notice furnished by the State Registrar calling attention to the requirements of the law, a blank certificate of death, and the statutes and rules of the Commissioner for the disposition of a dead body.

I. Dead body not found. When circumstances suggest that a death has occurred although a dead body cannot be produced to confirm the fact of death, a death certificate shall not be filed until a court having jurisdiction has adjudged the fact of death. A certified copy of the court finding must be attached to the death certificate when it is presented for filing.

7 MCAR § 1.015 Burial – Transit – Removal permits.

A. Permit for disposition – when required.

1. A Permit for Disposition shall be required for burial, cremation, transportation by common carrier, removal out-of-state, removal from a registration district, for disinterment and reinterment, or for the retention of a dead human body more than 5 days. It shall be issued by the local registrar or a subregistrar, of the place of death, or if necessary to avoid delay, by the State Registrar.

2. The permit shall contain the information required on the form supplied by the Commissioner and shall be signed by the following persons: the local registrar or the subregistrar, the mortician or funeral director, and the person in charge of the conveyance. When a communicable disease is the cause of death, the permit shall be signed by the mortician who prepared the body. When a firm name is subscribed on the Permit for Disposition, it shall be accompanied by the personal signature of a licensed member of that firm.

B. Notice of removal permit. Whenever it is impossible to secure a proper certificate or permit for disposition without great delay, the dead human body may be moved by private conveyance from its present registration district to another registration district within the state for burial preparation using the Notice of Removal provided by the State Registrar. Before removing the body, the attending mortician, or when death is not from a communicable disease the funeral director, shall obtain assurance that the cause of death will be certified prior to final disposition of the body. Within 18 hours following the removal, he shall mail or hand the notice of removal to the local registrar. The notice shall explain the failure to obtain the usual permit for disposition and include the date, and time of removal, and place to which the body shall be moved.

C. Ashes of the dead. Cremation of a dead human body shall be considered as a final disposition of that body. No additional permit is required for transportation or disposition of the ashes of cremation.

D. Issuance of a permit. The permit for disposition may be issued by a local registrar, a subregistrar, or if necessary to avoid delay, by the State Registrar, however,

1. No permit shall be issued until the death certificate or the fetal death report has been filed. Each certificate or report shall be as complete as possible under the circumstances: however, in every case certain minimal information shall be required.

a. The name and the age of the deacesed or the coroner's identification.

b. The date and place of death or the place where the body was found.

c. The medical certification. See 7 MCAR § 1.014F.

d. Information on disposition.

2. No permit shall be issued without receiving an assurance of compliance with the regulations governing disposition of the dead.

3. The subregistrar shall write upon each death certificate filed with him, the date of the filing, his name, and forward it to the local registrar of the proper district within 3 days after receipt.

E. Use and filing permit. Until the time of the final disposition, the permit shall be in the possession of the person in charge of the body, or attached to its shipping container. In localities requiring local issuance of disposition permits, the original permit shall be presented to the Health Officer with the request for the reissuance of a permit. At this time, the permit shall be filed with the person in charge of the cemetery or crematory. Where there is no person or corporation responsible for the maintenance of a cemetery, the

mortician or funeral director in charge of interment in this cemetery shall write above his signature upon the permit(s) issued "no association, person, or corporation responsible for this cemetery" with the name of the cemetery and the city, village, or township and county in which it is located. This permit shall then be mailed to the State Registrar.

F. Cemetery official to be appointed. Individuals, associations, or corporations owning or operating cemeteries shall appoint some person to be responsible both for receiving and filing, and preserving Permits for Disposition. The sexton or other person acting as such shall not permit the interment or cremation of a dead human body until a burial permit issued under the provisions of the Vital Statistics Act and these rules has been filed with him. He shall keep a record of all interments and cremations stating the name of the deceased, place of death, date of burial or cremation, and name and address of the attending mortician or funeral director.

G. Deat outside state, burial permit. When a death or fetal death occurs outside this state and the body is accompanied by a permit for burial, removal, or other disposition issued in accordance with the laws and rules in force where the death or fetal death occurred, the permit shall authorize the transportation of the body into or through this state but before the burial, cremation or other disposition of the body within this state a local burial permit shall be issued by the local registrar of the district where disposal is to be made, or by a subregistrar or, if necessary to avoid delay, by the State Registrar. The permit accompanying the body into this state shall, together with the local burial permit, be filed with the sexton who shall keep a record thereof as provided in 7 MCAR § 1.015F.

DEPARTMENT OF HEALTH RULES

RULES RELATING TO MORTICIANS, FUNERAL DIRECTORS, AND THE DISPOSITION OF THE DEAD

Chapter three: 7 MCAR §§ 1.021 - 1.031

§ 1.021 Resident trainee in mortuary science. No person shall be permitted to register as a resident trainee until he shall have completed the first year of academic training as provided in Minn. Stat. § 149.03.

No service in mortuary science may be performed by a resident trainee except under the personal direction and in the presence of the licensed person under whom he is registered or under another licensed mortician in the same establishment.

No one may at one and the same time be registered under more than one mortician.

Resident trainee registration with the Commissioner of Health* shall show the date on which such traineeship began, the name and address of the mortician under whom he is registered, and the name and address of the company, corporation or firm of which such mortician is the owner, partner or employee. Discontinuance of such training or transfer to some other mortician for service as a trainee shall be immediately reported to the Commissioner of Health. The trainee shall file with the Commissioner of Health not less than twenty-five comprehensive case reports upon the forms provided by the Commissioner. If the mortician under whom one is registered is not the owner or manager of the establishment in which such mortician and his trainee are working, then in such case all trainee case reports and all statements concerning the period of training, in addition to being signed by the mortician under whom registered, shall also be approved and signed by the employer of such mortician and trainee.

Effective January 1, 1969, mortuary science trainee registration shall be permitted for no more than three years, provided however, that for good cause the Committee of Examiners in Mortuary Science may extend the registration for an additional period not to exceed one year.

The application for the initial or renewal registration shall be accompanied by a $10.00 registration fee. The initial and renewal registration shall be issued for the calendar year for which application is made and shall expire on December 31 of such year. Renewal applications and fees shall be submitted no later than December 31 of the year preceding the year for which application is made.

4295-4328

7 MCAR S 1.022 Morticians; examination and license requirements.

A. Every person who wishes to qualify as competent to engage in the practice of mortuary science, shall comply with the following requirements:

1. An applicant shall apply to the Minnesota commissioner of health for a license. The application shall contain the full name of the applicant, age, mailing address and such other pertinent identifying information as the commissioner may require.

2. The applicant shall be at least 18 years of age and shall have successfully completed a minimum of 60 semester or 90 quarter credits at an accredited college or university with credit evaluation in course areas as follows: communications 15 quarter credits to include speech and English, the social sciences, 18 quarter credits to include sociology and psychology; natural science 21 quarter credits to include general or inorganic chemistry and biology or zoology and elective areas, 36 quarter credits. Following this academic work, the applicant shall have completed and have secured a verification of completion of the prescribed course of study from any college of mortuary science accredited by the Conference of Funeral Service Examining Boards of U.S., Inc. or the American Board of Funeral Service Education.

3. After these education qualifications, in the order specified have been acquired, the applicant shall attain a satisfactory level of achievement in a comprehensive examination, approved by the commissioner of health in such subjects related to the practice of mortuary science as the commissioner may prescribe. If an applicant for a license to practice mortuary science has satisfactorily passed the national board examination given by the Conference of Funeral Service Examining Boards of the U.S., Inc., and is so certified to the commissioner by the conference, effective January 1, 1976, the commissioner shall, subject to the criteria listed below, accept the results of the national board and require the applicant to successfully pass an examination on laws of the state of Minnesota and the rules of the commissioner pertaining to registration of deaths, embalming, transportation, disposition of dead human bodies and funeral directing. In order to accept the results of such national examination, the commissioner shall first determine that the knowledge and skills assessed by the examination adequately and accurately evaluates the knowledge and skills needed for actual job performance and ensures that the public is adequately served and protected. An applicant who fails to attain a satisfactory level of achievement on any examination given by or on behalf of the commissioner may be re-examined on application at the next examination. After successful completion of required examinations the applicant shall serve at least one year as a trainee in mortuary science under a mortician licensed by the state of Minnesota. During such period of experience the applicant shall be registered as a

trainee in mortuary science with the commissioner and shall assist under the supervision of a mortician in embalming at least 25 bodies and in the direction of at least 25 funerals.

4. License application, renewal and endorsement fees. An applicant for examination for a license in mortuary science, shall submit an application therefor on forms provided by the commissioner of health together with a fee of $25.

When the applicant has successfully completed the examination and requirements for original license, the applicant shall submit to the commissioner a license application on a form prescribed by the commissioner and a fee of $25 payable to the Treasurer, State of Minnesota, after which the license shall be duly issued.

An applicant for a license in mortuary science by endorsement without examination as to technical qualification pursuant to Minnesota Statutes, section 149.03, subdivision 2, shall submit an application therefor on forms provided by the commissioner of health together with a fee of $75. The applicant shall prior to licensure pass an examination on the Minnesota laws and rules relating to mortuary science only.

An applicant for a mortuary science courtesy card, issued pursuant to Minnesota Statutes, section 149.03, subdivision 2, shall submit an application therefor on forms provided by the commissioner of health together with a fee.

Initial and renewal mortuary science licenses or courtesy cards shall be issued for the calendar year for which application is made and shall expire on December 31 of that year.

Renewals thereof shall be obtained on an annual basis. Application for license or courtesy card renewal, together with the renewal fee of $25 shall be submitted to the commissioner of health on forms provided no later than December 31 of the year preceding the year for which application is made. Failure to submit the renewal application and fee by the date specified above shall result in an increase in the fee to $35. If the renewal application and fee are not submitted within thirty-one (31) days after the expiration date, the license or courtesy card shall automatically lapse. Such persons shall be required to apply for a new license and meet all the requirements therefor.

B. Funeral directors; examination and license. Every person who wishes to qualify as competent to engage in the practice of funeral directing, under Laws of 1959, chapter 395, shall comply with the following requirements:

He shall make application to the Minnesota commissioner of health for a license. Such application shall contain the name of the applicant in full, age and place of residence. It shall be accompanied by affidavits from at least two reputable residents of the county in which the applicant resides

certifying that the applicant is of good moral character. The applicant shall also submit two affidavits from ordained religious leaders of his faith substantiating the beliefs and convictions of the applicant's faith which forbids the practice of embalming.

The applicant shall be at least 21 years of age, shall have satisfactorily completed at least two years at an accredited college or university with approximate credit evaluation in course areas as follows: speech and English, 15 quarter credits; the social sciences, 16 quarter credits; natural science, 27 quarter credits; and elective areas, 32 quarter credits. Following such academic work applicants shall have completed a course of study at the Department of Mortuary Science at the University of Minnesota or any school of mortuary science accredited by the American Board of Funeral Service Education.

Such courses to include a minimum of 21 quarter credits in mortuary management, 29 quarter credits in the mortuary arts and sciences exclusive of any courses in embalming theory and practice.

After the educational qualifications in the order herein specified have been acquired, the applicant shall have served at least one year as a trainee in funeral directing under a Minnesota licensed mortician. During the period of practical experience or traineeship the applicant shall have been registered as a trainee in funeral directing with the commissioner of health and shall have assisted under supervision in the direction of at least 25 funerals. The applicant shall attain a satisfactory level of achievement in a comprehensive written examination given by the commissioner of health in such subjects as anatomy, bacteriology, business methods, chemistry, mortuary management, pathology, public health laws and regulations and the practice of funeral directing. At the discretion of the commissioner, a practical examination in funeral directing may also be required. An applicant who fails to attain a satisfactory level of achievement may be re-examined on application at the next annual examination.

An applicant for a funeral directors license, by examination, shall submit an application therefor on forms provided by the commissioner of health together with a fee of $25.

Initial or renewal funeral director licenses shall be issued for the calendar year for which application is made and shall expire on December 31 of such year. Renewals thereof shall be obtained on an annual basis. Applications for license renewal, together with the renewal fee of $25, shall be submitted no later than December 31 of the year preceding the year for which application is made. Failure to so submit the renewal application and fee within thirty-one (31) days of the date specified above shall result in an automatic lapse in the license which shall not thereafter be reinstated.

C. Funeral establishment permit. Applications for an original or renewal permit to operate a funeral establishment shall be submitted on forms provided by the commissioner of health together with a fee of $35. Original permits shall be effective from the day of issuance to the next June 30. Renewal permits shall be issued on an annual basis from July 1 to June 30 of the following year. Failure to submit the renewal application and fee by the expiration date shall result in an increase in the fee to $45. If the renewal application and fee are not paid within thirty-one (31) days after the expiration date, the permit shall automatically lapse.

§ 1.023 Communicable disease deaths - private funerals. Only morticians shall be permitted to take charge of the remains of persons who have died of any communicable disease. When such body is to be shipped, preparation shall be in accordance with 7 MCAR § 1.024 F.

The funeral shall be strictly private when the death has been due to diphtheria or smallpox. In the case of a smallpox death the casket shall be hermetically or permanently sealed.

A private funeral allows only the presence of those individuals who have been in immediate contact with the deceased within 21 days before the death occurred, the morticians, and a minister who shall be present only when the morticians in charge of the funeral are also present and who shall be directed by the morticians as to the precautions to be taken. If individuals who have been in such immediate contact with the deceased are not to be present at the funeral a private funeral need not be held. Attendance at interment is limited to those enumerated herein.

§ 1.024 Regulations governing transportation of the dead.

A. When a dead human body is transported by common carrier to a destination outside the State, it shall be embalmed and transported in accordance with the transportation regulations of the Commissioner of Health.

B. The transportation of dead human bodies shall be governed by the transportation regulations adopted by the Minnesota Commissioner of Health.

C. Only a mortician licensed to engage in the practice of mortuary science shall call for and embalm the body of a person whose death is caused by a disease listed as communicable in F. of this Regulation. Following prepara-

tion of the body by embalming, either a mortician or a funeral director shall have charge of such body for the purposes of transportation and final disposition.

D. Officials, agents and employees of all public transportation facilities throughout the State of Minnesota shall not receive for transportation a dead human body unless the body is accompanied by a burial-removal-transit permit properly completed and signed.

E. Transportation permit - when required. A burial-removal-transit permit shall be required for each dead human body transported by common carrier, and in all cases when transported by automobile, aircraft or any other conveyance in lieu of common carrier. It shall be issued by the local registrar of the place of death or a sub-registrar or, if necessary to avoid delay, by the state registrar.

It shall contain the information required on the permit form as furnished by the Commissioner of Health and be properly signed by the local registrar or a sub-registrar, the mortician or funeral director, and the person in charge of the conveyance. When the cause of death is a communicable disease the permit shall be signed by the mortician who prepared the body. Where a firm name is used in the signing of the burial-removal-transit permit it shall be supported by the personal signature of a licensed member of the firm.

The burial-removal-transit permit may be given to the person in charge of the remains, or attached to the shipping container, and in either case delivered with the body at the destination to the sexton or other person in charge of the cemetery, or to the health officer in cities that have local ordinances requiring burial permits by him in all cases.

F. Transporting dead of any communicable disease. The removal and transportation of bodies dead of the following communicable diseases shall be permitted only under the following conditions:

Actinomycosis
Anthrax
Botulism
Brucellosis (Undulant Fever)
Chickenpox (over 16 years of age)
Cholera, Asiatic
Conjunctivitis, Epidemic
Gonorrhea
Hepatitis, Infectious
Hepatitis, Serum
Mononucleosis, Infectious
Ophthalmia Neonatorum
Paratyphoid Fever
Plague
Pneumonia
Poliomyelitis
Diarrhea, Epidemic
Diphtheria
Dysentery
(a) Amebic
(b) Bacillary
Encephalitis (all types)
Glanders
Syphilis
Trachoma
Trichinosis
Influenza
Leprosy
Leptospirosis
Malaria
Measles
Meningitis (all types)

Psittacosis
Rabies
Rheumatic Fever
Ringworm of the Scalp
Rocky Mountain Spotted Fever
Smallpox
Streptococcal Diseases, including Scarlet Fever and Epidemic Sore Throat
Tuberculosis
Tularemia
Typhoid Fever
Typhus Fever
Whooping Cough (Pertussis)
Yellow Fever

1. Before removal by any of the conveyances authorized by K. of this regulation other than by common carrier, the body shall be properly covered and encased in a zipper pouch, bag or waterproof sheet and transported in a standard mortuary basket, a regulation ambulance cot or on an aircraft ambulance stretcher. All sanitary precautions in the preparation for removal and in the removal shall be observed for the protection of the public health.

2. In all cases of communicable disease deaths the body shall be embalmed as soon as practicable, and when the destination will not be reached within eighteen hours after death, the body shall be thoroughly embalmed before transportation. Embalming shall include both arterial and cavity treatment, all orifices and discharging sinuses closed with absorbent cotton and the body washed with a disinfecting fluid.

3. When a common carrier is to be used, embalming is mandatory and both a casket and an outside container shall be provided.

G. Transporting dead by aircraft. The transportation of human dead bodies by aircraft shall be permitted under the following conditions:

1. When the destination is outside the state, a body transported by aircraft shall be first thoroughly embalmed. It may be transported in a standard mortuary basket, on a regulation ambulance cot or aircraft ambulance stretcher. When transported by common air carrier it shall be enclosed in a casket and tight outside container.

2. Where a death caused by a disease listed as communicable in F. of this regulation occurs in a remote and inaccessible locality, the body in an emergency may be brought by aircraft to the nearest point having facilities and there thoroughly embalmed and prepared, as provided in this regulation, before being transported further by aircraft.

H. Transporting dead of noncommunicable disease. The transportation of human bodies dead of noncommunicable disease shall be permitted under the following conditions:

1. When the destination will be reached within eighteen hours after death, the body shall be enclosed in a casket and a tight outside container. When transportation is to be made by automobile or aircraft, the outside container may be omitted, or the casket and outside container may both be

omitted, and in such case the body shall be properly covered and encased in a zipper pouch, bag, or waterproof sheet and transported in a standard mortuary basket, on a regulation ambulance cot, or on an aircraft ambulance stretcher.

2. When the destination will not be reached within eighteen hours after death, the body shall be thoroughly embalmed and shipped in accordance with the provisions in paragraph 1. of this regulation.

I. Transporting disinterred bodies. No disinterred body dead from any disease or cause shall be transported unless approved, as is required by regulation 11032 (7 MCAR § 1.032), by the health authorities having jurisdiction. A burial-removal-transit permit signed by the local registrar or a sub-registrar, as provided in E. of this Regulation, is required.

All disinterred remains shall be enclosed in a sound, tight box and not thereafter opened, provided that bodies in a receiving vault when prepared by morticians shall not be regarded as disinterred bodies unless the health officer so rules. In townships having no physician as medical health officer for the township, a body shall be regarded as disinterred after the expiration of thirty days from the time of death.

J. Transportation regulations inapplicable to coroner. The regulations of the Commissioner of Health which control the transportation of dead human bodies do not apply to the coroner in the performance of the duties of his office as prescribed by Minn. Stat., ch. 390.

K. Kind of conveyances permitted. In the transportation of any dead body the following conveyances may be used: (1) baggage or express car, (2) boat, (3) hearse, (4) ambulance, (5) any standard automobile properly designed and manufactured for the transportation of dead human bodies, (6) any wagon or sleigh, or (7) airplane. All such conveyances or vehicles shall have ample area to accommodate a standard mortuary basket, a regulation ambulance cot or aircraft ambulance stretcher in a horizontal position and shall be so designed as to permit loading or unloading without excessive tilting of the cot or basket.

1. Moving bodies locally. When the transportation regulations do not apply embalming is not required if the body is to be buried within seventy-two hours after death.

§ 1.025 Arsenical embalming fluids.

A. No embalming fluid containing compounds of arsenic, mercury, zinc, or other poisonous metals shall be sold or used in Minnesota for or in the embalming of dead human bodies for burial.

Provided that in case it appears necessary to hold a dead human body for thirty days or more before burial, the county coroner after an investigation by him as to the cause of death may issue a written order permitting the use

of compounds of arsenic, mercury, zinc or other poisonous metals in the preservation of such body.

B. Embalming fluid - quantity used. In the shipment of the dead in Minnesota when embalming is carried out, the fluid shall be of a quality and used in sufficient quantity to properly embalm the body.

§ 1.026 **Outside container.** Every outside container shall bear at least four handles and when over five feet six inches in length shall bear six handles.

§ 1.027 **Opening of sealed caskets.** The opening of hermetically sealed caskets containing disinterred remains of persons dead from any cause and shipped for burial in Minnesota is hereby forbidden except when so ordered by a court of competent jurisdiction.

§ 1.028 **Ashes of the dead.** Cremation of a dead human body shall be considered as a final disposal of that body. No additional permit covering transportation, interment or other disposal of ashes of a cremated body, or concerning the kind of container in which such ashes are placed for preservation or transportation is required.

§ 1.029 **Serving of foodstuffs in funeral establishments.** In the interest of safeguarding public health, safety, welfare and sanitation, the serving of food to the public in a funeral establishment is prohibited. For the purpose of this regulation, beverages served in single use disposable containers shall not be considered food.

§ 1.030 **Permit for disinterment and reinterment.** No person except a mortician, and then only after first having obtained a permit therefor from the local health officer and the local registrar or a sub-registrar, as hereinafter prescribed, shall disinter the body of a deceased person; provided, the authorities in charge of a cemetery may transfer bodies buried therein from one part of such cemetery to another part thereof with the approval and under supervision of the local health officer.

Any person desiring such a permit shall first secure from the actuary or secretary or other person in charge of the cemetery records a written statement showing that such body is buried in that cemetery and giving thereon the name of deceased, age at time of death, date of death, cause of death, and date of burial. He shall present this statement to the proper local health officer and make application for permission to disinter and remove such body.

Provided, if there is no such cemetery record then such statement by relatives of the deceased or other competent person or persons who are empowered to cause such disinterment and removal, shall be presented. Provided further, if the health officer has cemetery records of the cemeteries in his municipality and a record of such interment, no such written statement need be secured or filed with him.

The local health officer shall question the applicant as to the manner in which

it is proposed to disinter, handle and dispose of the remains, and shall give and enforce such directions for disinterment, removal and reinterment as he deems necessary for the protection of the public health. Such local health officer shall thereafter notify the local registrar or sub-registrar orally or in writing if he has approved such application.

The applicant shall thereupon apply to the registrar or to a sub-registrar, who shall issue in duplicate a written "disinterment-reinterment" permit, using for such purpose the burial-removal-transit form now provided by the Commissioner of Health for original interments and noting thereon the words "disinterment-reinterment permit."

The mortician shall furnish the sexton or person in charge of any cemetery, burial place or other premises in which the disinterment is made, a duplicate copy of the disinterment-reinterment form. The sexton in charge of the final resting place shall not inter or permit the interment or other disposition of the disinterred body of a deceased person until he receives a "disinterment-reinterment permit."

§ 1.031 Sanitary condition of mortuaries.

4295 4328

A. A funeral home, mortuary or funeral directing establishment is a facility approved by the commissioner and devoted to or used for, or held out to the public as a place for the care, preparation or repose prior to burial or transportation of dead human bodies; or for the conducting of funeral services. However, these definitions are not applicable to any facility operated by a person holding a single license as funeral director as provided in Minnesota Statutes 1957, section 149.02.

B. All mortuaries and funeral directing establishments shall be maintained in a sanitary manner at all times. A properly lighted and ventilated preparation room shall be provided in every mortuary or funeral directing establishment. It shall have a tile, terrazzo, concrete, composition or linoleum covered floor which shall be kept in a smooth and easily cleanable condition and made free and clear of dust, dirt, refuse, and other contaminations. The operating or embalming table shall have a tile, metal or other hard surface sanitary top. The floors and walls of the preparation room and all embalming or dressing tables, portable couches, cooling boards and transfer cases shall be kept in a clean and sanitary condition.

C. The operating or embalming room shall be provided with an adequate water supply. Liquid waste from the operating or embalming tables shall be directed to an open fixture which is properly vented and connected to the building drainage system. Where a municipal sewerage system is available, the building drainage system shall be discharged into the municipal sewage system; where such a system is not available, the building drainage system must be discharged into a satisfactory private system of waste disposal. There shall be no connection or other arrangement from any plumbing fixture or device whereby unsafe water or other foreign material may be discharged or drawn into a safe water supply. Every plumbing fixture, receptacle and water supply

tank shall be provided with a proper air gap or other acceptable device to prevent backflow into the water supply.

D. Refuse, bandages, cotton, and other wastes shall be collected in proper and convenient receptacles which shall be provided in the operating and preparation rooms. All such waste shall be destroyed by incineration and all embalming tables, hoppers, sinks, receptacles, instruments and other appliances used in the embalming of dead human bodies shall be thoroughly cleaned immediately after the preparation of the case is completed.

4395-4328

7 MCAR S 1.032 Itemization and authorization to embalm.

A. Definitions. For the purposes of 7 MCAR SS 1.021-1.032, the words, terms and phrases listed below in this subdivision shall have the meaning stated herein, unless the language and context clearly indicates that a different meaning is intended.

1. CASKET - a container commonly used to enclose a dead human body for the purposes of the funeral and final disposition.

2. BURIAL VAULT/INTERMENT RECEPTACLE - an outer container used to enclose the casket for earth burial.

3. USE OF FACILITIES.

a. Provision of chapel or room for the funeral or memorial service and/or provision of facilities for parking, counseling offices and other administrative purposes.

b. Provision of chapel or room for visitation/reviewal.

4. TRANSPORTATION COSTS - includes the vehicle used for the initial transfer of the deceased, funeral coach, funeral sedans, flower car, service/utility car and the use of common carriers where needed.

5. FUNERAL SERVICE MERCHANDISE - includes such items as clothing, register books, cards and religious and fraternal items necessary to the conduct of the service.

6. EMBALMING - a process of chemically treating the dead human body to reduce the presence and growth of organisms, to retard organic decomposition and to restore an acceptable physical appearance.

7. PREPARATION OF THE BODY - includes such items of care as the setting of features; restorative procedures; washing; disinfecting; care of hair; shaving; dressing and casketing.

8. PROFESSIONAL SERVICES - includes the provision of staff for arrangements, visitations, funeral, memorial service when the body is not present, final disposition and administrative services such as counseling, securing and preparing necessary documents.

9. CASH ADVANCED ITEMS - items of merchandise and services provided by other than the mortician, funeral director or funeral establishment, the liability for which is incurred by the mortician, funeral director or funeral establishment on behalf of the funeral arranger and listed on the itemization form.

10. CREMATION/CALCINATION - the use of direct flames or intense heat to reduce the dead human body to ashes and inorganic bone fragments.

11. DESTINATION - the city or town of final disposition.

12. DISPOSAL UNIT - a container other than a casket used for burial, cremation, calcination or entombment of a dead human body.

13. FUNERAL - the rites or ceremonies connected with the final disposition of a dead human body with the body present.

B. Itemization of funeral costs.

1. Before final agreement is reached between the client and funeral establishment the mortician or funeral director shall give or cause to be given to the person(s) making arrangements, a written disclosure with the items and costs listed separately as required by Minnesota Statutes, section 149.09, subdivision 1.

a. Minimum items. As a minimum the disclosure shall include a statement of charges for casket, burial vault, use of facilities for reviewal, use of facilities for funeral services, specifically itemized transportation costs, specifically itemized funeral service merchandise, embalming, preparation of the body, other professional services, and anticipated cash advances and expenditures. When cremation is to be the method of final disposition the disclosure shall have printed in conspicuous print: "Minnesota law does not require that remains be placed in a casket before or at the time of cremation."

b. Copy given. A copy of the itemized statement (funeral expense contract) shall be given the person(s) making funeral arrangements. The contract shall be signed by both parties and the funeral establishment shall retain a copy for three years thereafter.

c. Charges not known. If the charge for any item is not known at the time the contract is entered into, the establishment representative shall give his/her best estimate of the charges and advise the purchaser(s) of the exact charge as soon as the information becomes available.

d. Net amount billed. No funeral establishment shall bill or cause to be billed any item that is referred to as a "cash advanced" item unless the net amount paid for such item or items by the funeral establishment is the same as is billed to the funeral establishment. The term net is not meant to include any discounts that may be allowed for prompt payment by the funeral establishment.

C. Authorization to embalm.

1. Who grants permission. Written authorization for embalming a dead human body shall be obtained from the person lawfully entitled to custody of the body or from the individual prior to his/her death.

2. Oral permission procedure. Oral permission shall constitute approval to proceed with embalming, however, the establishment representative must specifically use the term "embalm" in securing oral permission. Written authorization shall be obtained as soon as practicable.

3. Embalming mandate. Upon request the mortician or funeral director shall explain the requirements of 7 MCAR S 1.024 which in some instances mandate embalming and make available a copy of 7 MCAR S 1.024. When embalming is required as provided in 7 MCAR S 1.024, permission to embalm shall, as a matter of law, be implied.

4. Retention of copy. The written authorization shall be retained in the establishment record of the deceased for three years and a copy made available to the person(s) granting authority.

5. Form of authorization to embalm. The written authorization statement shall be as follows:

AUTHORIZATION TO EMBALM

I authorize ..... and its staff, agents or representative to embalm the body of ..... .

I am a relative of the deceased and/or am entitled to custody of the deceased.

I understand that embalming is not required by Minnesota law except as provided by 7 MCAR S 1.024 when:

1. The deceased is to be sent out of state by common carrier or aircraft,

2. Death is due to communicable disease,

3. More than 18 hours will elapse from time of death to arrival at the destination, or

4. Final disposition of the deceased is longer than 72 hours after death.

_____

name relationship

_____

name establishment representative

MINNESOTA STATE BOARD OF HEALTH

Hospital Administrator Regulations

MHD 36 Definitions, General Provisions

(a) A "hospital" within the meaning of the hospital administrator registration law, is any institution licensed as a hospital in this state.

(b) No person shall act as the hospital administrator of any institution licensed as a hospital unless such person is registered for a hospital of such size under the provisions of the hospital administrator registration law and regulations.

(c) Upon registration, a certificate of registration as a hospital administrator showing the limitation as to hospital size, if any, shall be issued. The certificate of registration of the hospital administrator shall be posted conspicuously in the hospital.

(d) Nothing in these regulations shall prohibit an administrator with a limited registration to continue to serve as the administrator of the same hospital if such hospital expands in size.

(e) Every person who, on the effective date of these regulations, is registered as a hospital administrator, shall be considered registered without limitation as to size of hospital.

(f) **Initial and Renewal Registration Fees; Registration Expiration Dates**

(1) **Registration Fees.** Applications for initial or renewal registration, whether limited or unlimited, shall be submitted to the State Board of Health on forms provided by it together with a fee of $40.00 except as provided in MHD 36 (f)(2).

(2) **Fees and Expiration Dates for Registrations with Effective Dates Commencing Between July 1, 1975, and December 31, 1975.** Applications for initial or renewal registration, whether limited or unlimited, to be effective commencing anytime between July 1, 1975, and December 31, 1975, shall be submitted to the State Board of Health on forms provided by it together with a fee of $60.00. These registrations shall expire on December 31, 1976.

(3) **Registrations Effective on or after January 1, 1976.** Initial and renewal hospital administrator registrations, whether limited or unlimited, effective on or after January 1, 1976, shall be issued for the calendar year for which application is made and shall expire on December 31 of such year. Applications for all renewal registrations effective on or after January 1, 1976, shall be submitted to the State Board of Health on forms provided by it with the $40.00 fee no later than December 31 of the year preceding the year for which application is made.

(The fees prescribed in MHD 36 (f) shall apply to all registrations which become effective on or after January 1, 1975.)

MHD 37 Responsibility

(a) The governing body of every institution licensed as a hospital under the provisions of the hospital licensing law shall designate one person as the administrative head of the institution. For the purposes of the hospital administrator registration law, this person shall be known as the hospital administrator.

(b) The hospital administrator shall be the person in charge of the institution. He shall be the direct representative of the Governing Board in the management of the hospital. He shall have the necessary authority and be held responsible for the administration of the hospital in all its activities and departments; subject only to such policies as may be adopted, and such orders as may be issued by the Governing Board.

MHD 38 Hospital Administrative Experience

(a) Except as otherwise provided herein, experience in an administrative position, within the meaning of the hospital administrator registration law, shall consist of experience gained in one or more duly established hospital positions requiring a comprehensive knowledge of hospital administrative procedure and techniques, and the exercise of independent judgment, supervision of other personnel, program planning, and formation of policies.

(b) For registration without limitation as to size of hospital to be administered, the hospital administrative experience shall consist of:

(1) Successful completion of one year of formal training in an approved course in hospital administration, together with an internship if the particular course requires, or

(2) Two years as an administrator or an assistant administrator of a hospital of 50 beds or more, or

(3) Three years as an administrator of a hospital of 25 beds or more.

(c) For registration limited to administration of hospitals under 50 beds, the hospital administrative experience shall consist of:

(1) Requirements of (b), or

(2) Two years as an administrator of a hospital of any size, or

(3) Two years as an assistant administrator of a hospital of 25 beds or more, or

(4) Two years as a head of a duly established department in a hospital of 50 beds or more.

(d) For registration limited to administration of hospitals under 25 beds, the hospital administrative experience shall consist of:

(1) Two years of hospital experience as defined in MHD 38 (a), (b), or (c).

MHD 39-43 Reserved for future use.

4295-4328

7 MCAR S 1.044 Definitions, general provisions, issuance of licenses.

(APPLIES TO BOTH NURSING HOMES AND BOARDING CARE HOMES)

For the purpose of these regulations: A state license is required for any facility where nursing, personal or custodial care is provided for five or more aged or infirm persons who are not acutely ill.

A. A "nursing home" shall mean a licensed facility or unit used to provide care for aged or infirm persons who require nursing care and related services in accordance with these regulations. A nursing home license is required for the facility if any of the persons therein need or receive nursing care. Examples of nursing care: bedside care, including administration of medications, irrigations and catheterizations, applications of dressings or bandages; rehabilitative nursing techniques; and other treatments prescribed by a physician which require technical knowledge, skill and judgment as possessed by a registered nurse. In addition the dietary, social, spiritual, educational and recreational needs of these patients shall be fulfilled. The director of the nursing service shall be a registered nurse employed 40 hours per week during the day shift. In addition, a registered nurse or a licensed practical nurse shall be employed so that on-site nursing coverage is provided eight (8) hours per day, seven (7) days per week during the day shift. Provision shall also be made for a registered nurse to be ON CALL during all hours when a registered nurse is not on duty.

B. A "convalescent and nursing care (C&NC) unit" is a nursing home unit operated in conjunction with a hospital where there is a direct physical connection between such unit and the hospital, which permits the movement of the patients and the provision of services without going outside the building or buildings involved. Such units are subject to these regulations.

C. A "boarding care home" shall mean a licensed facility or unit used to provide care for aged or infirm persons who require only personal or custodial care and related services in accordance with these regulations. A boarding care home license is required if the persons need or receive personal or custodial care only. Nursing services are not required. Examples of personal or custodial care: board, room, laundry and personal services; supervision over medications which can be safely self-administered; plus a program of activities and supervision required by persons who are not capable of properly caring for themselves.

D. "Existing facility" shall mean a nursing home or a boarding care home licensed prior to the effective date of these regulations. It shall also mean a nursing home or boarding care home or addition under construction or for which final working drawings and specifications have been approved not more than one

year prior to the effective date of these regulations.

E. A "patient" is any individual cared for in a nursing home.

F. A "resident" is any individual cared for in a boarding care home.

G. The term "board" as used in these regulations shall mean the "Minnesota State Board of Health." The term "department" shall mean the "Minnesota Department of Health."

H. The "licensee" is the person or governing body to whom the license is issued. The licensee is held responsible for compliance with the applicable regulations herein.

I. The term "nursing personnel" shall include registered nurses, licensed practical nurses, nurse aides and orderlies.

J. A "licensed nurse" shall mean a registered nurse or a licensed practical nurse.

K. "Ambulatory" shall mean a patient or resident who is physically and mentally capable of getting in or out of bed and walking a normal path to safety, including the ascent and descent of stairs in a reasonable period of time without the aid of another person.

L. Types of patients or residents not to be received. Maternity patients, disturbed mental patients (see MHD 51(c)) and patients or residents, who in opinion of the attending physician have or are suspected of having a disease endangering other patients or residents shall not be admitted to or retained in either a nursing home or a boarding care home.

M. Children not to be received. A nursing home or a boarding care home for adults shall not receive either sick children or well children for care. For the purpose of these regulations, children are defined as persons under 16 years of age.

N. Capacity prescribed. Each license shall specify the maximum allowable number of patients or residents to be cared for at any one time. No greater number of patients or residents shall be kept than is authorized by the license.

O. License to be posted. The license shall be conspicuously posted in an area where patients or residents are admitted.

P. Home not to be misrepresented. A nursing home or a boarding care home shall not use in its title the words of description: "Hospital," "Sanitorium," "Rehabilitation Facility," "Rehabilitation Center" or any other words which indicate that a type of care or service is provided which is not covered by the license.

Q. Separate Licenses. Separate licenses shall be required for institutions maintained on separate premises even though operated under the same management. A separate license shall not be required for separate buildings maintained by the same owner on the same premises.

R. Evaluation. Facilities shall be subject to evaluation and approval of the physical plant and its operational aspects prior to a change in ownership, classification, capacity or services.

S. Preliminary planning. Contact shall be made with the department to discuss the proposed program, location, staffing requirements and other pertinent aspects prior to planning a new care facility or purchasing or leasing an existing care facility.

T. Procedure for licensing. Any person acting individually or jointly with other persons who propose to build, own, establish or operate a nursing home or a boarding care home shall submit a Preliminary Information Questionnaire as furnished by the department at the time of initial contact as specified under MHD 44 (s). Application for license to establish or maintain such a facility shall be made in writing and submitted on forms provided by the department. If the applicant is a corporation, the officers shall furnish the department a copy of the Articles of Incorporation and By-Laws and any amendments thereto as they occur. In addition, out-of-state corporations shall furnish the department with a copy of the Certificate of Authority to do business in Minnesota. No license shall be issued until all final inspections and clearances pertinent to applicable laws and regulations have been complied with.

U. No discrimination. There shall be no discrimination with respect to patients or residents, employees or staff on the ground of race, color, or national origin.

V. License fees. Each application for either an initial or renewal license to operate a nursing home or boarding care home shall be accompanied by a fee based upon the formula established in 7 MCAR S 1.701, Exhibit I. A bed must be licensed if it is available for use by patients or residents. If the number of licensed beds is increased during the term of the license, $12 for each additional bed shall be paid. There shall be no refund for a decrease in licensed beds.

W. License expiration date. Initial and renewal licenses shall be issued for the calendar year for which application is made and shall expire on December 31 of such year. License renewals shall be applied for on an annual basis. Applications for license renewals shall be submitted no later than December 31 of the year preceding the year for which application is made. Any application for an initial license submitted after November 1 shall be considered as an application for the following year; provided, however, that a license may be issued and be effective prior to January 1 of the year for which

application is made without payment of fees for two years.

X. Variance and waivers.

1. General provisions. A nursing home or boarding care home may request that the department grant a variance or waiver from the provisions of these rules.

2. Contents of request. All requests for a variance or waiver shall be submitted to the department in writing. Each request shall contain the following information:

a. The specific rule or rules for which the variance or waiver is requested;

b. The reasons for the request;

c. The alternative measures that will be taken if a variance or waiver is granted;

d. The length of time for which the variance or waiver is requested;

e. Such other relevant information necessary to properly evaluate the request for the variance or waiver.

3. Criteria for evaluation.

a. The decision to grant or deny a variance or waiver shall be based on the department's evaluation of the following criteria:

(1) The variance or waiver will not adversely affect the health, treatment, comfort, safety or well-being of a patient or resident;

(2) The alternative measures to be taken, if any, are equivalent to or superior to those prescribed in the rules; and

(3) Compliance with the rule or rules would impose an undue burden upon the applicant.

b. The applicant shall be notified in writing of the department's decision. If a variance or waiver is granted, the notification shall specify the period of time for which the variance or waiver will be effective and the alternative measures or conditions, if any, to be met by the applicant.

4. Effect of alternative measures or conditions. All alternative measures or conditions attached to a variance or waiver shall have the force and effect of the licensure rule(s) and shall be subject to the issuance of correction orders and penalty assessments in accordance with the provisions of Minnesota Statutes, sections 144.653 and 144A.10. The period of time for correction and the amount of fines specified for the

particular rule for which the variance or waiver was requested, shall apply.

5. Renewal.

a. Any request for the renewal of a variance or waiver shall be submitted in writing prior to its expiration date. Renewal requests shall contain the information specified in section 2. above.

b. A variance or waiver shall be renewed by the department if the applicant continues to satisfy the criteria contained in section 3. above and demonstrates compliance with the alternative measures or conditions imposed at the time the original variance or waiver was granted.

6. Denial, revocation or refusal to renew. The department shall deny, revoke or refuse to renew a variance or waiver if it is determined that the criteria specified in section 3. above are not met. The applicant shall be notified in writing of the decision to deny, revoke or refuse to renew the variance or waiver, informed of the reasons for the denial, revocation or refusal to renew, and informed of the right to appeal this decision.

7. Appeal procedure. An applicant may contest the denial, revocation or refusal to renew a variance or waiver by requesting a contested case hearing under the provisions of the Administrative Procedures Act, Minnesota Statutes, section 15.0411 et. seq. The applicant shall submit, within 15 days of the receipt of the department's decision, a written request for a hearing. The request for hearing shall set forth in detail the reasons why the applicant contends the decision of the department should be reversed or modified. At the hearing, the applicant shall have the burden of proving that it satisfied the criteria specified in section 3. above, except in a proceeding challenging the revocation of a variance or waiver.

MHD 45 Administration

(APPLIES TO BOTH NURSING HOMES AND BOARDING CARE HOMES)

(a) **Licensee.** The licensee in each nursing home or boarding care home shall be responsible for its management, control and operation. The licensee shall develop written by-laws and/or policies which shall be available to all members of the governing body and shall assume full legal responsibility for matters under its control, for the quality of care rendered and for compliance with applicable laws and regulations of legally authorized agencies. The responsibilities of the licensee shall include:

(1) Full disclosure of each person having an interest of ten (10) per cent or more of the ownership of the home to the Board with any changes promptly reported in writing. In case of corporate ownership, the name and address of each officer and director shall be made known. If the home is organized as a partnership, the name and address of each partner shall be furnished. In the case of a home operated by a lessee, the persons or business entities having an interest in the lessee organization shall be reported and an executed copy of the lease agreement furnished. If the home is operated by the holder of a franchise, disclosure as specified above shall be made as to the franchise holder who shall also furnish an executed copy of the franchise agreement.

(2) Appointment of a licensed nursing home administrator[1] or a person in charge who shall be responsible for the operation of the home in accordance with law and established policies. The authority to serve as administrator or person in charge shall be delegated in writing. The administrator of a hospital with a convalescent and nursing care unit may serve both units.[1]

(3) Notification of the termination of service of the administrator or the person in charge as well as the appointment of a replacement shall be given within five (5) days in writing to the Board by the governing body of the home. If a licensed nursing home administrator or person in charge of the boarding care home is not available to assume the position immediately, such notification to the Board shall include the name of the person temporarily in charge of the home.[1] The governing body of a nursing home shall not employ an individual as the permanent administrator until it is determined that he qualifies for licensure as a nursing home administrator in Minnesota.

(4) Provision of a competent staff and maintenance of professional standards in the care of patients and residents.

(5) Employment of qualified personnel. There shall be sufficient personnel to provide the basic services such as food service, housekeeping, laundry and plant maintenance. Employees or volunteers under 18 years of age shall be under direct supervision.

(6) Provision of facilities, equipment and supplies for care consistent with the needs of the patients and residents.

(7) Provision of evidence of adequate financing, proper administration of funds, and the maintenance of required statistics.

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[1] See the Nursing Home Administrator Licensing Law, Laws of Minnesota, 1969, Chapter 770.

(b) **Availability of Licensing Regulations.** Copies of these licensing regulations shall be made readily available for the use of all personnel of the facility. All personnel shall be instructed in the requirements of the law and the regulations pertaining to their respective duties and such instruction shall be documented. All personnel shall be fully informed of the policies of the home and procedure manuals to guide them in the performance of their duties shall be readily available.

(c) **Administrator or Person in Charge.** There shall be one individual who shall be in immediate charge of the operation and administration of the nursing home or boarding care home, whether he is the "Licensee" or a person designated by the licensee. He shall be empowered to carry out the provisions of these regulations and shall be charged with the responsibility of doing so. The person in charge shall be full-time, serving only one nursing home and shall not serve as the director of nurses.

(d) **Delegation of Authority.** The administrator or person in charge shall not leave the premises without giving information as to where he can be reached and without delegating authority to a person who is at least 21 years of age, physically able, competent and capable of acting in an emergency. At no time shall a home be left without competent supervision. The person left in charge shall have the authority and competency to act in an emergency. The name of the person in charge at the time shall be posted at the main entrance.

(e) **Type of Admissions.** The administrator, in cooperation with the director of the nursing service in a nursing home or the person in charge in a boarding care home shall be responsible for exercising discretion in the type of patients or residents admitted to the home in accordance with the admission policies of the home. Patients or residents shall not be accepted or retained for whom care cannot be provided in keeping with their known physical, mental or behavioral condition.

(f) **Census Register.**[1] Each nursing home and boarding care home shall maintain a permanent, bound, chronological registry book for all persons admitted showing the date of admission, name of patient or resident and date of discharge or death.

(g) **Agreement as to Rates and Charges.** At the time of admission, there shall be a written agreement between the home and the patient, resident, his agent or guardian regarding the base rate, extra charges made for care or services, obligations concerning payment of such rates and charges and the refund policy of the home. All patients' and residents' bills shall be itemized as to the services rendered.

(h) **Responsibilities of the Administrator or Person in Charge.** These shall include:

(1) Maintenance, completion and submission of reports and records as required by the Board.

(2) Formulation of written general policies; admission, discharge and transfer policies; and personnel policies, practices and procedures that adequately support sound patient or resident care, including:

(aa) Current personnel records for each employee (see MHD 48 (a11)).

[1] See MHD 48 (a5).

(bb) Written job descriptions for all positions which define responsibilities, duties and qualifications. These shall be readily available for all employees with copies on file in the administrator's office. Each employee shall be thoroughly familiar with his duties and responsibilities.

(cc) Work assignments consistent with qualifications and the work load.

(dd) Maintenance of a weekly time schedule which shows each employees' name, job title, hours of work and days off for each day of the week. This schedule shall be dated and posted in a convenient location for employees' use. These schedules, the time cards and the payroll records shall be kept on file in the home for three years and shall be available to representatives from the Department.

(ee) Orientation for new employees and volunteers and provision of a continuing in-service education program for all employees and volunteers to give assurance that they understand the proper method of carrying out all procedures.

(ff) Written personnel policies which specify hours of work, vacations, illness, sick leave, holidays, retirement, employee health services, group insurance, promotions, personal hygiene practices,[1] attire, conduct, disciplinary actions and other items which will enable employees to perform their duties properly.

(3) Establishment of a recognized accounting system. There shall be financial resources at the time of initial licensure to permit full service operation of the home for six (6) months without regard to income from patient or resident fees.

(4) The development and maintenance of channels of communications with employees which include:

(aa) Distribution of written personnel policies to employees.

(bb) Regularly scheduled meetings of supervisory personnel.

(cc) Employee suggestion system.

(dd) At least annual employee evaluations.

(5) Establishing and maintaining effective working relationships with hospitals and other types of care facilities and with public or voluntary health and social agencies for the purpose of:

(aa) Developing specific patient or resident transfer procedures, including, where possible, a community-wide transfer agreement and a uniform inter-agency referral form and providing for the transfer of pertinent information to go with the patient or resident to promote continuity of care.

(bb) Promoting the sharing of services and facilities.

(cc) Conducting and participating in cooperative educational programs.

(dd) Participating in areawide planning activities to assist in determining the need for additional beds and facilities and establishing alternatives to institutional living[2].

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[1] See MHD 46 (h).

[2] Examples of such alternatives are day care programs, foster home programs, housing for the well elderly, home care programs, activity centers, out-patient services and community-wide recreation and adult education programs.

(6) Developing written disaster plan with procedures for the protection and evacuation of all persons in the case of fire or explosion or in the event of floods, tornados or other emergencies. The plan shall be developed specifically for each facility and its type of occupancy in cooperation with the State Fire Marshal, the local fire department and the Office of Civil Defense. The plan shall include information and procedures relative to: locations of alarm signals and fire extinguishers, frequency of drills,[1] assignments of specific tasks and responsibilities of the personnel on each shift, persons and local emergency departments to be notified, precautions and safety measures during tornado alerts, procedures for evacuation of ambulatory and non-ambulatory persons during fire or floods, planned evacuation routes from the various floor areas to safe areas within the building, or from the building when necessary, and arrangements for temporary emergency housing in the community in the event of total evacuation. Copies of the disaster plan containing the basic emergency procedures shall be posted at all nurses' stations, attendants' stations, kitchens, laundries and boiler rooms. Complete copies of the detailed disaster plan shall be available to all supervisory personnel.

THE FOLLOWING APPLIES TO NURSING HOMES ONLY:

(7) Establishment of a patient care policy committee[2] in each nursing home with representation from all disciplines directly involved in patient care for the development and implementation of guidelines for patient care.

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[1] These drills do not involve the evacuation of patients except when such is planned in advance.

[2] To include at least one physician and one registered nurse to govern the medical, nursing and other services provided.

4295-4328

7 MCAR S 1.046 General policies.

(APPLIES TO BOTH NURSING HOMES AND BOARDING CARE HOMES)

(a) **Visiting Hours.**[1] Visiting hours shall be established as a written policy of the home and shall be posted in plain view of visitors. A patient's or resident's pastor shall be permitted to visit him at any time. Privacy for consultation, communion, or for interviews shall be the privilege of every patient or resident. Relatives or guardians shall be allowed to visit critically ill patients in nursing homes at any time.

(b) **Telephones.** There shall be at least one non-coin operated telephone which is accessible at all times in case of emergency. Patients and residents shall have access to a public telephone at a convenient location within the building.

(c) **Keys.** The person in charge of the home on each work shift shall have keys to all doors and locks in the home in his possession with the exception of keys to the business office.

(d) **Smoking.** Patients or residents shall not be permitted to smoke in bed except in the case of a bedfast patient while under the direct supervision of a staff member.

(e) **Mail.** Patients and residents shall receive their mail unopened unless a legal guardian has requested in writing that the mail be reviewed. The outgoing mail shall not be censored.

(f) **Funds and Possessions.** No home shall handle the personal major business affairs of a patient or resident without written legal authorization by his legal guardian.

(g) **Animals or Birds.** No animals, birds, turtles or reptiles shall be housed in a nursing home or in a boarding care home.

(h) **Personal Hygiene of All Employees and Volunteers.** There shall be strict adherence to established policies and procedures relating to personal hygiene practices[2] including clean attire and frequent and thorough handwashing techniques at all times and in all areas of the home.

(i) **Inspection by Department.** All areas of the facility and all records related to the care and protection of patients and residents including patient, resident and employee records shall be open for inspection by the Department at all times for the purposes of enforcing these regulations.

(j) **Outside Services.** Where laundry or food service is obtained from an outside agency or establishment, such service shall be provided pursuant to a written agreement which shall specify that the service meets the same standards as are required under these regulations.

(k) **Procedure at Death.** When a patient or resident dies in a home, the administrator, nurse or person in charge shall contact a relative, guardian or the placement agency regarding funeral arrangements. The body shall be

[1] Unrestricted visiting hours are recommended.
[2] See MHD 45 (h)(2)(ff).

separated from other patients or residents until removed from the home. Where reasonably possible, no body shall remain in a home for more than 12 hours.

THE FOLLOWING APPLIES TO NURSING HOMES ONLY:

4295-4328

(1) Use of oxygen.

1. Oxygen may be used in a nursing home on an emergency or nonemergency basis. A registered nurse or other person trained in the use of oxygen shall be responsible for its administration and shall be on duty during the entire time that oxygen is administered. The following precautions shall be taken:

a. Signs indicating "No Smoking" shall be placed at the bedside and at the entrance to the room.

b. All matches, ash trays and other smoking material shall be removed and kept out of the room.

c. No oil or grease shall be used on oxygen equipment.

d. Oxygen tanks shall be securely anchored when stored or in use.

2. A nursing home, which admits or retains patients in need of oxygen, on other than an emergency basis, shall comply with the following provisions:

a. The nursing home shall provide 24 hour licensed nurse coverage, unless it only admits patients who can self-administer oxygen.

b. The patient's attending physician shall submit written orders for oxygen, and, if self-administration of oxygen is also ordered, the physician shall specify that the patient is mentally and physically capable of administering oxygen without the assistance of the nursing home staff.

c. The patient care policy committee shall develop and implement written policies regarding the provision of oxygen in the nursing home. These policies shall at a minimum, include:

(1) Any limitations placed on the patient or other patients such as room assignments and smoking policies.

(2) Any restrictions placed on patients using portable oxygen equipment as to mobility within the facility or participation in activities.

(3) A mechanism to periodically assess those patients authorized to self-administer oxygen as to their continued capability to self-administer it.

(4) Precautions to be taken, in addition to those in section 1.a.-d. above, to assure the safe use of oxygen.

d. All nursing homes which admit patients in need of oxygen shall inform these patients of any limitations or restrictions imposed by the nursing home prior to admission or at the time the use of oxygen is ordered by the physician.

e. The director of nursing shall be responsible for providing training to the nursing home staff regarding the procedures to be followed for the administration of oxygen, for monitoring the use and effectiveness of oxygen, special precautions to be taken, and the care and cleaning of equipment.

f. Written policies and procedures shall be developed and implemented regarding the care, storage, cleaning and sanitizing of oxygen equipment and supplies.

3. All oxygen used in the nursing home shall be from cylinders which bear labelling indicating that the oxygen is for medical purposes.

4295-4328

7 MCAR S 1.047 Personnel.

(APPLIES TO BOTH NURSING HOMES AND BOARDING CARE HOMES)

(a) Tuberculosis testing of employees. The nursing home or boarding care home shall be responsible for assuring that all employees, prior to employment and as otherwise indicated in this rule, show freedom from tuberculosis in accordance with the provisions of this section.

1. All employees, unless certified in writing by a physician to have had a positive reaction to a standard intradermal tuberculin test, shall have a standard intradermal tuberculin test with purified protein derivative (Mantoux) within 45 days prior to employment.

a. If the tuberculin test is negative, the employee shall be considered free from tuberculosis.

b. If the tuberculin test is positive or if the employee's physician has certified a positive reaction to the tuberculin test, the employee shall submit prior to employment and annually thereafter, a written report by a physician of a negative full-sized chest x-ray taken within the previous 45 days. Annual written reports of the employee's negative chest x-ray shall be required for five years after a documented positive standard intradermal tuberculin test, after which time the employee shall be considered free from tuberculosis.

2. All employees showing positive reaction to the tuberculin test who have taken a complete course of preventive therapy as directed by their physician, shall be considered free from tuberculosis at the completion of the program and shall be exempt from the testing requirements of this section.

3. Written documentation of compliance with the above requirements shall be filed in the employee's personnel record.

(b) **Capability.** Every employee shall be mentally and physically capable of performing the work to which assigned, in good health and free from colds and other communicable diseases. The above criteria shall be reviewed if the person is to be assigned to another job in the home.

(c) **Assignment to Extra Duties.** A person shall not be assigned to duty for two (2) consecutive work periods[1] except in a documented emergency.

(d) **Illness or Accident.** Personnel who have missed work days because of illness or accident shall report to the registered nurse or person in charge who may authorize return to work. If in doubt the nurse or person in charge shall consult with a physician by telephone and be guided by his opinion. This shall be made a part of the employee's personnel record. (See Records and Reports, MHD 48.)

(e) **Personal Belongings.** Personnel shall not keep wraps, clothing or other belongings in the food service or patient and resident areas. Provision shall be made elsewhere for their safe-storage.

[1] A work period is normally eight (8) hours.

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7 MCAR S 1.048 Records and reports.

(APPLIES TO BOTH NURSING HOMES AND BOARDING CARE HOMES)

A. Patient or resident care record. An individual chart shall be kept on each patient and resident admitted to the home. All entries shall be made with a pen and signed by the person making the entry. Accurate, complete and legible records for each patient or resident from the time of admission to the time of discharge or death shall be kept current and shall be maintained in a chart holder at the nurses' or attendants' station.[1]

1. Admission record. The admission record shall be initiated for each patient and resident within 72 hours after admission and contain identifying information including: name, previous address, social security number, sex, marital status, age, date and place of birth, previous occupation, date and hour of admission; name, address and telephone number of the nearest relative, and the person to be notified in an emergency or death; information as to funeral arrangements, if available; church affiliation and pastor; and the name of the patient's or resident's attending physician. At the time of discharge or death, this record shall be completed with the date, time, reason for discharge, discharge diagnosis and condition; or date, time and cause of death. In either case the signature and address of the responsible person to whom released shall be obtained.

2. Medical record. The medical record shall be initiated for each patient or resident within 72 hours in accordance with MHD 49 (c).

3. Filing and disposition of records. The patient or resident care record shall be incorporated into an individual folder and filed at the nurses' or attendants' station. The records of discharged patients or residents shall be promptly completed and filed in the home.

Patients' or residents' medical records and patient care plans in nursing homes shall be considered confidential but they shall be made available to all persons in the home who are responsible for the care of the patient or resident and they shall be open to inspection by representatives of the department. When a patient or resident is discharged to another care facility pertinent information relative to his care shall accompany the patient or resident.

[1]A central control point for the storage of records and medications.

4. Storage and preservation of records. Space shall be provided for the safe storage of patients' or residents' records at the nurses' or attendants' station[1] and in general storage. Records shall be filed so as to be readily accessible. All patients' and residents' records shall be preserved for a period of at least five years following discharge or death.

5. Census register. A register shall be kept in a separate bound book, listing in chronological order the names and dates of all admissions and discharges. This register shall be kept in such a manner that total admissions, discharges, deaths and patient or resident days can be calculated.

6. Reports to the department. Reports regarding statistical data and services furnished shall be submitted on forms furnished by the department. Copies shall be retained by the home.

7. Correspondence with department. All correspondence with the department shall be kept as a permanent, accessible record.

8. Record of patients' and residents' funds.

a. Admission policy. The admission policies of the nursing home and boarding care home shall specify whether the home will accept the personal funds of patients' or residents' for safekeeping. If the nursing home or boarding care home accepts the personal funds of patients' and residents' for safekeeping, written policies regarding the handling and protection of the funds shall be established in accordance with this section.

b. Authorization.

(1) The personal funds of the patient or resident shall not be accepted for safekeeping without written authorization from the patient or resident or from the patient's or resident's legal guardian or conservator or representative payee.

(2) A copy of this written authorization shall be retained in the patient's or resident's records.

(3) A "representative payee" is an individual designated by the Social Security Administration to receive benefits on behalf of the patient or resident.

[1] A central control point for the storage of records and medications.

c. Personal fund accounts.

(1) The personal funds of patients' and residents' shall not be commingled with the funds of the nursing home or boarding care home or with the funds of any person other than patients or residents of the home, unless otherwise authorized by law.

(2) The personal funds of patients' and residents' shall not be used in any way for the purpose of the nursing home, boarding care home or any other patient or resident and shall be free from any liability that the nursing home or boarding care home incurs.

(3) A person, firm, partnership, association or corporation which operates more than one facility licensed in accordance with the provisions of Minnesota Statutes, sections 144.50 to 144.56 or Minnesota Statutes, chapter 144A shall not commingle patient or resident funds from one facility with another.

(4) A written accounting system for the personal funds of patients and residents shall be developed and maintained.

(a) Each patient or resident and the patient's or resident's legal guardian or conservator, representative payee or other person designated by the patient or resident shall be allowed access to the written records of all financial arrangements and transactions involving the individual patient's or resident's funds in accordance with the nursing home's and boarding care home's written policy. Such policy shall assure that access be provided in accordance with the needs of patients and residents.

(b) Each patient or resident or the patient's or resident's legal guardian or conservator, representative payee or other person designated in writing by the patient or resident, shall be given a written quarterly accounting of the financial transactions made by or on behalf of the patient or resident.

(c) An individual written record shall be maintained for each patient or resident which shall include the following items:

(i) The date, amount and source of funds deposited by or on behalf of a patient or resident.

(ii) The name of all individuals, other than the patient or resident who have been authorized in writing by the patient or resident or the patient's or resident's legal guardian or conservator or representative payee to withdraw or expend funds from the patient's or resident's personal account.

(iii) The date and the amount of all

withdrawals from the patient's or resident's personal account.

(5) Unless otherwise specified by law, the personal funds of any patient or resident in excess of $150 shall be deposited in a demand account in a financial institution authorized to do business in Minnesota, the deposits which are federally insured, except that a facility that is operated by a county shall deposit such funds with the county treasurer. This account must be in a form which clearly indicates that the facility has only a fiduciary interest in the funds. Records shall be maintained which specify on whose behalf funds are deposited or withdrawn from this account.

(6) If a patient's or resident's personal funds are deposited in an interest bearing account, the accrued interest shall, unless otherwise specified by law, be prorated in accordance with the amounts attributable to each patient or resident and recorded on the patient's or resident's account.

(7) Upon the request of the patient or resident or the patient's or resident's legal guardian or conservator or representative payee, the nursing home or boarding care home shall return all or any part of the patient's or resident's funds given to the nursing home or boarding care home for safekeeping, including interest, if any, accrued from deposits. The nursing home or boarding care home shall develop a policy specifying the period of time during which funds can be withdrawn on each day of the week. Funds kept outside of the facility shall be returned within five business days.

d. Discharge of patient or resident. Upon discharge of a patient or resident, unless the patient's or resident's bed is being held for anticipated readmission, all funds of that patient or resident shall be returned to the patient or resident or to the patient's or resident's legal guardian or conservator, representative payee or other person designated, in writing, by the patient or resident with a written accounting in exchange for a signed receipt. Funds which are maintained outside of the nursing home or boarding care home shall be returned within five business days.

e. Death of a patient or resident. Upon the death of a patient or resident, the nursing home or boarding care home shall provide a complete accounting of that patient's or resident's funds.

9. Policy records. All policies and procedures adopted by the home shall be placed on file and be made readily accessible to the personnel.

10. Unusual occurrences. Any occurrence of food poisoning or reportable disease shall be reported immediately to the department.

11. Employees' personnel records. A current personnel record shall be maintained for each employee and placed on file

in a locked cabinet in the office of the administrator, person in charge or the business office. These records shall be available to representatives of the department and shall contain the following information:

a. Person's name, address, telephone number, age and birth date, sex, marital status, Minnesota license or registration number, if applicable; name, address and telephone number of person to be called in case of emergency; social security number, and similar identifying data.

b. Resume of individual's training, experience and previous employment; recommendations and references from previous employers.

c. Dates and results of any pre-employment physical examination and of any subsequent physical examinations.[1]

d. Date of employment in home, type of position currently held in home; hours of work, attendance and salary records.

e. The record of all illnesses and accidents.

f. A listing of all institutes or training courses attended.

g. At least annual evaluations concerning employee's work performance.

h. Date of resignation or discharge and reason for leaving.

[1]Annual physical examinations are recommended.

THE FOLLOWING APPLIES TO NURSING HOMES ONLY:

(b) **Nurses' Record.** The nurses' record and nurses' notes for each patient shall include: the condition of the patient at the time of admission; temperature, pulse, respiration, blood pressure and pertinent observations at least every four (4) hours during the first 24 hours and as often as indicated by the condition of the patient or ordered thereafter, but at least weekly; the patient's weight at the time of admission and at least once each month thereafter; the patient's general condition, actions and attitudes; significant observations on, for example, behavior, orientation, judgment, moods; date, time, quantity of dosage and method of administration of all medications and the signature of the nurse or authorized persons who administered same; dates and times of all treatments and dressings; dates and times of visits by physicians, dentists or podiatrists; visits to clinics or hospitals; a full record of any restriction of activity as ordered by a physician including the reason for restriction; any change in the patient's sleeping habits or appetite; and pertinent factors regarding changes in the patient's general condition. A detailed incident report of any accident, injury or error in drug administration and the action taken shall be completed immediately. Nurses' notes shall be recorded weekly on all patients or more often if indicated by their condition. All nurses' notes shall be written and signed by the person giving the medication or making the observation.

THE FOLLOWING APPLIES TO BOARDING CARE HOMES ONLY:

(c) **Resident Care Record.** The care record for each resident shall contain the resident's weight at the time of admission and at least once each month thereafter and a summary completed at least monthly by the person in charge indicating the resident's general condition, actions, attitude, changes in sleeping habits or appetite and any complaints. A detailed incident report of any accident or injury and the action taken shall be recorded immediately. All dates and times of visits by physicians or podiatrists and visits to clinics, dentists or hospitals shall be recorded.

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1 Annual physical examinations are recommended.

MHD 49 Medical and Dental Services

(APPLIES TO BOTH NURSING HOMES AND BOARDING CARE HOMES)

(a) **Physician to be Designated.** Each patient or resident or his legal guardian or the agency responsible for his care shall designate a licensed physician for the supervision of the care and treatment of the patient or resident during his stay in the home. This attending physician shall reside in the same or in a nearby community.

(b) **Emergency Care.** Each nursing home or boarding care home shall have an agreement with one or more licensed physicians to provide emergency services and to act in an advisory capacity. A schedule, which lists the names, telephone numbers and call days of the emergency physician(s) shall be posted in each nurses' or attendants' station.

(c) **Physicians' Examinations and Orders.**

(1) Each patient or resident shall have an admission medical history and complete physical examination performed and recorded by a physician within five (5) days prior to or within 72 hours after admission. The medical record shall include: the report of the admission history and physical examination; the admitting diagnosis and report of subsequent physical examinations; a report of a standard Mantoux tuberculin test or, if the Mantoux test is positive or contraindicated, a chest X-ray within three (3) months in advance of admission and as indicated thereafter; reports of appropriate laboratory examinations; general medical condition including disabilities and limitations; instructions relative to the patient's or resident's total program of care; written orders for all medications with stop dates, treatments, special diets and for extent or restriction of activity; physician's orders and progress notes; and condition on discharge or transfer, or cause of death.

(2) Each nursing home patient shall be examined by a physician at least every 6 months and each boarding care home resident at least annually or more often if indicated by the clinical condition. A progress note shall be recorded in the patient's or resident's record at the time of each examination.

(3) If orders for the immediate care of a patient or resident are not available at the time of admission, the emergency physician shall write temporary orders which are effective for a maximum of 72 hours.

(d) **Dental Care.** Patients and residents shall be provided with dental services appropriate to their needs.

(e) **Emergency Dental Care.** Nursing homes and boarding care homes shall have a written agreement with a licensed dentist to provide emergency dental care when necessary. The name and address of the emergency dentist shall be posted at each nurses' or attendants' station.

(f) **Dental Records.** All dental examinations and treatments shall be recorded in the patient's or resident's care record.

(g) **Dentists' Recommendations.** Personnel in the home shall assist patients and residents in carrying out dentists' recommendations.

(h) **Identification of Dentures.** A procedure shall be established for the accurate identification of patients' and residents' dentures.

THE FOLLOWING APPLY TO NURSING HOMES ONLY:

(i) **Admissions.** A patient shall be admitted to a nursing home only upon the recommendation of a physician.[1]

(j) **Telephone Orders.** Telephone orders shall be immediately recorded in the patient's record by the person authorized by the home and shall be counter-signed by the physician within seven (7) days.

[1] See MHD 45 (e).

MHD 50 Staffing and Services

(APPLIES TO BOTH NURSING HOMES AND BOARDING CARE HOMES)

(a) **General.** Adequate staff shall be provided to meet the nursing and personal care needs and the maintenance necessary for the well-being of the patients and residents at all times. There shall be at least one responsible person awake, dressed and on duty at all times. These persons shall be at least twenty-one (21) years of age and capable of performing the required duties of evacuating the patients and residents. Each employee and volunteer shall wear a badge which includes name and position.

(b) **Activities Program.**[1] There shall be an organized social and recreational activities program in all nursing homes and boarding care homes which shall be designed to meet the normal needs of all patients and residents for occupation, diversion and maintenance. The activities program shall create a normal living environment which is compatible with the needs and interests of the majority of patients and residents. This shall be integrated into the total care program. The patient or resident shall be encouraged to be involved in his own care through a purposeful activities program which allows him to function at his maximum physical, mental, social and emotional capacity. The activities program shall be supervised[2] by a person who is trained and/or experienced in the supervision of such a program.[3] The activities program shall be regularly scheduled at least five (5) days each week with the program posted one week in advance. A sufficient number of personnel shall be assigned to assist with the activities program on a regular basis. Appropriate space, equipment, materials and storage areas shall be provided. This shall include recreational space and activities out-of-doors.

(c) **Spiritual Needs.** The home shall provide adequate facilities and arrange for personnel to meet the spiritual needs of the patients or residents.

(d) **In-Service Education.** There shall be a continuing in-service educational program for all personnel with thorough job orientation for all new personel in each nursing home[4] and boarding care home.

THE FOLLOWING APPLY TO NURSING HOMES ONLY:

(e) **Nursing Staff.**

(1) The nursing home shall have on duty at all times a sufficient number of qualified nursing personnel which includes registered nurses, licensed practical nurses, nurse aides and orderlies to meet the needs of the patients on all nurses' stations, on all floors and in all buildings if more than one building is involved. This includes relief duty, weekends and vaca-

[1] A *Handbook for Activities Supervisors* is available from the Department for use as a guide.

[2] Employed on the basis of ⅗ hour per bed per week which is equal to 40 hours per week for 60 beds.

[3] A Certified Occupational Therapy Assistant (COTA) is qualified to direct such a program. It is recommended that consultation be provided for the activities director by a Registered Occupational Therapist or a Therapeutic Recreational Specialist.

[4] In nursing homes having ninety (90) beds or more it is recommended that one person other than the director of nursing service be responsible for coordination of all in-service education programs.

tion replacements. On and after July 1, 1973, a minimum of two (2) hours of nursing personnel per patient per 24 hours plus additional qualified nursing staff commensurate with the needs of the patients shall be provided.

(2) The nursing staff shall be employed and used for nursing duties only. There shall be sufficient additional staff for housekeeping, dietary, laundry and maintenance duties and these persons shall not be used to give nursing care.

(3) Each nursing home shall have a director of nursing service who is a registered nurse currently licensed in Minnesota.

(4) The director of the nursing service shall be employed full-time, a minimum of 40 hours per week, during the day shift (between 7 a.m. and 7 p.m.) and devote full time to the nursing service of the facility.

(5) A licensed nurse who serves as the assistant to the director of nursing service shall be designated and be responsible for the duties of the director in her absence and shall assist her in carrying out her responsibilities so that the functions of the director of nursing service are maintained seven (7) days per week.

(6) The director of nursing service shall be trained in rehabilitation nursing techniques and trained and/or experienced in areas such as nursing service administration, or psychiatric or geriatric nursing.

(f) **Responsibilities of the Director of the Nursing Service.** The director of nursing service shall be responsible for:

(1) The total nursing care of patients and the accuracy of the nursing care records.

(2) Establishing procedures for general nursing care and for aseptic techniques; developing nursing policy and procedure manuals and written job descriptions for each level of nursing personnel. Written nursing procedure manuals shall be available at each nurses' station.

(3) Planning and conducting written orientation programs for new nursing personnel, and continuing in-service education for all nursing home personnel, if there is no one designated who is responsible for all in-service education.[1] No nursing personnel shall perform duties for which they have not had proper and sufficient training. Duties assigned to nursing personnel shall be consistent with their training, experience and licensure.

(4) Recommending to the administrator the numbers and levels of nursing personnel to be employed.

(5) Participating in recruitment and selection of nursing personnel.

(6) Assigning, supervising and evaluating the performance of all nursing personnel.

(7) Participating in the selection of prospective patients in terms of nursing service needed and nursing competencies available.

(8) Assuring that a patient care plan[2] is established and implemented for each patient and that the plan is periodically reviewed and revised as necessary, but at least every thirty (30) days.

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[1] In nursing homes having ninety (90) beds or more it is recommended that one person other than the director of nursing service be responsible for coordination of all in-service education programs.

[2] Also known as a Nursing Care Plan; see MHD 50 (h).

(9) Coordinating nursing services for the patients in the home with other patient care services provided both within and outside the institution.

(10) Participating in planning, decision making and budgeting for nursing care.

(11) Accompanying or assigning other qualified nursing personnel to accompany physicians when attending patients.

(12) Recommending termination of employment of nursing personnel when necessary.

(13) Participating in discharge or transfer planning for patients.

(g) **Rehabilitation Nursing Care.**[1] There shall be an active program of rehabilitation nursing care directed toward assisting each patient to achieve and maintain his highest level of self-care and independence as recorded in the patient care plan.[2] Continuous efforts shall be made to encourage ambulation and purposeful activities. A supportive program which is directed toward prevention of deformities through positioning and range of motion shall be implemented and maintained. There shall be in effect a continuous program of bowel and bladder training to reduce incontinence and the unnecessary use of catheters. Rehabilitation nursing care initiated in a hospital shall be continued immediately upon admission to the nursing home in accordance with the physician's orders. All nursing personnel shall be taught rehabilitation nursing procedures including care of the skin and shall practice them in their daily care of patients. These measures include:

(1) Maintaining natural body alignment and proper positioning of bedfast patients.

(2) Encouraging and assisting bedfast patients to change positions at least every 2 hours, day and night.

(3) Making every effort to keep patients active and out of bed for reasonable periods of time, except when contra-indicated by physicians' orders.

(4) Maintaining a bowel and bladder training program.

(5) Encouraging patients to achieve independence in activities of daily living by teaching self-care (i.e., feeding, dressing, grooming, toilet activities), transfer and ambulation.

(6) Assisting patients to adjust to their disabilities, to use their prosthetic devices, and to redirect their interest if necessary.

(h) **Patient Care Plan.** A written patient care plan shall be developed and revised for each patient. This is a personalized plan of daily care based on the nature of the illness, treatment prescribed, long and short term goals which include:

(1) The physician's orders for medications, treatments, diet and other therapy.

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[1] A consultant registered nurse trained in rehabilitation nursing or a physical or occupational therapist can provide knowledge and teaching skills in the areas of rehabilitation nursing, adaptive equipment, and self-care. Manuals are available from the American Rehabilitation Foundation, 1800 Chicago Avenue, Minneapolis, Minnesota 55404.

[2] Also known as a Nursing Care Plan.

(2) The types of care and consultation services needed; how they can best be accomplished; how the plan meets the needs and interests of the patient; what methods are most successful; and the modifications necessary to insure best results.

Patient care plans shall be utilized by all personnel involved in the care of the patient and shall be reviewed periodically but at least every thirty (30) days and revised as needed. Staff conferences shall be conducted regularly to keep the plans current and such conferences shall involve all personnel engaged in the care of the patient.

(i) **Assistance with Eating.** Nursing personnel shall determine that patients are served diets as prescribed. Patients needing help in eating shall be promptly assisted upon receipt of the meals and such assistance shall be unhurried. Adaptive self-help devices shall be provided to contribute to the patient's independence in eating. Food and fluid intake of patients shall be observed and deviations from normal reported to the charge nurse. Persistent unresolved problems shall be reported to the physician.

(j) **Educational Opportunities.** The nursing home shall provide opportunities for personnel to attend courses in rehabilitation nursing and other educational programs. Nursing home personnel shall be trained in nursing skills including demonstrations and practice with supervision as needed and prior to assignment to patient care responsibilities.[1]

[1] Textbooks, periodicals, dictionaries and other reference materials should be available and kept current.

MHD 51 Care of Patients and Residents

(APPLIES TO BOTH NURSING HOMES AND BOARDING CARE HOMES)

(a) **Criteria for Determining Adequate Care.** Each patient or resident shall receive nursing care or personal and custodial care and supervision based on individual needs. Patients and residents shall be encouraged to be active, to develop techniques for self-help, and to develop hobbies and interests. Nursing home patients shall be up and out of bed as much as possible unless the attending physician states in writing on the patient's medical record that he must remain in bed. Criteria for determining adequate and proper care shall include:

(1) Evidence of adequate care and kind and considerate treatment at all times. Privacy shall be respected and safeguarded.

(2) Clean skin and freedom from offensive odors. A minimum of a complete tub bath or shower once a week shall be provided for all ambulatory patients and for all residents with adequate assistance or supervision as needed.

(3) A minimum of monthly shampoos and assistance with daily hair grooming as needed.

(4) Assistance with or supervision of shaving of men patients or residents as necessary to keep them clean and well-groomed.

(5) Assistance as needed with oral hygiene to keep the mouth, teeth or dentures clean. Measures shall be used to prevent dry, cracked lips.

(6) Proper care and attention to hands and feet. Fingernails and toenails shall be kept clean and trimmed.

(7) Clean linen. Bed linen shall be changed weekly, or more often as needed. Beds shall be made daily and straightened as necessary.

(8) Clean clothing and a neat appearance. Patients and residents shall be dressed during the day whenever possible.

(b) **Safety Program.** Every home shall have an organized safety program in accordance with a written plan and such shall be included in the orientation and in-service training programs of all employees and volunteers to assure safety to patients and residents at all times. In addition to fire safety, such precautions shall include the provision of safety features as outlined in Section MHD 66. All attached equipment shall be solidly anchored to avoid accidents.

(c) **Restraints[1]—Management of Difficult Behavior.** Disturbed mental patients shall not be received or retained in a nursing home or boarding care home. If a patient or resident becomes suddenly disturbed or difficult behavior creates a problem of management, the person in charge of the home shall take temporary, emergency measures to protect such person and other persons in the home and the physician shall be called immediately. If a restraint is needed, this may be applied only upon the physician's written order. In instituting such temporary protective measures, a special attendant shall be placed on duty on the floor or in the section of the building in which

[1] Any device which restricts the patient's normal movements.

such patient or resident is restrained. No form of restraint may be used or applied in such manner as to cause injury to the patient or resident. No locked restraints may be used. No door to a patient's or resident's room may be locked in a manner which will not permit immediate opening in case of emergency. A full record of the use of restraints or seclusion shall be maintained in the patient's or resident's medical record. If the patient or resident does not respond to the treatment prescribed within a period of two (2) days, he shall be transferred to suitable facilities.

(d) **Acute Illness, Serious Accident or Death.** In case of acute illness or serious accident, the home shall immediately notify the physician and the family or legal guardian. Apparent deaths shall be reported immediately to the attending physician.

THE FOLLOWING APPLY TO NURSING HOMES ONLY:

(e) **Patient Care.** Adequate patient care shall include:

(1) A complete bath at least every other day and more often as indicated for patients confined to bed. Incontinent patients shall be checked at least every two (2) hours and shall have partial baths and clean linens promptly each time the bed or clothing is soiled. Pads or diapers shall be used to keep the bed dry and for the patient's comfort. Special attention shall be given to the skin to prevent irritation. Rubber, plastic or other types of protectors shall be kept clean, be completely covered and not come in direct contact with the patient. Soiled linen and clothing shall be removed immediately from the patient areas to prevent odors.

(2) An on-going program for care of the skin. Bony prominences and weight-bearing parts, such as heels, elbows and back, shall be bathed and given care frequently to prevent discomfort and the development of pressure sores. If pressure sores exist, treatment shall be given on a written medical order. The position of bed patients shall be changed at least every two hours during the day and night. Patients shall be positioned in good body alignment. Precautions shall be taken to prevent foot drop in bed patients.

(3) Availability of fresh, cold water and other fluids at the bedside for all patients unless fluids are restricted.

(4) Evidence of a continuous in-service training program in rehabilitation for all nursing personnel to promote ambulation, aid in activities of daily living, assist in activities, self-help, maintenance of range of motion, proper chair and bed positioning and in the prevention or reduction of incontinence.

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7 MCAR S 1.052 Furnishings and equipment for care.

(APPLIES TO BOTH NURSING HOMES AND BOARDING CARE HOMES)

(a) Patient or resident units. The following items shall be provided for each patient or resident:

(1) A comfortable bed at least 36 inches wide, good springs and a clean, firm comfortable mattress and mattress pad. At least one clean, comfortable pillow with extra pillows available to meet the patient's needs. Clean, light weight blankets and bed linen in good condition and of the proper size shall be kept on hand for use at all times. Clean sheets and pillow cases shall be furnished at least once a week. Each bed shall have a washable bedspread. A moisture-proof mattress cover or rubber or plastic sheeting shall be provided for mattresses of all bed patients and for other beds as necessary. Rollaway type beds, cots, or folding beds shall not be used. The nursing home and boarding care home shall develop a written policy regarding the use of double beds.

(2) At least one comfortable chair.

(3) A locker or closet within the room to allow clothes to be hung.[1] In existing facilities, if a closet is used for two or more persons, there shall be a fixed partition for complete separation of clothing for each person. There shall be dresser drawer space provided for each patient or resident. Closets, lockers or drawers which are provided with locks shall have a master key available in the administrator's office.

(4) A bedside table with a towel bar, a drawer to accommodate personal possessions and a separate compartment for the storage of bedpans[2] and urinals.[2]

(5) Individual drinking glass, bath towel, hand towel, washcloth and soap dish. Clean towels shall be provided as needed.

(6) Cubicle curtains to afford privacy in all multi-bed rooms.[3] Each window shall have shades or equivalent in good repair.

(7) A device for signaling nurses and attendants which shall be kept in working order at all times.

(8) A handwashing facility with a mirror located in the room or convenient to the room for the use of patients, residents and personnel.[4]

(9) A bed light providing a minimum of 30 footcandle intensity conveniently located for reading or for doing handiwork in bed or in an adjacent chair.

(10) All furnishings and equipment shall be maintained in a usable, safe and sanitary condition. All rooms and beds shall be numbered. All beds shall be identified with the name of the patient or resident.

(b) **Facilities for Emergency Care.** First aid supplies shall be maintained in a place known to and readily available to all personnel responsible for the health or well-being of patients or residents.

(c) **Handwashing Facilities.** Handwashing facilities shall be readily available for physicians, nurses, and other personnel attending patients or

[1] See MHD 64(a3gg) and 64(b3ff).
[2] Not required in a boarding care home.
[3] Existing boarding care homes in converted dwellings may continue to use bed screens.
[4] It is recommended that these be equipped with gooseneck spouts and wrist-action controls.

residents. Single service towels shall be available at all times. Use of a common towel is prohibited.

(d) **Dayrooms.** Each dayroom shall be provided with reading lamps, tables and chairs of satisfactory design for patients and residents.

(e) **Dining Rooms.** Furnishings shall be well-constructed and designed for patients and residents. Tables shall be of a type that can be used by wheelchair patients.

(f) **Other Areas.** All office spaces, nurses' and attendants' stations, treatment rooms, utility rooms, maintenance rooms and other spaces or rooms not specifically mentioned elsewhere shall be appropriately furnished and equipped.

(g) **Nurses' or Attendants' Station.** There shall be a well-lighted nurses' or attendants' station centrally located in the patient or resident area which shall contain sufficient space for recording and for the storage of charts and the equipment necessary for keeping records and orders current.

(h) **Storage.** Cabinets and other suitable space shall be provided and identified for the safe storage of equipment and supplies in a sanitary, convenient and orderly manner. Supplies shall be identified. Sterile supplies shall be marked with the latest date of sterilization and shall be stored apart from unsterile supplies.

THE FOLLOWING APPLY TO NURSING HOMES ONLY:

(i) **Patient Units.** The following items shall be provided for each patient:

(1) Individual bedpans, urinals, wash basins, emesis basins and mouth wash cups, free of chips and cracks, for each patient confined to bed and stored in the bedside table. Such equipment shall be thoroughly cleaned after each use and sanitized at least weekly and prior to use by a new patient. All bedside equipment such as utensils, bedpan covers, towels, washcloths, bath blankets and other linens which come in direct contact with the body shall not be interchangeable from one person to another unless they are first thoroughly cleaned or laundered. Thermometers shall be washed with soap and water, rinsed well in clean water, then totally immersed in an effective disinfectant solution, removed, dried and placed in a covered container until used again. Oral and rectal thermometers shall be kept on separate trays.

(2) Side-rails[1] for beds for the protection of patients when needed.

(j) **Autoclave.** There shall be a properly functioning autoclave or instrument sterilizer with a recording thermometer for the sterilization of nursing equipment and supplies unless an alternate, satisfactory method is approved by the Department or sterilization services are provided by an outside agency.

(k) **Equipment.** There shall be sufficient wheelchairs, walkers, canes, metal bedside rails, foot stools, commodes, foot cradles, footboards, under-the-mattress bed boards, trapeze frames, transfer boards and similar equipment needed for the care of patients.

[1] Half-length side-rails are recommended.

4295-4328

7 MCAR S 1.053 Medications.

THE FOLLOWING APPLY TO NURSING HOMES ONLY:

(a) **Administration of Medications.** A system shall be developed in each nursing home to assure that all medications are administered safely and properly. The supervising nurse or other nursing staff trained specifically by the supervising nurse or a physician in the administration[1] of medications and familiar with the expected action of drugs, shall be designated and held responsible for the administration of medications during each eight hour period. A list of carefully selected personnel, currently employed, who have been so trained, none under eighteen (18) years of age, shall be maintained. The written training program shall be available at each nursing station. Medications administered by hypodermic may be given only by a physician, registered nurse or licensed practical nurse. Administration shall include the addition of medications to food when patients require assistance with eating. The actual act of swallowing oral medications shall be observed personally by the individual responsible for administering medications. When medications have been added to food, the amount of food consumed shall be recorded by the person designated to administer medications. All medications shall be administered exactly as ordered by the physician. Any medication errors or patient reactions[2] shall be reported to the physician at once and an explanation made in the patient's care record.

(1) All medications, including those brought into the nursing home by the patient, shall be administered only on a written order signed by a licensed physician or dentist except that orders may be given by telephone provided that such orders are authorized by the physician or dentist, recorded by the person so authorized and signed by the physician or dentist within seven (7) days. The charge nurse and the attending physician together shall review each patient's medications and treatments at least every three (3) months.

(2) Stock supplies of legend[3] drugs may be kept on the premises only within a licensed pharmacy. Legend drugs are dispensed from a pharmacy only: (a) on an individual prescription basis, (b) through a unit dose dispensing system[4] approved by the Minnesota State Board of Pharmacy, or (c) on a proof-of-use system[5] in a convalescent and nursing care unit of a hospital when the hospital has a licensed pharmacy dispensing controlled substances.[6]

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[1] Administration of medications includes the complete procedure of checking the patient's record, transferring individual doses of the medication from the patient's prescription container, distribution to the patient and the recording of all medications given on the patient's chart.

[2] It is recommended that all adverse drug reactions be reported to the Adverse Drug Reaction Registry of the American Medical Association, 535 North Dearborn Street, Chicago, Ill., 60610 or to the Food and Drug Administration, 240 Hennepin Avenue, Minneapolis, Minnesota, 55414.

[3] Legend drugs include those obtainable only on prescription.

[4] A "unit dose dispensing system" utilizes unit dose packaging in a pharmacy-based distribution system which insures the identity and integrity of the drug dosage form up to the point of patient consumption. The traditional nursing act of "setting up" medications is accomplished in the pharmacy from which doses are distributed according to pre-determined schedules.

[5] A "proof-of-use" system is a pharmacy-based drug control system which allows multiple dose distribution for selected controlled drugs which are accounted for by a certified disposition record completed by the nurse and filed in the pharmacy to account for drugs administered.

[6] "Controlled Substances" include all narcotics, stimulants, depressants and other drugs of abuse contained in the federal Controlled Substances Act of 1970 (Public Law 91-513) or Chapter 937, Minnesota Session laws of 1971.

(3) Medications procurable without prescription may be retained in stock supply. These shall be dated on receipt to prevent the accumulation of out-dated or deteriorated items.

(4) For use in emergencies only, a licensed physician may maintain a minimum supply of medications in the nursing home providing the responsibility for the contents, maintenance, safeguarding and usage of this emergency supply is fully assumed in writing by the physician. This emergency supply shall be kept in a separate, labeled container in the locked medicine cabinet or locked medicine room.

(5) In no case shall a prescription drug supply for one patient be used or saved for the use of other patients in the nursing home.

(b) **Medicine Cabinet and Preparation Area.** A well-illuminated medicine cabinet shall be provided on each nursing station. The medicine cabinet shall be equipped with separate cubicles which are plainly labeled, or provided with other physical separation for the storage of each patient's prescriptions. A medicine preparation area shall be provided in a location that is quiet, convenient for the nursing staff and separate from all soiled activities. All medications shall be prepared in such preparation area. Graduated medicine containers for the accurate measurement of liquid medications shall be provided. If not disposable, these medicine containers shall be returned to the institution dishwashing unit for processing after each use. All narcotics shall be placed under double lock. This shall be accomplished by maintaining a separate, permanently attached compartment with a tumblered key lock within the locked medicine cabinet or locked medicine room. The medicine cabinet, medicine refrigerator or medicine room shall be kept locked when not in use. The keys shall be carried on the person designated to administer drugs and be available only to those persons who are authorized to administer drugs. All drugs shall be stored in medicine cabinets. The cabinet shall be kept clean and orderly at all times and shall be used only for the storage of drugs.

(1) Poisons and medications intended for external use only shall be clearly so marked and shall be kept in a separate locked compartment.

(2) Biologicals and other medications requiring refrigeration shall be kept in a refrigerator within the medication room or in a specially locked, securely attached, and labeled, impervious container in a general use refrigerator.

(3) All substances, such as cleaning agents, bleaches, detergents, disinfectants, pesticides, paints and flammable liquids shall be clearly labeled and stored separately from all drugs and foods.

All disposable equipment shall be rendered inoperable prior to disposal, unless incinerated. Other than disposable syringes, needles, medicine droppers and similar equipment shall be thoroughly cleaned and then sterilized before each use by one of the following methods:

(aa) Dry heat at 170°C. (338°F.) for not less than one hour.

(bb) Autoclaving at 15 pounds pressure and 120°C. (248°F.) for 20 minutes.

(cc) Boiling for not less than 30 minutes after the boiling temperature has been reached.

(dd) Other method of sterilization acceptable to the Department.

(c) **Medication Containers.** All medications shall be kept in their original container bearing the original label with legible information stating the prescription number, name of drug, strength and quantity of drug, expiration dates of all time-dated drugs, directions for use, patient's name, physician's name, date of original issue or in the case of a refill, the most recent date thereof and name and address of the licensed pharmacy which issued the medications. It shall be the responsibility of the nursing home to secure the prescription number and name of the medication if these are not on the label.

(1) Any drug container having detached, excessively soiled or damaged labels shall be returned to the issuing pharmacy for relabeling.

(2) The contents of any drug container having no label or with an illegible label shall be destroyed immediately.

(3) Medications having a specific expiration date shall not be used after the date of expiration.

(d) **Record of Medications and Narcotics.** All medications administered to each patient shall be recorded on the medication and treatment record or in the nurses' notes on the patient's chart. This information shall include the name and quantity of the drug given and the time administered and shall be initialed by the person giving the drug. Special notations shall be made whenever medications are started or discontinued. Medicine cards or a medicine list shall be maintained to show each medication which is currently being given.

All narcotics and other controlled substances and antihistamines shall have their prescription number entered on the nursing record each time a new prescription is received. Records of receipt and distribution of controlled substances shall be maintained by either of the following methods:

(1) A narcotic record book consisting of a bound notebook with numbered pages and containing a record of the name and the quantity of all narcotics received, dates received as well as a record of the patient to whom the narcotics are given. It shall also include the prescription number, date and time administered, name of patient, kind of drug, dosage, method of administration, name of prescribing physician and signature of person who administered the drug.

(2) A proof-of-use system in a convalescent and nursing care unit of a hospital when the hospital has a licensed pharmacy.

Each time a controlled substance is given it shall be recorded on the patient's chart. In addition, the supervising nurse shall record and sign the narcotic count at least once every day. When a loss or spillage of a prescribed narcotic occurs, an explanatory notation shall be made on the patient's chart and in the narcotic record book. This notation shall be signed by the person responsible for the accident and by one witness who shall also observe the destruction of any remaining contaminated drug by flushing into the sewer system.

(e) **Automatic "Stop Orders."** Medications not specifically limited as to time or number of doses when ordered, shall be automatically stopped in accordance with a written policy approved by the physician(s) responsible for advising the nursing home on its patient care policies[1]. The patient's attending physician shall be notified of stop order policies a short time

[1] See MHD 45 (h7).

before a medication order expires so that the medications are renewed when necessary and the continuity of the patient's therapeutic regimen is not interrupted.

(f) Disposition of medications.

1. If authorized by the attending physician or the physician in charge, medications belonging to patients shall be given to them when discharged or transferred. This shall be recorded on the patient's chart. Unused portions of controlled substances shall be handled by contacting the Minnesota Board of Pharmacy who shall furnish the necessary instructions and forms, a copy of which shall be kept on file in the home for two years. Any other unused portions of prescription drugs remaining in the nursing home after the death or discharge of the patient for whom they were prescribed or any prescriptions discontinued permanently, shall be destroyed by the supervising nurse in the nursing home, by flushing them into the sewer system and removing and destroying the labels from the containers or handled in accordance with section F.2., below. A notation of any such destruction giving date, quantity, name of medication and prescription number shall be recorded on the patient's chart. Such destruction shall be witnessed and the notation signed by both persons.

2. Drugs and prescribed medications, other than controlled substances, used in nursing homes may be returned to the dispensing pharmacy in accordance with the provisions of the Minnesota Board of Pharmacy rule, 7 MCAR S 8.032 B.

(g) Pharmacies in Nursing Homes. No pharmacy shall be maintained as a part of any nursing home unless it is licensed by the Minnesota State Board of Pharmacy and complies with all its statutes and regulations governing such licensures and operation.

(h) Medication References. The nursing home shall maintain current medication references and other printed sources of information[2].

THE FOLLOWING APPLY TO BOARDING CARE HOMES ONLY:

(i) Distribution of Medications. A system shall be developed in each boarding care home to assure that all medications are distributed safely and properly. All medications shall be distributed and taken exactly as ordered by the physician. Any medication errors or resident reactions shall be reported to the physician at once and an explanation made in the resident's personal care record.

(j) Medicine Cabinet. A well-illuminated medicine cabinet shall be provided at each attendants' station[3]. The medicine cabinet shall be equipped with separate cubicles which are plainly labeled, or provided with other physical separation for the storage of each resident's prescriptions.

(1) Poisons and medications intended for external use only shall be clearly so marked and shall be kept in a separate locked compartment.

(2) Biologicals and other medications requiring refrigeration shall be kept in a specially locked, securely attached, and labeled, impervious container in a general use refrigerator.

[2] Such as the ASHP Hospital Formulary Service; a current standard text book on pharmacology and similar references.
[3] A central control point for the storage of records and medications.

(3) All substances, such as cleaning agents, bleaches, detergents, disinfectants, pesticides, paints and flammable liquids shall be clearly labeled and stored separately from all drugs and foods.

(k) **Medication Containers.** All medications shall be kept in their original container bearing the original label with legible information stating the prescription number, name of drug, strength and quantity of drug, expiration dates of all time-dated drugs, directions for use, resident's name, physician's name, date of original issue or in the case of a refill, the most recent date thereof and name and address of the licensed pharmacy which issued the medications. It shall be the responsibility of the boarding care home to secure the prescription number and name of the medication if these are not on the label.

(1) Any drug container having detached, excessively soiled or damaged labels shall be returned to the issuing pharmacy for relabeling.

(2) The contents of any drug container having no label or with an illegible label shall be destroyed immediately.

(3) Medications having a specific expiration date shall not be used after the date of expiration.

(l) **Record of Medications.** All medications distributed to each resident shall be recorded on the resident's personal care record. This information shall include the name and quantity of the drug given and the time distributed and shall be initialed by the person distributing the drug. Special notations shall be made whenever medications are started or discontinued.

(m) **Disposition of Medications.** If authorized by the attending physician or the physician in charge, medications belonging to residents shall be given to them when discharged or transferred. This shall be recorded on the resident's personal care record. Unused portions of prescription drugs remaining in the boarding care home after the death or discharge of the resident for whom they were prescribed or any prescriptions discontinued permanently, shall be destroyed by the person in charge in the boarding care home by flushing them into the sewer system and removing and destroying the labels from the containers. A notation of such destruction giving date, quantity, name of medication and prescription number shall by recorded on the resident's personal care record. Such destruction shall be witnessed and the notation signed by both persons.

MHD 54 Linen Service and Laundry Requirements

THE FOLLOWING APPLY TO NURSING HOMES ONLY:

(a) **Linen and Nursing Utensils.**

(1) **Complete Separation.** There shall be a complete separation of handling, collection, storage, transport and processing of soiled and clean linen to prevent cross-contamination. This includes the laundry operation. Easily cleanable laundry trucks or containers, for off-the-floor storage and sorting of soiled linen shall be provided. Only clean trucks or containers shall be used for the storage and transport of clean linen.

(2) **Clean Linen.** Clean linen[1] shall be dried, ironed, except for non-iron linen, and folded and shall be stored in enclosed, clean, designated locations at least 8 inches above the floor. New linen shall be washed and ironed before use. During distribution for use, only the linen needed in an area or room shall be carried into that area or room. Enclosed linen carts are acceptable for linen storage on patient floors. Linen storage rooms or closets shall be kept clean and used only for the storage of clean linen and clean supply items.

(3) **Soiled Linen.** Soiled linen shall be removed from the patients and beds without undue agitation. Sheets shall be rolled from the corners containing other miscellaneous soiled items within the bundle. The soiled linen shall be placed directly into a lined, cleanable hamper or similar container with a cover for storage in the soiled utility area, and for frequent removal in the same container to the soiled linen collection room or to the laundry. Linen soiled by incontinent patients shall be soaked and rinsed immediately in the soiled utility room. The liners and bags used for soiled linen shall be laundered between each use if they are not disposable. Linen containers shall be cleaned regularly.

(4) **Contaminated Linen.** Contaminated linen, such as linen from patients with infectious drainage, dressings or pads shall be stored and sent to the laundry in separate bags which are plainly marked to indicate that their contents are contaminated. The bags shall be tightly closed until the contents are removed from the bag, and placed in the washer along with the bag, if non-disposable. Laundry personnel shall be instructed in the safe handling of such laundry.

(5) **Laundering of Linen.** Linen shall be washed in commercial-type washers. The water temperature inside the washers shall be at least 160°F. during the main washing and rinsing cycles[2] for a total time of at least 30 minutes, excluding time for filling and draining. Contaminated linen shall be thoroughly preflushed separately before being introduced to the main washing and rinsing process.

(6) **Outside Linen Service.** Linen processed in central or commercial laundries outside the institution shall be subject to the laundering standards of these regulations; see MHD 46 (j).

(7) **Laundering of Personal Clothing.** Patients' personal clothing and other non-linen items shall be laundered in accordance with appropriate washing procedures for the various fabrics and shall be ironed, mended and

[1] The supply of linen should provide for at least three times the bed capacity.

[2] Tests indicate that linen can be rendered pathogen-free under the following conditions: 160°F. water temperature, 0.10% high titer soap, 0.05% alkali, 11.5 pH, and 30-minutes wash series.

labeled as necessary. Outside services for washing or dry cleaning are acceptable.

(8) **Sanitizing of Nursing Utensils.** All bedpans, urinals, emesis basins, wash basins and other personal nursing items shall be thoroughly cleaned after each use and shall be washed and sanitized[1] at least weekly and before use by another patient as follows:

(aa) **Washing.** Utensils shall be pre-flushed prior to washing and shall be completely free of all soil before being sanitized. The washing solution shall contain detergent and 20 to 30 p.p.m. (parts per million) of chlorine. The washing temperature shall be as high as tolerable; for machine washing the temperature shall be not less than 160°F. for a washing period of at least 8 minutes.

(bb) **Sanitizing.** Utensils shall be sanitized by a thermal process such as hot water sanitizing, or some other acceptable method producing equivalent results. Hot water sanitizing by immersion or a continuous mechanical rinse shall be provided with a water temperature maintained at a minimum of 180°F. for a sanitizing period of not less than 12 minutes.

THE FOLLOWING APPLY TO BOARDING CARE HOMES ONLY:

(b) **Linen.**

(1) **Clean Linen.** Clean linen shall be dried, ironed, except for non-iron linen, and folded and shall be stored in enclosed, clean, designated locations at least 8 inches above the floor. New linen shall be washed and ironed before use. During distribution for use, only the linen needed in an area or room shall be carried into that area or room. Enclosed linen carts are acceptable for linen storage. Linen storage rooms or closets shall be kept clean and used only for the storage of clean linen and clean supply items. Only clean trucks or containers shall be used for the storage and transport of clean linen.

(2) **Soiled Linen.** Soiled linen shall be collected in a cleanable hamper, container or bag for removal to the soiled linen collection room or to the laundry. Hampers, containers or bags shall be cleaned or washed regularly. Easily cleanable laundry trucks or containers for off-the-floor storage and sorting of soiled linen shall be provided.

(3) **Laundering of Linen.** Linen shall be washed in commercial-type washers. The water temperature inside the washers shall be at least 160°F. during the main washing and rinsing cycles for a total time of at least 30 minutes, excluding time for filling and draining.

(4) **Outside Linen Service.** Linen processed in central or commercial laundries outside the facility shall be subject to the laundering standards of these regulations; see MHD 46 (j).

(5) **Laundering of Personal Clothing.** Residents' personal clothing and other non-linen items shall be laundered in accordance with appropriate washing procedures for the various fabrics and shall be ironed, mended and labeled as necessary. Domestic-type washers and dryers are acceptable as well as outside washing and dry-cleaning services.

[1] A mechanical washer-sanitizer is recommended.

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7 MCAR S 1.055 Dietary service and sanitation.

(APPLIES TO BOTH NURSING HOMES AND BOARDING CARE HOMES)

(a) **Dietary Service.** If the facility accepts or retains individuals in need of medically prescribed therapeutic diets, regularly scheduled dietary consultation shall be provided by a qualified dietitian or nutritionist at least four (4) hours each month unless the dietary supervisor qualifies. All therapeutic diets shall be prepared as ordered in writing by the attending physician. There shall be current diet manuals readily available in the kitchen.

(b) **Dietary Supervisor.** The administrator shall designate a person trained or experienced in the planning and preparation of meals to be responsible for the dietary service. Other responsibilities of this individual shall include: Participation in the selection of other dietary staff and in the formulaton of food service personnel policies, orientation, training and supervision of the dietary staff; and recommending the type and quantity of the food purchased.

(c) **Dietary Staff.** The dietary staff shall be adequate in number to provide personnel on duty 12 or more hours per day. They shall be trained in the performance of their assigned duties. Work assignments and duty schedules shall be posted in the dietary department. The staff shall be in good health, free from symptoms of communicable disease and from open, infected wounds. All persons working in the dietary department shall maintain personal cleanliness, wear a clean uniform and cover their hair with a hairnet or a cap for short hair, when on duty. They shall wash their hands frequently, especially after using handkerchief or tissue, after handling soiled dishes and after using toilet facilities and shall observe all other accepted hygienic practices[1] in the prevention of contamination of food. The handwashing procedure shall also apply to other staff on temporary assignment to the food service and in addition, uniforms shall be changed when soiled activities are involved. Sanitary procedures and conditions shall be maintained in the operation of the dietary department at all times. Smoking or other use of tobacco is not allowed in the food preparation or in the dishwashing area. The kitchen shall not be used for eating meals or for coffee breaks.

(d) **Food Handling.** Raw meat products shall be kept separated from cooked or prepared foods. Utensils or equipment and other food contact surfaces used in preparation of such products shall be thoroughly washed before being used for other foods; the person handling the raw products shall wash his hands thoroughly before touching other foods or utensils.

(e) **Adequacy of Meals.** The food and nutritional needs of patients and residents shall be met in accordance with physicians' orders and shall, to the extent medically possible, meet the dietary allowances, as adjusted for age, sex, and activity as stated in the **Recommended Dietary Allowances,** National Academy of Sciences, 7th Edition, 1968 which lists the daily dietary allowances in nutrients. The daily food groups and quantities for each patient or resident that would meet these recommended daily dietary allowances shall include:

[1] It is recommended that the Department's food handling guide entitled "Information for Food Service Personnel in Hospitals and Related Care Facilities" be made readily available for reference by all food service personnel.

(1) **Meat or Protein Food.** Two (2) or more servings of protein food of good quality. Consider each of the following as one serving:

3 ounces cooked (equivalent to 4 ounces raw) of any meat without bone, such as beef, pork, lamb, poultry or variety meats such as liver, heart and kidney

2 slices prepared luncheon meat

2 eggs

3 ounces of fresh or frozen cooked fish or shellfish or ½ cup canned fish

1 cup cooked navy beans.

(2) **Milk.** Two eight (8) ounce glasses of milk are required for each patient or resident. A portion of this amount may be served in a cooked form, such as cream soups, desserts, etc. Cheese and ice cream may replace part of the milk. The amount of either it will take to replace a given amount of milk is figured on the basis of calcium content. (One ounce or one slice of cheese equals ½ cup milk; ½ cup cottage cheese equals ⅓ cup milk; and ½ cup ice cream equals ¼ cup milk.)

(3) **Vegetables.** Three servings of vegetables (½ cup each), one of which is deep green or yellow.

(4) **Fruits.** Two or more servings. One shall be citrus, such as orange, grapefruit, or tomato. A serving of fruit is defined as:

1 medium size orange or 4 ounces of juice;

½ grapefruit or 4 ounces of juice;

1 large tomato or 8 ounces of juice.

(5) **Cereal and Bread.** Three to 4 servings preferably whole grain or enriched. (One slice of bread equals one serving: ½ cup or cereal equals one serving.)

(6) **Butter or Margarine.** Some of either each day as a seasoning and to make food more palatable.

Other foods to round out meals plus snacks shall be offered to satisfy individual appetites and provide additional calories.

(f) **Frequency of Meals.** At least three meals shall be served at regular times during each twenty-four hour period with a maximum of fourteen (14) hours between a substantial evening meal and breakfast. Meals shall be served in the dining room and bedroom trays kept to a minimum. Patients or residents shall be encouraged to eat together.

(g) **Quality and Variety.** The diet shall be palatable, of adequate quantity and variety, prepared by methods which conserve nutritional value and attractively served.[1] Hot foods shall be served hot; cold foods shall be served cold. Foods shall be served in a form to meet individual needs.

(h) **Menu Planning.** All menus including special diets shall be planned, dated and posted for a minimum of one week in advance. Notations shall be made of any substitutions in the meals actually served and these shall be of equal nutritional value. Records of menus and of foods purchased shall be filed for six (6) months. A reasonable variety of foods shall be

[1] It is recommended that dishes be used rather than compartment trays.

provided. A file of tested recipes adjusted to a yield appropriate for the size of the home shall be maintained.

(i) **Food Habits and Customs.** There shall be reasonable adjustment to the food habits, customs, likes and appetites of individual patients and residents.

(j) **Returned Food.** Returned portions of food and beverages from individual servings shall not be reused unless such food or beverage is served in a sealed wrapper or container which has not been unwrapped or opened.

(k) **Food Supplies.** All food shall be from sources approved or considered satisfactory by the Board, and shall be clean, wholesome, free from spoilage, free from adulteration and misbranding, and safe for human consumption. No hermetically sealed, non-acid or low-acid food which has been processed in a place other than a commercial food-processing establishment shall be used.

(l) **Milk.** All fluid milk shall be procured from suppliers licensed by the Commissioner of Agriculture. The milk shall be dispensed directly from the original container in which it was packaged, shipped and received. Milk served for drinking shall be served in the individual original container or shall be poured directly from the original individual container into the drinking glass at meal time or be dispensed from an approved bulk dispenser. Dry milk and milk products may be reconstituted in the dietary department if used for cooking only.

(m) **Ice.** Ice shall be stored and handled in a sanitary manner. Stored ice shall be kept in an enclosed container. If an ice scoop is used, the scoop shall be stored in a separate compartment to prevent the handle from contact with the ice.

(n) **Food Containers.** All food or food products, prepared or in bulk shall be stored in approved seamless covered containers after opening of the original container. Dry milk and milk products after opening shall be stored in seamless, all tight containers.

(o) **Storage of Non-Perishable Food.** Non-perishable food, and single-service articles shall be stored off the floor on washable shelving in a ventilated room. It shall be protected from dust, flies, rodents, vermin, overhead leakage and other sources of contamination, and shall be placed away from areas with excessive heat.

(p) **Storage of Perishable Food.** All perishable food shall be stored off the floor on washable, corrosion-resistant shelving under sanitary conditions, and at temperatures which will protect against spoilage. Meat and dairy products shall be stored at 40°F. or below, and fruit and vegetables at 50°F. or below. When stored together, the lower temperature shall apply. Temperatures shall be monitored by an accurate thermometer.

(q) **Prohibited Storage.** The storage of detergents, cleaners, pesticides and other non-food items, including employees' personal items, is prohibited in food storage areas.

(r) **Vending Machines.** Storage and dispensing of food and beverages in vending machines shall be in accordance with State Department of Health Regulation 10950, November, 1966.

(s) **Transport of Food.** Food shall be covered during transport through non-dietary areas, but need not be covered when served in a contiguous dining area. The food service system shall be capable of keeping food hot or cold until served. A dumbwaiter or conveyor, which cab or carrier is used for the transport of soiled linen or soiled dishes, shall not be used for the transport of food.

(t) **Dishes and Utensils.** Only dishes and utensils with the original smooth finishes shall be used. Cracked, chipped, scratched or permanently stained dishes, cups or glasses or damaged, corroded or open seamed utensils or cookware shall not be used. All tableware and cooking utensils shall be kept in enclosed storage compartments. Accessories for food appliances shall be provided with protective covers unless in enclosed storage. Enclosed lowerators for dishes are acceptable. Machine washed silverware (flatware) shall be washed in approved perforated containers, and stored with the handles up in the same containers. Dishes or plate settings shall not be set out on the tables more than two hours before serving time.

(u) Dishwashing. The dishwashing operation shall provide proper separation in the handling of soiled and clean dishes and utensils, and shall conform with either of the following procedures for washing, rinsing, sanitizing and drying.

1. Machine washing of dishes and utensils.

a. Hot water sanitizing. The dishwashing machine shall be operated in accordance with the manufacturer's instructions which shall be posted nearby; see MHD 67 (clii). The flow pressure shall be maintained between 15 and 25 pounds per square inch (psi) at the dishwasher. The temperatures of the water shall be maintained at 140-160 degrees F. for the washing cycle, and at 170 degrees F. for the rinsing and sanitizing cycle, both temperatures measured at tray level. If the same person handles both soiled and clean dishes, he shall wash his hands between operations. Dishes and utensils shall be air dried.

b. Chemical sanitizing.

(1) Equipment.

(a) Dishwashing machines using chemicals for sanitizing shall bear the seal indicating that the machine meets the standards of the National Sanitation Foundation.

(b) Each dishwashing machine shall be equipped with a visual or audible signaling device which indicates when the chemical sanitizing supply is empty. The signaling device shall be maintained in an operating condition.

(c) The clean dish counter shall provide space for at least four racks of clean and sanitized dishes and utensils.

(2) Operation.

(a) The dishwashing machines shall be operated in accordance with the manufacturer's instructions which shall be posted nearby.

(b) The temperature of the wash water shall not be less than 140 degrees F. (60 degrees C.).

(c) Chemicals added for sanitation purposes shall be automatically dispensed in accordance with the manufacturer's specifications for time and concentration.

(d) The chemical sanitizing rinse water temperature shall not be less than 75 degrees F. (24 degrees C.)

nor less than the temperature specified by the machine manufacturer as indicated on the NSF data plate.

(e) All chemical sanitizers used in the dishwashing machines shall bear labeling indicating that the chemical sanitizers are registered by the Environmental Protection Agency and shall contain specific instructions for use.

(f) A test kit or other device that accurately measures the parts per million concentration of the sanitizing solution shall be available and used in accordance with this section.

(i) The concentration level shall be tested in accordance with the manufacturer's instruction each day the machine is used.

(ii) The results of the testing shall be recorded in a written log which specifies the result of the test and shall be signed by the individual making the test. The log shall include the name of the chemical used and the manufacturer's recommended concentration of the chemical. This written log shall be maintained for the previous three months.

(g) If the same person handles both soiled and clean dishes, he shall wash his hands between operations.

(h) Dishes and utensils shall be air dried.

(i) The dishwashing machine shall be thoroughly cleaned at least once a day in accordance with the manufacturer's recommendation.

2. Hand washing of pots and pans. A three-compartment scullery sink, see MHD 65 (b2aa3), shall be utilized as follows for a complete washing cycle by hand of pots and pans. The first compartment is for soaking and washing, the second compartment is for rinsing, and the third compartment for sanitizing. Sanitizing is accomplished by complete immersion for at least two (2) minutes in 170 degrees F. water. A unit heater capable of maintaining the water in the sanitizing compartment at 170 degrees F. shall be provided, including a long handled wire basket for the removal of the sanitized items. The temperature shall be monitored with a thermometer. If the mechanical dishwasher is used for sanitizing of pots and pans, a sanitizing compartment is not required. Only air drying is permitted.

(v) Floor Cleaning. There shall be no major sweeping or mopping in the kitchen during the time of food preparation.

(w) Non-Dietary Trash. Trash or refuse unrelated to dietary activities shall not be transported through food preparation areas or food storage areas for disposal or incineration.

MHD 56 Housekeeping

(APPLIES TO BOTH NURSING HOMES AND BOARDING CARE HOMES)

(a) **Housekeeping.** The entire facility, including walls, floors, ceilings, registers, fixtures, equipment and furnishings shall be maintained in a clean, sanitary and orderly condition throughout and shall be kept free from offensive odors, dust, rubbish and safety hazards. Accumulation of combustible material or waste in unassigned areas is prohibited.

(b) **Established Program.** A program shall be established for routine housekeeping. Besides the daily duties, the program shall include policies and procedures for any special cleaning necessary.

(c) **Solid Waste Disposal.** Solid wastes, including garbage, rubbish and other refuse shall be collected, stored and disposed of in a manner that will not create a nuisance or fire hazard, nor provide a breeding place for insects or rodents.

(d) **Garbage Containers.** All containers for the collection and storage of garbage and refuse shall be of seamless water-tight construction with tightly fitting covers, and be kept in a sanitary condition. Containers shall be stored in a safe location pending removal of contents, and shall be removed from the building and cleaned at frequent intervals.

(e) **Janitor's Closet.** The janitor's closets and all other areas used by the housekeeping personnel shall be kept in a clean, sanitary and orderly condition. Mop buckets shall be emptied after each cleaning, and mopheads shall be washed after each use and replaced as often as necessary. Housekeeping supplies shall be stored at least 8 inches off the floor to facilitate cleaning. Disinfectants, pesticides and other toxic substances shall be clearly identified and stored in a locked enclosure or cabinet.

(f) **Deodorizers.** Deodorizers or aerosols shall not be used as a substitute for acceptable ventilation, nor shall they be used to mask odors resulting from ineffective housekeeping or sanitation. Ozone generators are not permitted.

(g) **Insect and Rodent Control.** Any condition on the site or in the facility conducive to the harborage or breeding of insects, rodents or other vermin shall be eliminated immediately. A continuous pest control program shall be maintained by qualified personnel and all chemical substances of a poisonous nature used for pest control shall be identified and stored in a locked space.

(h) **Shelving.** All shelving shall be provided with a surface finish which is smooth and easily cleaned.

(i) **Screens.** Outside openings such as doors, operable windows or louvers shall be protected with screens to prevent the entrance of flies, mosquitoes and other insects with screening material no larger than 16 mesh per square inch. Screen doors shall open in the direction of exit traffic and be equipped with self-closing devices. Screen doors are not required on main entrances to facilities, unless such doors are kept open. Outside open drain outlets shall be screened to prevent the entrance of rodents.

THE FOLLOWING APPLY TO NURSING HOMES ONLY:

(j) **Disposal of Special Waste.** Materials or waste such as dressings or disposable pads which are infectious or suspected of presenting a potential health hazard shall be collected in a manner which will prevent transmission of disease, and shall be incinerated. If regular waste or refuse is not incinerated, infectious waste shall be collected separately in special bags to indicate their content. Needles and similar medical single-use items shall be destroyed before disposal, unless incinerated.

(k) **Prohibited Sink Uses.** A flushing rim service sink in a soiled utility room shall not be considered as a substitute for, nor shall it be used as a janitor's service sink. A janitor's service sink shall not be used for disposal of urine, fecal matters, or other human wastes.

4330-4341

7 MCAR S 1.057 Schedule of fines for uncorrected deficiencies.

(APPLIES TO BOTH NURSING HOMES AND BOARDING CARE HOMES)

A. A $50 penalty assessment will be issued under the provisions of Minnesota Statutes, section 144.653, subdivision 6 (1974) for non-compliance with correction orders relating to the sections of these regulations listed below.

MHD 44 (o); (p); (q); (s); (t); (u)

MHD 45 (a)(3); (f); (h)(1); (h)(2)(aa); (h)(2)(ff); (h)(4)

MHD 46 (a); (b); (j); (k)

MHD 47 (c); (e)

MHD 48 (a)(4); (a)(5); (a)(6); (a)(7); (a)(9); (a)(11)

MHD 50 (a); (j)

MHD 52 (a)(2); (a)(3); (a)(4); (a)(9); (d); (e)

MHD 54 (a)(7); (b)(5)

MHD 55 (i)

MHD 56 (f); (h)

MHD 64 (a)(22); (b)(15)

B. A $250 penalty assessment will be issued under the provisions of Minnesota Statutes, section 144.653, subdivision 6 (1974) for non-compliance with correction orders relating to all other sections of these regulations not specifically enumerated in section A. or C.

C. Nursing homes.

1. A $50 penalty assessment will be assessed on a daily basis to a nursing home for non-compliance with correction orders relating to the following rules:

a. 7 MCAR S 1.048 A.4.

b. 7 MCAR S 1.048 A.8.a.

c. 7 MCAR S 1.048 A.8.b.(2)

d. 7 MCAR S 1.048 A.8.c.(3)

e. 7 MCAR S 1.048 A.8.c.(5)

f. 7 MCAR S 1.048 A.8.c.(6)

g. 7 MCAR S 1.048 A.8.d.

h. 7 MCAR S 1.048 A.8.e.

i. 7 MCAR S 1.052 A.1.b.

j. 7 MCAR S 1.053 F.2.

k. 7 MCAR S 1.055 U.1.b.(1)(c)

l. 7 MCAR S 1.064 A.3.f.(1)(a)

2. A $150 penalty assessment will be assessed on a daily basis to a nursing home for non-compliance with correction orders relating to the following rules:

a. 7 MCAR S 1.046 L.2.b.

b. 7 MCAR S 1.046 L.2.c.

c. 7 MCAR S 1.046 L.2.d.

d. 7 MCAR S 1.046 L.2.e.

e. 7 MCAR S 1.046 L.2.f.

f. 7 MCAR S 1.046 L.3.

g. 7 MCAR S 1.047 A.

h. 7 MCAR S 1.048 A.8.b.(1)

i. 7 MCAR S 1.048 A.8.c.(1)

j. 7 MCAR S 1.048 A.8.c.(2)

k. 7 MCAR S 1.048 A.8.c.(4)(a)

l. 7 MCAR S 1.048 A.8.c.(4)(b)

m. 7 MCAR S 1.048 A.8.c.(4)(c)

n. 7 MCAR S 1.048 A.8.c.(7)

o. 7 MCAR S 1.055 U.1.b.(1)(a)

p. 7 MCAR S 1.055 U.1.b.(1)(b)

q. 7 MCAR S 1.055 U.1.b.(2)(a)

r. 7 MCAR S 1.055 U.1.b.(2)(b)

s. 7 MCAR S 1.055 U.1.b.(2)(c)

t. 7 MCAR S 1.055 U.1.b.(2)(d)

u. 7 MCAR S 1.055 U.1.b.(2)(e)

v. 7 MCAR S 1.055 U.1.b.(2)(f)

w. 7 MCAR S 1.055 U.1.b.(2)(g)

x. 7 MCAR S 1.055 U.1.b.(2)(h)

y. 7 MCAR S 1.055 U.1.b.(2)(i)

3. A $250 penalty assessment shall be assessed on a daily basis to a nursing home for non-compliance with correction orders relating to the following rules:

a. 7 MCAR S 1.046 L.2.a.

b. 7 MCAR S 1.064 A.3.f.(1)(b)

4330-4341

7 MCAR S 1.058 Allowable time periods for correction.

A. Allowable time periods for correction. The allowable time periods for complying with a correction order issued by the department shall be as follows:

1.	7 MCAR S 1.046	
	a. L.2.a.	30 days
	b. L.2.b.	14 days
	c. L.2.c.	14 days
	d. L.2.d.	14 days
	e. L.2.e.	14 days
	f. L.2.f.	14 days
	g. L.3.	30 days
2.	7 MCAR S 1.047A	14 days
3.	7 MCAR S 1.048	
	a. A.4.	14 days
	b. A.8.a.	30 days
	c. A.8.b.	14 days
	d. A.8.c.(1)	30 days
	e. A.8.c.(2)	30 days
	f. A.8.c.(3)	30 days
	g. A.8.c.(4)(a)	14 days
	h. A.8.c.(4)(b)	30 days
	i. A.8.c.(4)(c)	30 days
	j. A.8.c.(5)	30 days
	k. A.8.c.(6)	30 days
	l. A.8.c.(7)	14 days
	m. A.8.d.	14 days
	n. A.8.e.	14 days
4.	7 MCAR S 1.052 A.1.b.	30 days
5.	7 MCAR S 1.053 F.2.	30 days
6.	7 MCAR S 1.055	
	a. U.1.b.(1)(a)	60 days
	b. U.1.b.(1)(b)	30 days
	c. U.1.b.(1)(c)	60 days
	d. U.1.b.(2)(a)	14 days
	e. U.1.b.(2)(b)	14 days
	f. U.1.b.(2)(c)	14 days
	g. U.1.b.(2)(d)	14 days
	h. U.1.b.(2)(e)	14 days
	i. U.1.b.(2)(f)	14 days
	j. U.1.b.(2)(g)	14 days
	k. U.1.b.(2)(h)	14 days
	l. U.1.b.(2)(i)	14 days
7.	7 MCAR S 1.064	

a. A.3.f.(1)(a) 30 days
b. A.3.f.(1)(b) 14 days

B. Extension of the allowable time period for correction.

1. Request for extension. The nursing home may request an extension of the allowable time for correction for those rules specified in section A., above. The request for extension of the allowable period of time for correction shall be received by the department prior to the expiration of the time period cited in the correction order. The failure to submit a request within that time period shall result in a denial of the request.

2. Contents of request.

a. All requests for an extension of the allowable time period for correction shall contain the following information:

(1) The identification of the rule or rules for which the correction order was issued;

(2) The date the correction order was received;

(3) The allowable time period for correction;

(4) The reasons for requesting an extension of the allowable time period for correction which shall specify, in detail, the steps that have been taken by the nursing home to attain compliance;

(5) The length of additional time required to attain compliance with the correction order; and

(6) Such other relevant information necessary to evaluate the request for the extension of time.

b. If the request for an extension is made orally, the administrator shall mail, within one business day, a written confirmation which contains the information specified under section 2.a., above.

3. Criteria for evaluation.

a. A request for an extension of the allowable period of time shall be granted if the department determines that:

(1) Continued non-compliance with the rule for the length of the extension will not jeopardize the health, treatment, comfort, safety or well-being of the patient; and

(2) The nursing home:

(a) Has entered into a contract to obtain the materials, labor, personnel, or other items necessary to obtain

compliance with the correction order, but the supplier, contractor or individual has failed to perform or is unable to perform within the time period specified and the inability of the nursing home to comply with the correction order is due solely to that failure; or

(b) Has otherwise made a diligent good faith effort to comply with the correction order since its receipt.

b. The administrator shall be notified, in writing, of the department's decision. If an extension of time is granted, the notification shall specify the additional time allowed for correction.

4. Renewal.

a. Any request for the renewal of an extension of the allowable time period for correction shall be made in accordance with sections B.1. and B.2., above.

b. Approval for the renewal of an extension of the allowable time period for correction shall be granted if the department determines that the nursing home continues to meet the criteria contained in section B.3., above.

5. Denial. The department shall deny any request for an extension of the allowable time period for correction if it determines that the criteria specified in section B.3., above, are not met. The denial shall be in writing and shall list the reasons for the denial.

7 MCAR § 1.059 (AR 03885T) →

PART II

MHD 62 Licensing Requirements for the Physical Plant

(APPLIES TO BOTH NURSING HOMES AND BOARDING CARE HOMES)

(a) **State Approval.** As a condition of licensure, a certificate of need shall be obtained for "construction or modification" as defined in the Minnesota Certificate of Need Act, Laws 1971, Chapter 628.

(b) **Notice to the Board.** On matters affecting licensure which are not regulated by the Certificate of Need Act, the Board shall be notified directly in writing relative to proposed planning for (1) all new construction as defined herein, (2) remodeling, (3) changes in existing service, function or bed capacity, (4) addition of new services, (5) sale, and (6) change of ownership.

(c) **New Construction.** New construction involves all construction planned and commenced after the effective date of these regulations. The term "new" or "new construction" as used in Part II of these regulations means (1) the erection of new facilities, (2) expansion of or additions to existing facilities, (3) modernization or major remodeling involving substantial changes in space or arrangement, and (4) any building planned for conversion to be licensed under the provisions of these regulations.

(d) **Existing Facility.** An existing facility is defined in MHD 44(d). The term "existing" or "existing construction" as used in Part II of these regulations shall be considered synonymous with "existing facility", as defined in MHD 44 (d).

(e) **Compliance with Regulations.** The physical plant of all facilities shall be in compliance with these regulations as follows:

(1) **New Construction.** All new construction shall be in accordance with the requirements for new construction as outlined in these regulations.

(2) **Existing Facilities.** All existing facilities shall be deemed to be in substantial compliance with the physical plant requirements for new construction, except as noted in these regulations. When additional beds are added to existing facilities the required dayroom and dining room areas shall be based on the bed capacity of the entire facility. Compliance with the standards for new construction for existing facilities shall be for the areas involved and to the extent that the existing structure will permit. Selected improvements or correction of minor deficiencies in existing facilities shall not be a requirement for compliance with new construction criteria.

(f) **Reclassification.** As a condition for reclassification of a boarding care home to a nursing home, the physical plant shall be in compliance with all new construction requirements for nursing homes.

(g) **State Fire Marshal.** Fire protection shall be provided in accordance with the requirements of the State Fire Marshal and of these regulations. The State Fire Marshal's approval of plans for new construction and of the fire protection of the completed facility shall be pre-requisite for licensure. Facilities shall maintain a clearance by the State Fire Marshal in order to qualify for continued licensure.

(h) Preparation of Plans. Architectural and engineering plans and specifications for new construction shall be prepared and signed by architects and engineers who are registered in the State of Minnesota and in accordance with the requirements by the State Board of Registration for Architects, Engineers and Land Surveyors.

(i) **Approval of Plans.** Preliminary plans and final working drawings and specifications for proposed construction shall be submitted to the Board for review and approval. Preliminary plans shall be approved before the preparation of final working drawings is undertaken. Final working drawings and specifications shall be approved before construction is begun.

(1) Preliminary plans[1] shall be drawn to scale, show basic dimensions and indicate the general layout and space arrangement of the proposed building or area and shall include a site plan when applicable. Plans shall indicate assignments of rooms and areas, and shall show bed capacities and fixed equipment.

(2) Final architectural plans and specifications shall include elevations and sections through the building showing types of construction, and shall indicate dimensions and assignments of rooms and areas, room finishes, door types and hardware, elevations and details of nurses' stations, utility rooms, toilets and bathing areas, and large-scale layouts of dietary and laundry areas. Plans shall show location of fixed equipment and sections and details of elevators, chutes and other conveying systems. Fire walls and smoke partitions shall be indicated. The roof plan shall show all mechanical installations. The site plan, if applicable, shall indicate the proposed and existing buildings, topography, roadways, walks and utility service lines.

(3) Final mechanical and electrical plans and specifications shall cover the complete layout and type of all installations, systems and equipment to be provided in accordance with the requirements of these regulations.

(aa) Heating plans shall include heating elements, piping, thermostatic controls, pumps, tanks, heat exchangers, boilers, breeching and accessories.

(bb) Ventilation plans shall include room air quantities, ducts, fire and smoke dampers, exhaust fans, humidifiers and air handling units.

(cc) Plumbing plans shall include fixtures and equipment fixture schedule, water supply and circulating piping, pumps, tanks, riser diagrams, building drains, the size, location and elevation of water and sewer services, and the building fire protection systems.

(dd) Electrical plans shall include fixtures and equipment, receptacles, switches, power outlets, circuits, power and light panels, transformers and service feeders. Plans shall show location of nurse call signals, telephones, fire alarm stations and detectors, and emergency lighting.

(j) **Start of Construction.** The Department shall be notified in writing of the date of start of construction not less than seven (7) days after commencement. Unless construction is commenced within one year after ap-

[1] The planning should include consideration for future expansion of a facility. This includes the site, orientation of the structure on the site, parking areas as well as patient, dietary, and laundry areas. If a laundry is not contemplated initially, provision should be made for its possible future location.

proval of final working drawings and specifications, the drawings shall be resubmitted for renewal of review and approval.

(k) **Compliance of Construction.** All construction shall be executed in accordance with the approved final plans and specifications. Subsequent construction changes which involve these regulations shall be approved by the Department before such changes are made.

(l) **Final Inspection.** The Department shall be notified at least 30 days prior to the completion of construction so that arrangements can be made for a final inspection by the Department and by the State Fire Marshal. Completion involves the entire construction, equipment, staffing patterns and services. Mechanical and electrical systems shall be completed and tested for performance and safety in accordance with specifications and State requirements before new construction can be licensed and patients or residents admitted.

(m) **Plan Safekeeping.** At least one set of complete plans of the entire facility, including changes resulting from remodeling or alterations shall be kept on file in the licensed facility.

MHD 63—The Site

(APPLIES TO BOTH NURSING HOMES AND BOARDING CARE HOMES)

(a) **New Construction Site.** A care facility shall be so located as to promote at all times the health, comfort and safety of patients and residents. The factors included in selecting the site for a new facility shall be as follows:

(1) Public utilities shall be available and such services provided for power and light.

(2) The water supply shall be obtained from an approved public water supply system where such is available; otherwise, water shall be obtained from a water supply system, the location, construction and operation of which is approved by the Board. Plans and specifications for a private water supply system shall be approved before construction of the system or the facility is started.

(3) Sewage and other liquid wastes shall be discharged into an approved public sewerage system where such a system is available; otherwise, the sewage shall be collected, treated, and disposed of in a sewage disposal system which is approved by the Board and the Minnesota Pollution Control Agency. Plans and specifications for a private sewage disposal system shall be approved before construction of the system or the facility is started.

(4) Community activities shall be accessible, and there shall be a maintained public access to the site.

(5) Medical services shall be readily available, and the location shall be such that employees can be recruited.

(6) The site shall be away from insect breeding swamps and shall be no closer than 300 feet to the right-of-way of a railroad main line or to the property line of industrial developments which are nuisance-producing or hazardous to health. The site shall not be contiguous to or in immediate view of a cemetary or a funeral home.

(7) The topography shall be such that good natural drainage is available, and that the site is not subject to flooding.

(8) Adequate all-weather roads and walks shall be provided within the lot lines to the main entrance and the service entrance, including employees' and visitors' parking at the site.

(9) Grading to one primary entrance shall allow for access for the elderly and the physically handicapped.

(10) The site shall include space for outdoor activities.

(11) The site shall be located within five (5) miles of a municipality and in an area which has: 1) a written contract with the municipality providing fire department service, or 2) a written contract with the municipality to provide the services of an approved organized fire department to which an alarm can be sent by telephone or other suitable alarm-sending device.

(12) The site shall not be located within 85 feet of underground or 300 feet of above ground storage tanks or warehouses containing flammable liquids used in connection with a service station, garage, bulk plant or marine terminal or bottling plant of liquified petroleum gas installation.

4330-4341

7 MCAR S 1.064 Patient or resident areas.

THE FOLLOWING APPLY TO NURSING HOMES ONLY:

(a) **Patients' Bedroom and Service Areas.**

(1) **Bedroom Capacities.**

(aa) **New Construction:** At least 5% of the rooms shall be designed for single person occupancy (1 bed), and shall have private toilet rooms. At least 75% of the beds shall be located in rooms designed for one or two beds. No room shall have more than four (4) beds.

(2) **Corridors.**

(aa) **Existing and New:** Securely anchored handrails shall be provided on both sides of corridors used by patients.

(bb) **New Construction:** The unobstructed width of all corridors in patient areas shall be 8'-0", and all exits shall comply with the State Building Code, 1971 Edition. The handrails shall be mounted at a height of 32 inches to the top of rail. The handrail shall be a round or oval section, 1¾ to 2 inches in diameter, and the clear distance between the handrail and wall shall be 1½ inches. Wall bracket supports shall be provided at least 6'-0" on center, and the brackets shall be capable of supporting a load of not less than 200 pounds.

(3) **Bedroom Requirements.**

(aa) **Location.**

(aa1) **Existing and New:** Bedrooms for patients shall be outside rooms; they shall be dry, well ventilated, naturally lighted and otherwise suitable for occupancy. Each bedroom shall have direct access to an exit corridor. In existing facilities, the floor in existing bedrooms shall not be more than 3'-0" below the outside grade level. All bedrooms for patients which are licensed on or after the effective date of these regulations shall be at or above grade. In all new construction, the floor shall be located at or above the outside grade level or outside surface.

(bb) **Maximum Travel.**

(bb1) **New Construction:** Patient bedrooms shall be located not more than 120 feet from the nurses' station and a clean utility room; and the location of the soiled utility room shall be not more than 80 feet from a patient bedroom or from the nurses' station.

(cc) **Useable Floor Area.**

(cc1) **Existing and New:** The useable floor area and the arrangement and shape of the bedroom shall provide space for furnishings, for the free movement of patients with physical handicaps and for nursing procedures. The useable floor area does not include spaces occupied by toilet rooms, vestibules, lockers or closets, or heating units.

(cc2) **Existing Facilities:** The useable floor area per bed shall not be less than:

100 square feet for single rooms,
80 square feet for two-bed rooms, and
70 square feet for three or four-bed rooms,
when thus licensed prior to the effective date of these regulations.

(cc3) **New Construction:** In new construction the useable floor area per bed shall not be less than:

100 square feet for single rooms, and
80 square feet for two, three or four-bed rooms.

(dd) **Bed Arrangement.**

(dd1) **Existing and New:** Beds shall be located so as to avoid drafts, excessive heat or other discomforts to patients. All single and multi-bed rooms shall allow for a bed arrangement which provides at least 3 feet of floor space at both sides and the foot end of each bed.

(dd2) **New Construction:** Multi-bed rooms shall be arranged to permit not more than two beds side by side parallel to the window wall.

(ee) **Windows.**

(ee1) **New Construction:** The window area shall not be less than one-eighth of the useable floor area, and the window sill shall not be higher than 2'-6" above the floor. The window shall face an open outside space not less than 30 feet deep, and shall provide an unobstructed angle[1] of vision within this space of not less than 65°.

(ff) **Bedroom Doors.**

(ff1) Existing and new.

(a) The nursing home shall develop a written policy regarding the use of locks on patient bedroom doors. The policy shall address whether or not doors can be locked while the patient is in the room.

(b) All such locks shall permit exit from the room by a simple operation without the use of a key. All locks shall be openable with a master key which is located at each nursing station.

(ff2) **New Construction:** The door to the corridor shall be of fire-resistive construction in accordance with the State Building Code, 1971 Edition, open into the bedroom, and provide a clear opening of 44 inches. Bedroom doors shall not open directly to a dayroom, dining area or any other common use area.

(gg) **Clothes Closet.**

(gg1) **New Construction:** A separate built-in closet[2] or storage space for clothing and personal belongings shall be provided within the room for each patient. It shall be provided with shelving; at least one drawer unless included in the bedroom, and a full-length hanging space sized to accommodate clothes on hangers. The interior closet area shall be at least 22 inches deep and 36 inches wide.

(gg2) **Existing Facilities:** See MHD 52 (a)(3).

(hh) **Cubicle Curtains.**

(hh1) **Existing and New:** Cubicle curtains[3] shall be installed for complete privacy for each patient in multi-bed rooms.

(4) **Nurses' Station.**[4]

(aa) **Existing and New:** One or more nurses' stations shall be provided, and there shall be at least one nurses' station per patient floor. A nurses' station may serve more than one nursing area on the same floor,

[1] This angle may be read along the exterior wall.

[2] Locks may be provided, with keys for the patients when a pass key is provided for the nurse.

[3] Decorative types recommended.

[4] An examination and treatment room is recommended. The room should be provided with a lavatory with institutional fittings, a single-service towel dispenser, storage cabinets, a treatment table, and a high intensity examining light.

when adequately sized and staffed, and the maximum travel distances are not exceeded. The station area shall include a nurse call register panel and counter space for nurses' and doctors' charting, and space for storage of charts and supplies.

(bb) **New Construction:** Each nursing station shall be located at the main corridor for better control and for observation of patients and signals.

(5) **Medication Room.**

(aa) **Existing and New:** The medicine preparation area[1] shall be provided in a location which is quiet and convenient for the nursing staff, and separated from all soiled activities. It can be a designated area within the nurses' station or the clean utility room. The area shall contain a work counter, a sink with institutional fittings, a single-service towel dispenser, a refrigerator for medications with a reliable thermometer, and medicine and narcotics cabinets.

(6) **Clean Utility Room.**

(aa) **Existing and New:** A separate clean utility room shall be provided, conveniently located within each nursing area.

(bb) **New Construction:** The clean utility room shall contain a work counter, a sink with institutional fittings, a single-service towel dispenser and adequate storage cabinets and shelving for clean items and supplies.

(7) **Sterilizing Facilities.**

(aa) **Existing and New:** An autoclave for instrument sterilizing if provided in the nursing home shall be located in the clean utility room or in a separate sterilizing room. See MHD 52 (j).

(8) **Clean Linen Storage.**

(aa) **Existing and New:** Rooms, closets, or enclosed carts shall be provided for the storage of clean linen.

(9) **Staff Toilet Room.**

(aa) **New Construction:** A separate nurses' toilet room shall be provided near the nurses' station. It shall include a water closet, a lavatory with institutional fittings, a mirror, and a single-service towel dispenser.

(10) **Soiled Utility Room.**

(aa) **Existing and New:** A separate soiled utility room shall be provided which is conveniently located within each nursing area. It shall contain a flushing rim service sink with bedpan flushing equipment, handwashing facilities and a single-service towel dispenser. Cabinets and shelving shall be provided for the storage of materials and supplies. The washer-sanitizer for bedpans shall be located here.

(bb) **New Construction:** The soiled utility room shall be provided with a work counter and a deep counter sink with institutional fittings for clean-up and for handwashing.

(11) **Nourishment Area.**

(aa) **New Construction:** A nourishment area or room shall be provided for serving between-meal refreshments; it may serve more than one nursing area, and can be located contiguous with a dayroom. The nourish-

[1] See MHD 53 (b).

ment area shall be provided with work counter and sink, storage cabinets and a refrigerator. Ice storage or an ice maker-dispenser, if provided in the patient areas, shall be located here.

(12) **Sanitary Fixtures.**

(aa) **Existing Facilities:** The number of sanitary fixtures shall not be less than:

1 water closet and 1 lavatory for 8 beds, and

1 shower or tub for 20 beds.

When the licensed capacity is increased, the requirements under **New Construction** shall apply to the new addition. In patient toilets where grab bars or towel bars are not provided, such bars shall be installed in accordance with MHD 64 (a)(14) to the extent that the room arrangements will permit.

(bb) **New Construction:** The number of sanitary fixtures shall not be less than:

1 water closet and 1 lavatory for 4 beds, and

1 shower or tub for 15 beds.

Toilets in central bathing, other service areas, or for personnel, or the public shall not be counted in the above requirement. If urinals are provided, they shall be floor mounted. No toilet room shall be without a lavatory and all lavatories shall be provided with hot and cold water. Lavatories and sinks used by nurses or doctors shall be provided with institutional fittings in accordance with MHD 67 (c)(1)(11), and shall include the provision of single-service hand drying facilities. A single-service towel dispenser can use single or roll towels, either disposable or washable.

(cc) **Existing and New:** Water closets shall be located in separate toilet rooms, in stalls or within bathing areas only. Portable commodes, chemical toilets or water closets with moving parts in the bowl or waste line assembly shall not be considered as substitutes for the required number of water closets.

(13) **Provision of Patient Toilet Rooms.**

(aa) **New Construction:** Each toilet room shall be directly accessible from the bedroom, except as noted; it may serve 2 bedrooms if patients are of the same sex, but not more than 4 beds. Hinged doors shall swing out, or they shall be double acting and be provided with an emergency type release stop. Privacy door locks shall be of a type which can be opened from the outside without the use of a separate device. Sliding doors shall be surface mounted. Folding doors shall be limited to toilet rooms with a single door access, and shall be capable of easy and positive latching when being closed, and of staying folded in the open position; the required width of door opening shall be increased to allow for the door when folded. Toilet rooms shall be designed for the elderly, disabled, and infirm and special toilet rooms accessible to wheelchair users shall be provided for at least 25% of the patients. At least one such special toilet room shall be provided which has access from the corridor side for general use; the toilet required in central bathing can service this function when properly designed and arranged.

(14) **Toilet Room Layout.**

(aa) **New Construction:**

(aa1) The door opening shall be at least 2'-8" wide.

(aa2) The center of the water closet shall be located 18 to 21 inches from the side wall and there shall be at least 3'-0" of unobstructed space in front of the bowl. No basic interior room dimension shall be less than 3'-6".

(aa3) The water closet shall be mounted at a height of not less than 16 inches nor more than 19 inches above the floor, measured to the top of seat. The bowl[1] shall be elongated with an open front seat.

(aa4) The paper holder shall be securely anchored on the side wall near the water closet, 6 inches above the seat, and 6-12 inches in front of the seat with both dimensions measured to the center of the holder.

(aa5) A vertical grab bar, at least 18 inches long, shall be provided on the side wall[2] near the water closet. The low end shall be mounted at a height of 10 inches above the toilet seat and at a distance of 12 inches in front of the seat.

(aa6) Grab bars shall have an outside diameter of 1½ inches, and shall provide a clearance of 1½ inches between the bar and the wall. Bars shall be securely anchored to sustain a load of 250 pounds for 5 minutes.

(aa7) The lavatory, with or without a counter top, shall be mounted at a height of 32 inches above the floor, measured to the top edge.

(aa8) A towel bar for patients shall be provided at a height of 42 inches above the floor. It shall be a horizontal grab bar, securely anchored.

(aa9) A mirror shall be provided.

(aa10) A small shelf for personal toilet accessories shall be provided, unless such space is provided by a suitable lavatory or a counter.

(15) **Special Toilet Rooms.**

(aa) **New Construction:** Toilet rooms for wheelchair users shall be arranged to allow wheelchair movement for both the frontal and the oblique angle[3] approach.

(aa1) The door opening shall be at least 2'-8" wide, and shall be located within an area in front of the water closet.

(aa2) The center of the water closet shall be located 18 inches from the side wall, and there shall be at least 4'-0" of unobstructed space in front of the bowl. No basic interior room dimension shall be less than 5'-6".

(aa3) The water closet shall be mounted at a height of 18 to 19 inches above the floor measured to the top of the seat. The bowl shall be elongated with an open front seat.

(aa4) The paper holder shall be securely anchored on the side wall near the water closet, 6 inches above the seat, and 6 to 12 inches in front of the seat with both dimensions measured to the center of the holder.

[1] It is recommended that individual bedpan flushing equipment and lugs be included with all patient water closets serving bedrooms.

[2] A grab bar on each side of the water closet is recommended.

[3] It is recommended that the room also be designed for lateral transfer of wheelchair users.

(aa5) An L-shape grab bar, each leg at least 18 inches long, shall be provided, securely anchored, on the side wall near the water closet. The low end of the vertical leg shall be mounted at a height of 10 inches above the toilet seat and at a distance of 12 inches in front of the seat, and the horizontal bar shall extend toward the back wall.

(aa6) A horizontal grab bar, braced for vertical and lateral loads, and projecting 16 inches out from the back wall, shall be located at the open, opposite side of the water closet. It shall be without floor supports and shall be mounted at a height of 10 inches above the toilet seat and at a distance of 4 to 6 inches away from the edge of the toilet seat.

(aa7) Grab bars shall have an outside diameter of 1½ inches, and shall provide a clearance of 1½ inches between the bar and the wall. Bars shall be securely anchored to sustain a load of 250 pounds for 5 minutes.

(aa8) The lavatory, with or without countertop, shall be accessible and shall not interfere with general wheelchair movements. It shall be mounted at a height of 32 inches above the floor, measured to the top edge, and shall provide a vertical free clearance of at least 26 inches for knee space. A standard type lavatory which meets these conditions is acceptable.

(aa9) A towel bar for patients shall be provided at a height of 42 inches. It shall be a horizontal grab bar, securely anchored.

(aa10) The bottom of the mirror shall be placed at a height of 36 inches and the top at a height of at least 66 inches.

(aa11) A small shelf for personal toilet accessories shall be provided at a height of 32 to 36 inches, unless such space is provided by a suitable lavatory or a counter.

(16) **Patient Toilet-Bath Combinations.**

(aa) **Existing and New:** In a room used by more than one patient, the bathtub or shower area shall be provided with a draw curtain for privacy. Bathtubs and showers shall be provided with a non-slip bottom or floor surface, and the areas shall be provided with grab bars.

(bb) **New Construction:** The toilet area shall comply with MHD 64 (a)(14). The shower or bathtub area shall comply with the provisions for the physically handicapped in the State Building Code, 1971 Edition. In addition to the above, shower and bathtub areas shall be provided with recessed soap holders without handles.

(17) **Central Bathing Area.** Bathing fixtures shall be provided in accordance with MHD 64 (a)(12).

(aa) **Existing and New:** In bathing areas with more than one fixture, each bathtub or shower area shall be provided with privacy curtains and/or wall dividers. Bathtubs and showers shall be provided with a non-slip bottom or floor surface, and at least one grab bar, securely anchored, shall be provided at each fixture. There shall be convenient access to toilet facilities. If a water closet is located within an open area with multiple bathing fixtures, the toilet area shall be provided with privacy curtains or stall partitions. Such a toilet facility shall not be for general use by patients outside the bathing area.

(bb) **New Construction:** All bathtub and shower areas shall be designed for assisted bathing. The bathing area shall have direct access

to a toilet room without going through the general corridor, and the toilet room shall allow space for assistance of patients; see MHD 64 (a)(14) or MHD 64 (a)(15). If towel bars are provided, they shall be horizontal grab bars, securely anchored.

(bb1) Central showers shall not be less than 4'-0" x 4'-0" or 4'-6" x 3'-6" with the long side open, without a curb, and with a 32 inch high splash protection. The shower area[1] shall have the controls located near the splash protection for easy reach by both patient and attendant, and the floor drain shall be located near the rear wall. A flexible hose hand shower shall be provided, and soap holders shall be without handles and be recessed. A vertical, non-slip grab bar, 24 inches long, shall be provided at the shower and at the shower entrance location. The low end of the grab bar shall be 3'-0" above the floor. Horizontal grab bars inside wet areas shall be mounted at a height of 4'-6" above the floor.

(bb2) The elevated tub shall be free-standing not more than 32 inches high and shall provide at least 3'-0" of working space for the attendant on one side, and at least 4'-0" at the end and on the opposite side for a chair lift. A pedestal being used to elevate a standard type bath tub shall be provided with a finished cleanable surface, and include a toe space. A flexible hose hand shower shall be provided, and the soap holder shall be without handle and be recessed. A vertical, non-slip grab bar, 24 inches long, shall be provided on each side of the tub at the head end. The low end of the grab bar shall be 3'-0" above the floor or 4 inches above the rim of the tub.

(18) **Toilet Training Room.**

(aa) **Existing and New:** A room shall be provided for toilet training, and may serve the central bathing area. The toilet seat shall be provided with removable or hinged side rails.

(bb) **New Construction:** The toilet training room shall be accessible from the general corridor. The space shall provide for a 3'-6" clearance at the sides of the water closet, 4'-0" at the front. The water closet shall be mounted at a height of 18 to 19 inches, measured to the top of the seat. A lavatory with institutional fittings shall be provided, but shall be located outside the wheelchair clearance limits.

(19) **Storage Room.**

(aa) **New Construction:** A room or space for the storage of wheelchairs, walkers and other bulky equipment on the basis of one square foot per bed shall be provided in each patient area.

(20) **Janitor's Closet.**

(aa) **New Construction:** A janitor's closet shall be provided for each patient floor or area. It shall contain a floor receptor or service sink, storage for housekeeping supplies and equipment.

(21) **Drinking Fountains.**

(aa) **New Construction:** Refrigerated drinking fountains shall be provided in patient areas and in the recreational or activities area. The fountain shall be of a type and installation which is accessible to, and useable by the physically handicapped.

[1] A folding shower seat, 16 inches deep and 19 inches above the floor, is recommended for use by ambulatory patients.

(22) **Room Numbering.**

(aa) **Existing and New:** All bedrooms and service rooms shall be labeled utilizing a system of numbers. The numbers of rooms in multi-story facilities shall be prefixed by the number of the corresponding floor level.

(23) **Staff Housing.**

(aa) **Existing and New:** When living quarters for staff or administration are provided within the facility, they shall be separated from the patients' areas.

(24) **Mechanical and Electrical Systems.**

(aa) **Existing and New:** The requirements for plumbing, heating, ventilation and electrical systems are covered in MHD 67.

THE FOLLOWING APPLY TO BOARDING CARE HOMES ONLY:

(b) **Residents' Bedroom and Service Areas.**

(1) **Bedroom Capacities.**

(aa) **New Construction:** At least 5% of the rooms shall be designed for single person occupancy (1 bed), and shall have private toilet rooms. At least 75% of the beds shall be located in rooms designed for one or two beds. No room shall have more than four (4) beds.

(2) **Corridors.**

(aa) **New Construction:** The unobstructed width of all corridors in resident areas shall be at least 6'-0"[1], and all exits shall comply with the State Building Code, 1971 Edition.

(3) **Bedroom Requirements.**

(aa) **Location.**

(aa1) **Existing and New:** Bedrooms for residents shall be outside rooms; they shall be dry, well ventilated, naturally lighted and otherwise suitable for occupancy. Each bedroom shall have direct access to an exit corridor. In existing facilities, the floor in existing bedrooms shall not be more than 3'-0" below the outside grade level. All bedrooms for residents which are licensed on or after the effective date of these regulations shall be at or above grade. In all new construction, the floor shall be located at or above the outside grade level or outside surface.

(bb) **Useable Floor Area.**

(bb1) **Existing and New:** The useable floor area and the arrangement and shape of the room shall provide space for furnishings and for the free movement of residents. The useable floor area does not include spaces occupied by toilet rooms, vestibules, lockers or closets, or heating units.

(bb2) **Existing Facilities:** The useable floor area per bed shall not be less than:

100 square feet for single rooms.

80 square feet for two-bed rooms; and

[1] It is recommended that the planning of a new boarding care home include provisions for ease of compliance with nursing home requirements in order to accommodate a future higher level of care.

70 square feet for three or four-bed rooms, when thus licensed prior to the effective date of these regulations.

(bb3) **New Construction:** In new construction the useable floor area per bed shall not be less than:

100 square feet for single rooms, and

80 square feet for two, three or four-bed rooms.

(cc) **Bed Arrangement.**

(cc1) **Existing and New:** Beds shall be located so as to avoid drafts, excessive heat or other discomforts to residents. All single and multi-bed rooms shall allow for a bed arrangement which can provide at least 3 feet of floor space at both sides and the foot end of each bed.

(cc2) **New Construction:** Multi-bed rooms shall be arranged to permit not more than two beds side by side parallel to the window wall.

(dd) **Windows.**

(dd1) **New Construction:** The window area shall not be less than one-eighth of the useable floor area, and the window sill shall not be higher than 2'-6" above the floor. The window shall face an open outside space not less than 30 feet deep, and shall provide an unobstructed angle[1] of vision within this space of not less than 65°.

(ee) **Bedroom Doors.**

(ee1) **New Construction:** The door to the corridor shall be of fire-resistive construction in accordance with the State Building Code, 1971 Edition, open into the bedroom, and provide a clear opening of 36 inches. Bedroom doors shall not open directly to a dayroom, dining area or any other common use area. Privacy locks on doors to residents' bedrooms shall be of a type which can be opened with a master key from the corridor side at all times.

(ff) **Clothes Closet.**

(ff1) **New Construction:** A separate built-in closet[2] or storage space for clothing and personal belongings shall be provided within the room for each resident. It shall be provided with shelving; at least one drawer, unless included in the bedroom, and a full-length hanging space sized to accommodate clothes on hangers. The interior closet area shall be at least 22 inches deep and 36 inches wide.

(ff2) **Existing Facilities:** See MHD 52 (a)(3).

(gg) **Cubicle Curtains.**

(gg1) **Existing and New:** Cubicle curtains[3] shall be installed for complete privacy for each resident in multi-bed rooms.

(4) **Attendants' Station.**

(aa) **Existing Facilities:** An attendants' station shall be provided with space for the residents' records and a medicine cabinet.

[1] This angle may be read along the exterior wall.
[2] Locks may be provided, if openable with a master key.
[3] Decorative types recommended.

(bb) **New Construction:** An attendants' station or stations shall be provided on each resident area or floor with space for the residents' records and a medicine cabinet.

(5) **Clean Linen Storage.**

(aa) **Existing and New:** One or more rooms, closets, or enclosed carts shall be provided for the storage of clean linen.

(6) **Nourishment Area.**

(aa) **New Construction:** A nourishment area or room shall be provided for between-meal refreshments; it may serve more than one resident area, and can be located contiguous with a dayroom. The nourishment area shall be provided with work counter and sink, storage cabinets and a refrigerator. Ice storage or an ice maker-dispenser, if provided in the resident areas, shall be located here.

(7) **Sanitary Fixtures.**

(aa) **Existing Facilities:** The number of sanitary fixtures shall not be less than:

1 water closet and 1 lavatory for 8 beds, and
1 shower or tub for 20 beds.

When the licensed capacity is increased, the requirement under **New Construction** shall apply to the new addition. In resident toilets where grab bars or towel bars are not provided, such bars shall be installed in accordance with MHD 64 (a)(14) to the extent that the room arrangements will permit.

(bb) **New Construction:** The number of sanitary fixtures shall not be less than:

1 water closet and 1 lavatory for 4 beds, and
1 shower or tub for 15 beds.

Toilets in central bathing, other service areas, or for personnel or the public shall not be counted in the above requirement. If urinals are provided, they shall be floor mounted. No toilet room shall be without a lavatory and all lavatories shall be provided with hot and cold water. A single-service towel dispenser can use single or roll towels, either disposable or washable.

(cc) **Existing and New:** Water closets shall be located in separate toilet rooms, in stalls or within bathing areas only. Portable commodes, chemical toilets or water closets with moving parts in the bowl or waste line assembly shall not be considered as substitutes for the required number of water closets.

(8) **Provision of Resident Toilet Rooms.**

(aa) **New Construction:** Each toilet room shall be directly accessible from the bedroom, except as noted; it may serve 2 bedrooms if residents are of the same sex, but not more than 4 beds. Hinged doors shall swing out, or they shall be double acting and be provided with an emergency type release stop. Privacy door locks shall be of a type which can be opened from the outside without the use of a separate device. Sliding doors shall be surface mounted. Folding doors shall be limited to toilet rooms with a single door access, and shall be capable of easy and positive latching when

being closed, and of staying folded in the open position; the required width of door opening shall be increased to allow for the door when folded. Toilet rooms shall be designed for the elderly and infirm.

(9) **Toilet Room Layout.**

(aa) **New Construction:**

(aa1) The door opening shall be at least 2'-8" wide.

(aa2) The center of the water closet shall be located 18 to 21 inches from the side wall and there shall be at least 3'-0" of unobstructed space in front of the bowl. No basic interior room dimension shall be less than 3'-6".

(aa3) The water closet shall be mounted at a height of not less than 16 inches nor more than 19 inches above the floor, measured to the top of seat. The bowl shall be elongated with an open front seat.

(aa4) The paper holder shall be securely anchored on the side wall near the water closet, 6 inches above the seat, and 6 to 12 inches in front of the seat with both dimensions measured to the center of the holder.

(aa5) A vertical grab bar, at least 18 inches long, shall be provided on the side wall[1] near the water closet. The low end shall be mounted at a height of 10 inches above the toilet seat and at a distance of 12 inches in front of the seat.

(aa6) Grab bars shall have an outside diameter of 1½ inches, and shall provide a clearance of 1½ inches between the bar and the wall. Bars shall be securely anchored to sustain a load of 250 pounds for 5 minutes.

(aa7) The lavatory, with or without a counter top, shall be mounted at a height of 32 inches above the floor, measured to the top edge.

(aa8) A towel bar shall be provided at a height of 42 inches above the floor. It shall be a horizontal grab bar, securely anchored.

(aa9) A mirror shall be provided.

(aa10) A small shelf for personal toilet accessories shall be provided, unless such space is provided by a suitable lavatory or a counter.

(10) **Resident Toilet-Bath Combinations.**

(aa) **Existing and New:** In a room used by more than one resident the bathtub or shower area shall be provided with a draw curtain for privacy. Bathtubs and showers shall be provided with a non-slip bottom or floor surface, and the areas shall be provided with grab bars.

(bb) **New Construction:** The toilet area shall comply with MHD 64 (b)(9). The shower or bathtub area shall comply with the requirements in MHD 64 (b)(11)(bb) and with the requirements for the physically handicapped in the State Building Code, 1971 Edition. In addition to the above, shower and bathtub areas shall be provided with recessed soap holders without handles.

(11) **Central Bathing Area.** Bathing fixtures shall be provided in accordance with MHD 64 (b)(7).

[1] A grab bar on each side of the water closet is recommended.

(aa) **Existing and New:** In bathing areas with more than one fixture, each bathtub or shower area shall be provided with privacy curtains and/or wall dividers. Bathtubs and showers shall be provided with a non-slip bottom or floor surface, and at least one grab bar, securely anchored, shall be provided at each fixture. There shall be convenient access to toilet facilities. If a water closet is located within an open area with multiple bathing fixtures, the toilet area shall be provided with privacy curtains or stall partitions. Such a toilet facility shall not be for general use by residents outside the bathing area.

(bb) **New Construction:** All bathtub or shower areas shall be designed for the elderly and infirm. At least one special bathtub or shower area, designed for assisted bathing, shall be available for general use. Shower stalls shall be at least 2'-6" x 2'-6" inside dimension, and be without curbs. Bathtubs shall be at least 18 inches, but not more than 20 inches above the floor. Soap holders shall be without handles and be recessed.

(bb1) The special bathtub or shower facilities shall be provided in accordance with the provisions for the physically handicapped in the State Building Code, 1971 Edition.

(bb2) A shower for assisted bathing shall not be less than 4'-0" x 4'-0" or 4'-6" x 3'-6" with the long side open without a curb, and with a 32 inch high splash protection. The shower area[1] shall have the controls located near the splash protection for easy reach by both resident and attendant, and the floor drain shall be located near the rear wall. A flexible hose hand shower shall be provided, and the soap holder shall be without handle and be recessed. A vertical, non-slip grab bar, 24 inches long, shall be provided at the shower and at the shower entrance location. The low end of the grab bar shall be 3'-0" above the floor. Horizontal grab bars inside wet areas shall be mounted at a height of 4'-6" above the floor.

(bb3) A bathtub area for assisted bathing shall provide at least 3'-0" of working space for the attendant on at least two sides of the tub. A flexible hose hand shower shall be provided, and the soap holder shall be without handle and be recessed. A vertical, non-slip grab bar, 36 inches long, shall be provided at the point of access at each side or end of the tub. The low end of the grab bar shall be 4 inches above the rim. A horizontal grab bar, 36 inches long, shall be installed 4 inches above the inside rim, if the bathtub is installed with the long side toward the wall.

(12) **Storage Room.**

(aa) **New Construction:** A room or space for storage of bulky equipment shall be provided.

(13) **Janitor's Closet.**

(aa) **New Construction:** A janitor's closet shall be provided for each floor or resident area. It shall contain a floor receptor or service sink, storage for housekeeping supplies and equipment.

(14) **Drinking Fountains.**

(aa) **New Construction:** Refrigerated drinking fountains shall be provided in resident areas and in the recreational or activities area.

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[1] A folding shower seat, 16 inches deep and 19 inches above the floor, is recommended.

(15) Room Numbering.

(aa) **Existing and New:** All bedrooms and service rooms shall be labeled utilizing a system of numbers. The numbers of rooms in multi-story facilities shall be prefixed by the number of the corresponding floor level.

(16) Staff Housing.

(aa) **Existing and New:** When living quarters for staff or administration are provided within the facility, they shall be separated from the residents' areas.

(17) Mechanical and Electrical Systems.

(aa) **Existing and New:** The requirements for plumbing, heating, ventilation and electrical systems are covered in MHD 67.

MHD 65 Supportive Service Areas

(APPLIES TO BOTH NURSING HOMES AND BOARDING CARE HOMES)

(a) **Dining and Activity Areas.**

(1) **Required Floor Area.**

(aa) **New Construction:** The total areas set aside for dining, dayroom and activities[1] shall not be less than 30 square feet per bed.

(bb) **Existing and New:** Additional space shall be provided for the above if the facility is offering a day care program.

(2) **Dayrooms.**

(aa) **New Construction:** The minimum dayroom and activities[1] area shall be 20 square feet per bed. Areas used for corridor traffic or chapels with fixed pews, shall not count as dayroom space. Dayrooms shall be located convenient to the bedroom areas and there shall be at least one on each bedroom floor in multi-story construction. Dayrooms shall have outside windows, and the sill shall not be higher than 2'-6" above the floor.

(3) **Dining Area.**

(aa) **New Construction:** The minimum dining area shall be 10 square feet per bed. The dining room area shall be separate from the kitchen.

(4) **Activities Area.**

(aa) **New Construction:** The area for social and recreational activities or therapeutic treatment shall provide space, arrangement and equipment to accommodate the activities program.

(aa1) **Space Arrangement.** Special consideration shall be given to space arrangement for obtaining maximum flexibility in divisions or separations of activities areas according to the type of function. Dirty and dusty activities shall be separate from clean activities, and noisy activities shall be completely separate and enclosed.

(aa2) **Storage.** Storage for supplies and equipment, including storage accommodations and display space for individual participants' projects shall be provided.

(aa3) **Sanitary Facilities.** A counter with a sink or a lavatory and a single-service towel dispenser shall be provided within the area. A toilet room shall be available nearby.

(b) **Dietary Facilities.**

(1) **Kitchen Area.**

(aa) **New Construction:** The kitchen shall be located convenient to the service entrance, the food storage areas and the dining area. Door openings to food preparation areas shall be located away from entrances to soiled linen or utility rooms, trash rooms, or a laundry. The kitchen area shall be arranged for efficient operation and shall contain sufficient space and equipment for the type of food service selected. If a commercial food

[1] It is recommended that an additional, separate activities area be provided.

service[1] is utilized, or if meals are provided by another facility, the dietary areas and equipment shall be designed to provide for the sanitary storage, processing, and handling of such food. The kitchen area[2] shall be subjected only to that traffic which is directly related to the functions of the food service; food storage areas shall be located to avoid delivery traffic through the kitchen area.

(aa1) **Storage for Non-Perishable Food.** A well-ventilated storeroom shall be provided for day storage, and for the reserve food supply. The supply room shall have storage capacity for at least one week's supplies. Shelving shall be finished with a washable surface, and the bottom shelf shall be at least 8 inches above the floor. Floor drains shall not be provided.

(aa2) **Storage for Perishable Food.** Refrigerated storage for perishable foods shall be provided for a minimum three-day supply, and refrigerators, freezers, and refrigerated storerooms shall each be equipped with a reliable thermometer. Walk-in coolers and freezers shall be equipped with open-grid, corrosion-resistant metal shelving with the lowest shelf at least 8 inches above the floor; be provided with inside lighting and inside safety lock releases; and the floors shall be flush with the kitchen floor to accommodate moveable equipment. Floor drains, directly connected to the building sewer system, shall not be provided inside the room. The required temperatures are covered under MHD 55 (p).

(aa3) **Storage for Dishes and Utensils.** Enclosed storage shall be provided for all china, glasses, flatware and other food service utensils, including cooking utensils, pots and pans. Dishes and utensils shall not be stored in the dishwashing area.

(aa4) **Supervisor's Office.** An office or separate desk space[3] for the dietary supervisor shall be provided within or adjacent to the kitchen. The area shall include space for reference books and files.

(aa5) **Janitor's Closet.** The dietary department shall be provided with its own janitor's closet with a floor receptor or service sink, and storage for housekeeping supplies and equipment.

(aa6) **Lavatories.** At least one lavatory with a single-service towel dispenser, shall be provided in the food preparation area and in the clean end of the dishwashing area. A single lavatory may be provided for a smaller dietary department; it shall be located near the clean end of the dishwashing area. Mirrors shall not be installed in food preparation areas.

(aa7) **Toilet Room.** A toilet room shall be conveniently accessible for the dietary staff. It shall not open directly into any food service area. It shall contain a water closet, lavatory, mirror, and a single-service towel dispenser.

(2) **Food Service Equipment.**

(aa) **New Construction:** All food service equipment, including icemakers, drinking fountains and dishwashers, shall be of a type equal to the Standards established by the National Sanitation Foundation (NSF),

[1] A dietary area designed for limited food preparation should be arranged for possible future expansion in the case that a facility reverts to a standard type food service at a later date.

[2] It is recommended that doors with locks be provided to secure the kitchen and food storage areas during off-hours.

[3] Dietary office space may be provided in the administrative area in a facility with 30 beds or less.

see MHD 67 (g). Sufficient separation shall be provided between each piece of equipment and between equipment and walls to permit easy and effective cleaning, or the equipment shall be placed with a tight fit and the joints sealed. Equipment which is not sealed at the floor shall be installed on sanitary legs providing at least 6 inches clearance between the equipment and the floor, or it shall be provided with casters. Aisles between equipment shall have a minimum width of 4 feet to allow room for traffic in work areas and to permit movement of mobile equipment.

(aa1) **Food Carts.** Food carts shall be enclosed when used for the transport of uncovered food trays or containers through non-dietary areas. Floor storage shall be provided for the storage of all carts.

(aa2) **Cutting Boards.** Cutting boards or similar use table tops shall be constructed of hard rubber, high-pressure laminate, or of similar non-porous, smooth and cleanable material, and be free of cracks, crevices and open seams.

(aa3) **Scullery Sink.** A three-compartment scullery sink shall be provided for the complete hand-washing of pots and pans. A drainboard, at least 30 inches long, shall be provided on each end of the sink. Each compartment shall be of a size and depth which will accommodate utensils, pots and pans. The sanitizing compartment[1] shall be at least 14 inches deep, permit the introduction of long-handled wire baskets for small utensils, and shall be equipped with a unit heater capable of maintaining a water temperature of at least 170°F.

(bb) **Existing Facilities:** All food service equipment when it is being replaced shall be of a type equal to the Standards established by the National Sanitation Foundation (NSF), see MHD 67 (g).

(3) **Dishwashing Area.**

(aa) **New Construction:** The dishwashing area shall be separate and away from the kitchen food preparation area, and shall be arranged and equipped as follows:

(aa1) Soiled dishes shall arrive at the soiled dish counter without passing through the clean dish side of the dishwashing area or through the food preparation area of the kitchen. The soiled dish counter shall include provisions for pre-rinse of dishes and disposal of garbage.

(aa2) Facilities with more than 30 beds shall be provided with a commercial hood type or conveyor dishwasher. The area containing the dishwasher and the soiled dish spray rinse shall be separated from the food preparation area and the clean dish storage area by a wall protection.

(aa3) In facilities with 30 beds or less, a commercial type undercounter type dishwasher shall be a minimum requirement.

(aa4) Clean dishes shall be returned directly from the clean dish counter to a clean area for storage. The clean dish counter shall not be less than 4'-0" long in facilities with pass-through type dishwashers. If necessary, provision shall be made for the return of empty dish racks to the dishwasher area.

[1] If the mechanical dishwasher or a mechanical utensil washer is used for the sanitizing of pots and pans, a sanitizing compartment may not be required and a two-compartment scullery sink may be acceptable.

(4) **Washing of Food Carts.**

(aa) **New Construction:** A separate area shall be provided for the cleaning of food carts.

(5) **Washing of Garbage Cans.**

(aa) **New Construction:** An area, separated from the dietary area, shall be provided for the washing of garbage cans.

(c) **The Laundry.**

(1) **Size and Location.**

(aa) **Existing and New:** The laundry, if provided in the facility, shall be sized and equipped to handle the laundering of all linen and personal clothing to be processed in the facility.

(bb) **New Construction:** The entrance to a soiled linen collection room or to a laundry processing room shall be located away from patient or resident living areas and the entrance to the kitchen. Door widths to laundry areas shall allow for movement of equipment and linen carts.

(2) **Soiled Linen Collection Room.**

(aa) **Existing and New:** A separate, enclosed soiled linen room shall be provided for the collection, storage and sorting of soiled linen to be processed in the laundry processing room or by an outside laundry service.

(bb) **New Construction:** The soiled linen collection room shall be located at the soiled side of the laundry processing room. A soiled linen collection room for facilities with outside laundry service shall be located near the service entrance.

(3) **Laundry Processing Room.**

(aa) **New Construction:** The laundry processing room shall be arranged to allow for the orderly, progressive flow of work from the soiled to the clean area. Equipment shall be arranged to minimize linen transportation, provide the necessary floor area between operations, and avoid cross traffic between clean and soiled operations. The room shall provide space for storage of laundry supplies, cleaning equipment, and for parking of laundry trucks used in the operation. Hand-washing facilities shall be available for the area. A two-compartment laundry tub[1] shall be provided and shall be of a material with a non-absorbent smooth, permanent finish.

(4) **Laundry Equipment.**

(aa) **Existing and New:** The equipment[2] shall be of commercial type and shall consist of one or more washers, extractors, tumblers or combinations of these, as well as ironers and presses, depending on the size of the facility. The washer installation shall be capable of meeting the operating requirements in MHD 54 (a)(5) and MHD 54 (b)(3).

(5) **Clean Linen Room.**

(aa) **Existing and New:** A separate, enclosed clean linen storage room shall be provided.

[1] The laundry tub may be provided with fittings for the required handwashing facilities.
[2] The washers and extractors should each have a combined rated capacity of not less than 12 pounds of dry laundry per patient, when operating not more than 40 hours per week. The tumbler and flat work ironer should each have a rated capacity of 15% and 70% respectively of the washers when operating 40 hours per week.

(6) Laundry for Personal Clothing.

(aa) **Existing and New:** Provision shall be made for the washing of personal clothing either within or outside the facility.

(d) Central Storage.

(1) **New Construction:** Central storage shall be provided in all facilities for the storage of bulk supplies and equipment. At least 10 square feet per bed shall be provided.

(e) Refuse Area.

(1) **Existing and New:** An outside, fenced area or a separate room shall be provided for holding trash and garbage prior to disposal. It shall be located convenient to the service entrance and be sized to accommodate the refuse volume and the chosen type of disposal system. An incinerator, if provided, shall be in a separate room, or in a designated area within the boiler or heater room, or outdoors.

(f) Yard Equipment.

(1) **New Construction:** Separate storage for yard maintenance equipment and supplies shall be provided outside the facility.

(g) Main Entrance Area.

(1) **New Construction:** A lobby area appropriate to the size of the facility shall be provided. It shall be located near the main control area, with easy access to elevators, if provided. Public toilet facilities shall be provided in this area.

(h) Administration.

(1) **New Construction:** Space shall be provided for administrative functions involving business records and for the safe-keeping of patients' and residents' valuables.

(i) Facilities for Personnel.

(1) **Existing and New:** Locker and toilet facilities shall be provided in accordance with the requirements of the Minnesota Department of Labor and Industry, see MHD 67 (g).

(j) Plumbing, Ventilation and Lighting.

(1) **Existing and New:** The requirements for mechanical and electrical systems are covered in MHD 67.

THE FOLLOWING APPLY TO NURSING HOMES ONLY:

(k) Physical Therapy Area.

(1) **Existing and New:** The physical therapy service, if provided, shall contain space and equipment[1] for exercise and treatment which meets the needs of a medically directed therapy program. Each treatment area shall be provided with cubicle curtains for patients' privacy. Storage space shall be provided for supplies and equipment; and the area shall be provided with a lavatory or sink with institutional fittings and a single-service towel

[1] It is recommended that this area be utilized for inservice training in restorative nursing procedures.

dispenser. A desk and file space for the supervisor shall be provided which also may serve an adjacent activities area. A toilet room[1] shall be convenient to the area.

(2) **New Construction:** The toilet room shall comply with the requirements for special toilets, MHD 64 (a)(15).

(l) **Barber and Beauty Shop Services.**

(1) **New Construction:** A room shall be provided for barber and beauty shop services with a shampoo sink, a lavatory and storage space.

[1] The toilet room may also serve an adjacent activities area.

MHD 66 Construction Details, Chutes and Elevators

(APPLIES TO BOTH NURSING HOMES AND BOARDING CARE HOMES)

(a) **Access to Facility.**

(1) **New Construction:** Accessibility to the facility by patients, residents and the handicapped, shall include at least one primary entrance without obstructions such as steps or curbs on walkways. Ramp slope shall not exceed 1 foot rise in 12 feet.

(b) **Ceiling Heights.**

(1) **New Construction:** Minimum ceiling heights shall be provided as follows:

(aa) Boiler room ceilings shall be at least 5'-0" higher than the top of the boiler unit and at least 2'-6" above the main boiler header and connecting piping with a minimum total height of 9'-0".

(bb) Ceilings in corridors, storage rooms, patients' toilet rooms and other minor rooms shall not be less than 7'-6".

(cc) Ceilings in all other rooms shall not be less than 8'-0".

(c) **Clean Air.**

(1) **Existing and New:** All air supplied to the facility shall be free from harmful particulate matter, any type of combustion products or contaminants, obnoxious odors or exhausted air from the building or adjoining property.

(d) **Exterior Mechanical Shafts.**

(1) **New Construction:** Exterior shafts serving equipment for patient or resident areas shall be constructed to prevent accumulation of dirt, leaves or snow.

(e) **Area Heat Protection.**

(1) **Existing and New:** Floors and walls for patient or resident living areas which are overheated due to adjoining heat sources shall be insulated or otherwise protected to prevent the surface from exceeding a temperature of 85°F.

(f) **The Incinerator.**

(1) **New Construction:** An incinerator, if provided, shall comply with the requirements of the Minnesota Pollution Control Agency.

(g) **Overhead Piping.**

(1) **New Construction:** Overhead piping shall not be exposed in dietary areas, clean supply and clean linen areas. Overhead sanitary waste lines in these areas shall be avoided.

(h) **Protection Railings.**

(1) **New Construction:** Protection railings, 42 inches high, shall be provided in accordance with the requirements for guardrails in the State Building Code, 1971 Edition. The provision shall include railings for top landings of stairs, and window wells and open air shafts in areas accessible to patients or residents.

(i) **Glass Protection.**

(1) **Existing Facilities:** All full height windows, glass partitions, or glass doors shall be provided with decals or markings.

(2) **New Construction:** Any full height window or glass partition of clear glass which has the sill placed at or near floor level and is located in areas accessible to patients or residents shall be provided with a railing or some other structural safety barrier at a height of at least 30 inches above the floor. Glass doors shall be provided with a push bar or with decals or markings.

(j) **Floor Joints.**

(1) **New Construction:** Thresholds and expansion joint covers shall be flush with the floor, except at exterior doors. Adjacent dissimilar floor materials shall be flush with each other to provide an unbroken surface.

(k) **Non-Skid Surfaces.**

(1) **Existing and New:** Stairways, ramps, bathtubs and showers shall be provided with non-slip surfaces. Rubber non-skid mats in bath and shower stalls, and loose scatter rugs in patient or resident areas shall not be used.

(l) **Door Handles.**

(1) **New Construction:** Lever type door handles shall be provided on all doors to bedrooms, toilet rooms, dayroom, dining room and activities areas.

(m) **Electrical Safety.**

(1) **Existing and New:** Major appliances such as washers and dryers shall be grounded. Electrical items such as radios, television sets or lamps shall not be placed next to sanitary fixtures.

(n) **Floors.**

(1) **Existing and New:** All floors in living and service areas for patients and residents shall be washable and/or cleanable.

(aa) Floors in areas subject to local wetting shall be finished with a smooth, hard, non-slip, non-absorbent surface. In dietary areas, such floor surfaces shall be grease resistant.

(bb) Carpeting, including padding or adhesives, shall conform with the required smoke and flamespread ratings in the State Building Code, 1971 Edition; each square yard of the product, or the container, shall be marked for identification of its flame spread rating. Carpeting in patient or resident areas shall be of stain resistant, high density, low pile construction which is cleanable and facilitates wheeled traffic. It shall be stretched and securely fastened to avoid looseness and bunching.

(o) **Walls.**

(1) **Existing and New:** Wall finishes in living and service areas for patients and residents shall be smooth, washable and/or cleanable. Colors shall be light and cheerful.

(aa) Walls in areas subject to local wetting shall be provided with a hard, non-absorbent surface in accordance with the State Building Code,

1971 Edition. Walls in high humidity areas shall be provided with a water resistant finish.

(bb) The juncture at floors and walls in dietary areas shall be sealed or coved.

(2) **New Construction:** The juncture at floors and walls shall be coved in all areas used for food preparation and storage of prepared foods.

(p) **Ceilings.**

(1) **Existing and New:** All ceiling finishes in living and service areas for patient and resident areas shall be washable and/or cleanable. Ceilings in high humidity areas shall be provided with a smooth and water resistant finish.

(2) **New Construction:** Ceilings shall be accoustically treated in corridors and in patient or resident living areas. Materials which flake or dust shall not be used.

(q) **Linen and Trash Chutes.**

(1) **New Construction:** Chute enclosures, service openings and general installation shall be provided in accordance with the requirements of the State Building Code, 1971 Edition.

(aa) Minimum diameter of a gravity type chute shall be 2'-0".

(bb) The valve for the chute flushing equipment shall be located for convenient use. The ceiling space between shaft walls and the discharge end of the chute shall be sealed to prevent odors from leaking into the enclosing shaft space.

(r) **Dumbwaiters and Conveyors.**

(1) **New Construction:** Shaft enclosure and installation requirements for dumbwaiters or conveyors shall be in accordance with the provisions in the State Building Code, 1971 Edition.

(aa) Enclosed dumbwaiter pits and conveyor spaces shall be provided with access for cleaning.

(s) **Elevators.**

(1) **New Construction:** Shaft enclosures and elevator installations shall be provided in accordance with the requirements in the State Building Code, 1971 Edition. Elevators shall be provided in all facilities where patients or residents occupy or use more than the entrance or first floor level. The elevator cab shall be at least 5'-0" in each direction and the car door shall have a clear opening of at least 3'-0".

(aa) Number of elevators:

One (1) elevator for 1-59 persons above the first floor.
Two (2) elevators for 60-200 persons above the first floor, and
Three (3) elevators for 201-350 persons above the first floor.
One (1) additional elevator shall be added for each 150 persons in facilities with more than 350 persons above first floor.

THE FOLLOWING APPLIES TO NURSING HOMES ONLY:

(t) **Elevators in New Construction.** At least one (1) elevator shall be a hospital-size elevator. The inside cab dimension shall be at least 5'-0" wide and 7'-0" deep. The car doors shall have a clear opening of at least 3'-8".

MHD 67 Mechanical and Electrical Systems

(APPLIES TO BOTH NURSING HOMES AND BOARDING CARE HOMES)

(a) **Plant Operation and Maintenance.**

(1) **Existing and New Construction:**

(aa) **General Requirements.** The physical plant shall be kept in a continuous state of good repair and operation with regard to the health, comfort, safety and well-being of the occupants in accordance with an established routine maintenance and repair program.

(bb) **Walls, Floors and Ceilings.** Walls, floors and ceilings shall be kept in good and acceptable repair at all times. They shall be of a type or finish to permit good maintenance including frequent washing, cleaning, or painting.

(cc) **Illumination.** Lighting shall be provided and maintained throughout the facility in accordance with MHD 67 (f).

(dd) **Emergency Electrical Service.** If an emergency electrical service is provided it shall be maintained in working condition. An emergency generator shall be operated and tested at frequent intervals.

(ee) **Electrical Wiring and Appliances.** Electrical wiring, appliances, fixtures, equipment and cords shall be maintained in a serviceable and safe condition. Light and power panels shall be properly indexed and locked when necessary. Radios, televisions, lamps or clocks shall not be placed within reach of sanitary fixtures.

(ff) **Heating, Air Conditioning and Ventilation.** The mechanical systems shall be operated to maintain the necessary temperatures and air changes. Convectors, registers, ducts and equipment shall be cleaned at regular intervals, and filters exchanged, when required. The heating system shall be capable of maintaining a minimum temperature of 75°F. in all living areas.

(gg) **Descaling of Equipment.** Caution shall be taken that acid or other chemical solutions do not enter the potable water supply during the descaling operation of mechanical equipment.

(hh) **Boiler Water Additives.** Precautions shall be taken to assure that the type and concentration of boiler water additives is not harmful if steam is used for humidification or comes into direct contact with food.

(ii) **Brine Tanks.** All brine tanks shall be provided with tight-fitting, over-lapping covers.

(jj) **Elevators and Other Machinery.** Elevators, dumbwaiters, conveyor systems and other machinery shall be maintained so as to comply with the regulations of the Minnesota Department of Labor and Industry. All dangerous areas and equipment shall be provided with proper safeguards and appropriate devices to prevent accidents.

(kk) **Periods of Construction.** Special precautions shall be taken to protect patients or residents from dust, harmful and obnoxious odors, dangers and excessive noise during construction periods.

(ll) **Testing of Fire Safety System.** The total fire alarm system and the fire fighting equipment shall be tested at regular intervals as required by the State Fire Marshal.

(mm) **Storage of Hazardous Materials.** The storage of gasoline containers, gasoline powered equipment, liquid petroleum gas, fuel oil, paints and other flammable items shall be in accordance with the requirements of the State Fire Marshal.

(nn) **Grounds.** The surrounding grounds within lot lines shall be maintained in an acceptable manner and be kept free of accumulations of refuse and debris. Driveways, walks and outside steps or ramps shall be maintained in good condition for access and safe use at all times, including the winter months.

(oo) **Hot Water Temperature.** Hot water supplied to lavatories and bathing fixtures shall not exceed 110°F. at the fixtures.

(b) **Building Construction.**

(1) **New Construction:** All new construction shall be in accordance with the requirements for Group D Occupancy in the State Building Code, 1971 Edition.

(c) **Plumbing.**

(1) **New Construction:**

(aa) **Installation.** All plumbing systems shall be installed and tested in accordance with the requirements of the Minnesota Plumbing Code, 1969 Edition, and with these regulations.

(bb) **Area Drainage.** Roofs, basements, tunnels, pits, shafts, areaways, courts, yards and drives shall be properly drained to eliminate intrusion of rain water or ground water into the building. Floor drains in exterior areaways and similar installations shall be provided with a running trap located inside the building to prevent freeze-up in the winter.

(cc) **Sanitary Fixtures.** The numbers and special types of sanitary fixtures required in the various areas are covered under MHD 64 and MHD 65. The material used for sanitary fixtures shall be smooth and non-absorbent with a non-slip bottom surface in bathtubs and showers. Flush valves in living areas shall be of a quiet operating type.

(dd) **Waste Line Interceptors.** Interceptors[1] for sand, plaster, rags, buttons and other solids shall be provided on the waste line for sinks used for ceramics in activity areas and for washers in the laundry.

(ee) **Valves.** Each water service main, branch main, riser and branch to a group of fixtures shall be valved. Stop valves shall be provided at each fixture. There shall be easy access to all valves, and if concealed, their location shall be marked.

(ff) **Booster Heater.** If the water system provides only 110°F. hot water,[2] a booster heater shall be provided for the dishwasher and for the washer(s) in the laundry. It shall be located and sized to maintain the required temperature at the point of use. A pressure and temperature relief valve and a conductor pipe which discharges within 10 inches off the floor shall be provided.

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[1] Grease interceptors are not recommended.

[2] It is recommended that separate hot water heaters for 110°F. and 180°F. be provided.

(gg) **Pipe Insulation.** Sufficient insulation shall be provided for all water and steam piping to assure proper functioning of the systems, provide safety against burns, and to prevent undesirable condensation or heat transfer in areas for patients or residents.

(hh) **Hot Water Supply.** Circulating hot water shall be provided in all hot water mains and in risers more than three stories high to assure hot water at the fixtures. The hot water heating equipment shall have sufficient capacity and recovery to supply water at temperatures at the point of use as follows:

Patient and resident areas	110°F.
Mechanical dishwashing	180°F.
Washers in the laundry	180°F.

If a thermostatically controlled mixing valve is used, it shall be of the "fail safe" type, which prevents flow of hot water in case the cold water supply fails. Heaters shall be insulated and provided with a thermometer.

(ii) **The Dishwashing Machine.** The dishwashing machine shall be of a commercial type equal to the standards established by Standard No. 3 of the National Sanitation Foundation (NSF), April, 1965 and shall be of a size that can accommodate food trays. The water supply line at the machine shall be provided with a pressure reducing valve, a pressure gauge and a vacuum breaker. The rinse water flow pressure shall be maintained between 15 and 25 pounds per square inch (p.s.i.) at the machine by the use of a pressure reducing valve. A pressure gauge shall be installed following the reducing valve. A recirculation system and pump shall be provided if the final rinse water heater is located more than five (5) feet from the dishwasher. The drain shall be an indirect waste connection to a trapped floor drain, or it shall be a trapped connection to a branch with a floor drain without a backwater valve in the horizontal branch.

(jj) **Waste and Vent Piping Restrictions.** Waste lines over food preparation areas, food storage areas, clean storage areas, and electrical panels shall be avoided. Precautions shall be taken to protect these areas from possible leakage or condensation from over-head lines. Plumbing waste lines and vents shall not be located within ventilation plenums.

(kk) **Floor Drains.** Floor drains shall not be installed in areas for food storage nor shall they be directly connected to ventilation equipment or air supply plenums.

THE FOLLOWING APPLY TO NURSING HOMES ONLY:

(ll) **Institutional Fittings.** Institutional fittings shall include: a mixing faucet, a gooseneck spout or other approved spout, wrist-action controls, and an open grid strainer on the waste in the lavatories.

(111) The spout shall provide a minimum vertical distance of 5 inches from its discharge point to the rim of the fixture, and a minimum horizontal bowl clearance of 7 inches between the discharge point and the inside face of the rim.

(112) The blades on wrist-action controls shall not exceed 4½ inches in length, except that handles on clinical sinks shall not be less than 6 inches long.

(mm) **Clinical Sinks.** Flushing rim service sinks or clinical sinks shall have an integral trap in which the upper portion of a visible trap seal provides a water surface. A bedpan cleaning device shall be included at the clinical sink in soiled utility rooms.

(nn) **Sterilizer Vent Systems.** All sterilizers requiring vapor vents shall be connected with a vapor venting system extending up through the roof independent of the plumbing fixture vent system. The vertical riser pipe shall be provided with a drip line which discharges into the drainage system through an air gap or open waste fixture. The connection between the fixture and the vertical vent riser pipe shall be made by means of a horizontal offset. Vent material shall be erosion and corrosion resistant.

THE FOLLOWING APPLY TO BOTH NURSING HOMES AND BOARDING CARE HOMES:

(d) **Heating and/or Cooling.**

(1) **New Construction:**

(aa) **Design and Installation.** All heating and/or cooling systems shall be designed and installed in accordance with the requirements of the State Building Code, 1971 Edition. The heating system[1] shall be capable of maintaining a temperature of 75°F. in all patient and resident areas. Areas shall be zoned according to use and exposure, and be provided with thermostatic temperature controls.

(bb) **Isolation of Major Components.** A means of isolating major sections or components in the heating system shall be provided. Supply and return mains, and risers of space heating systems shall be valved to isolate the various sections of each system. Each piece of equipment[2] shall be valved at the supply and return ends.

(cc) **Controls and Gauges.** All valves and controls shall be placed for convenient access and use, and thermometers and gauges shall be mounted for easy observation.

(dd) **Heating Elements.** Heating elements shall be located so as not to interfere with beds in patients' or residents' rooms. Tubing and casing of gravity type heating convectors shall be mounted at least 4 inches above the floor and be provided with removable sturdy covers in order to facilitate cleaning.

(ee) **Forced Flow Room Units.** Cabinets for forced flow heating/cooling units shall be sturdy and shall be mounted either continuously along the floor with a tight fit or at least 4 inches above the floor. Outside air shall be filtered.[3] The interior air grill for recirculation shall be located not less than 4 inches above the floor on floor mounted units. Fans or blowers shall be of a quiet operating type, and the fan or blower housing shall not be directly connected to the metal of the unit cabinet.

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[1] Recommend provision for humidification of up to 25% relative humidity.

[2] Any pump on which the heating system is dependent should be installed in duplicate for standby service in a nursing home.

[3] It is recommended that recirculated air also be passed through the filter, and that the filter be replaceable from within the room.

(e) Ventilation.

(1) Design and Installation.

(aa) **New Construction:** All ventilation systems shall be designed and installed in accordance with the requirements of the State Building Code, 1971 Edition, and with these regulations.

(2) Ventilation Requirements.

(aa) **Existing Construction:** Ventilation in existing facilities shall include mechanical exhaust ventilation[1] in the following areas: kitchen; laundry; soiled linen collection room; soiled utility rooms, and toilets, except when private or semiprivate and provided with window ventilation.

(bb) **New Construction:** Mechanical supply and exhaust ventilation shall be provided for all areas as indicated in Table 67 (e)(A) or (B). Areas not covered in this table shall be ventilated in accordance with the requirements in the State Building Code, 1971 Edition. Areas indicated with equal or positive pressure relationship to adjacent areas shall be provided with tempered make-up air.

(3) Fresh Air Intakes.

(aa) **New Construction:** Fresh air intakes for ventilation systems shall be located not less than 25 feet away from a ventilation exhaust, combustion exhaust, driveway or parking area. The bottom of fresh air intakes serving central air systems shall be located as high as possible, but not less than 4'-0" above grade or, if installed through the roof, not less than 2'-0" above roof level. Air intakes for individual room units shall not be less than 1'-6" above outside grade. Any exhaust system or waste chute vent shall terminate not less than 25 feet away from windows that can be opened.

(4) Height of Registers.

(aa) **New Construction:** Registers for air supply or return shall be located not less than 4 inches above the floor.

(5) Filters.

(aa) **New Construction:** All outside air introduced into living and service areas of a facility shall be filtered. Return air to central ventilation systems shall be filtered.

(6) Dietary Area.

(aa) **New Construction:** The dietary area shall be ventilated separately. Ventilation hoods shall be provided for ranges and other heat-producing equipment in addition to the general ventilation. Grease extractors or filters shall be provided. Filters and grease drip pans shall be easily removable for cleaning and replacement. A separate exhaust from the mechanical dishwasher shall not satisfy the requirement for general ventilation of the dishwashing area. Exhaust ducts shall be provided with access panels for cleaning.

(7) Laundry Area.

(aa) **New Construction:** Air in the laundry shall be vented away from the finishing and ironing area and toward the extracting and washing area. The general air movement shall be from the clean area to the soiled

[1] Recommended for janitors' closets.

area, and shall be of sufficient volume to remove steam, odors and excessive heat.[1] Dryers shall be provided with a lint collector. Horizontal exhaust ducts shall be provided with access panels for cleaning.

(8) **Mechanical Rooms.**

(aa) **New Construction:** Mechanical rooms below grade with equipment utilizing liquified petroleum gas shall be provided with continuous mechanical ventilation providing a pressure which is equal or greater than atmospheric.

THE FOLLOWING APPLY TO NURSING HOMES ONLY:

(9) **Filters.**

(aa) **New Construction:** When central air systems are installed, outside air for use in patient areas shall pass through filters rated at a minimum efficiency of 30% based on the National Bureau of Standards Dust Spot Test Method with Atmospheric Dust. Filter frames shall be durable and carefully dimensioned and shall provide an air-tight fit with the enclosing ductwork.

(10) **Sterilizer Room.**

(aa) **New Construction:** A separate sterilizing room with a large autoclave shall be provided with supply and exhaust ventilation. If an autoclave is built into a separate equipment room, the equipment room shall be provided with exhaust ventilation.

THE FOLLOWING APPLY TO BOTH NURSING HOMES AND BOARDING CARE HOMES:

(f) **Electrical Systems.**

(1) **Installation and Equipment.**

(aa) **New Construction:** All electrical installations and equipment shall be in accordance with the requirements of the State Building Code, 1971 Edition, and with these regulations.

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[1] Spot ventilation for large heat-producing equipment such as dryers and ironers should be provided.

TABLE 67 (e)(A)—VENTILATION
PRESSURE RELATIONSHIPS AND VENTILATION FOR CERTAIN AREAS

Area Designation	Pressure[1] Relationship to Adjacent Areas	All Supply Air From Outdoors	Minimum Air Changes of Outdoor Air per Hour	Minimum Total Air Changes per Hour	All Exhaust Directly to Outdoors	Recirculated Within Room
Patient Bedroom	0	—	2	2	—	—
Dayroom, Activity Area	0	—	2	2	—	—
Patient Corridor	0	—	2	4	—	—
Exam. and Treatment Room	0	—	2	6	Yes	No
Dining Room, Phys. Therapy	—	—	2	6	—	—
Medication Room	+	—	2	4	—	—
Clean Utility Room	+	—	2	4	—	—
Soiled Utility Room	—	—	—	10	Yes	No
Toilet Room	—	—	—	10	Yes	No
Bathing Area	—	—	—	10	Yes	No
Barber and Beauty Room	—	—	—	10	Yes	No
Janitor's Closet	—	—	—	10	Yes	No
Sterilizer Equip. Room	—	—	—	10	Yes	No
Garbage Room, Can Washing	—	—	—	10	Yes	No
Trash Collection Room	—	—	—	10	Yes	No
Food Preparation, Nourishment	0	—	2	10	Yes	No
Dishwashing, Food Cart Cleaning Area	—	—	—	10	Yes	No
Dietary Storage	0	—	—	2	—	No
Laundry Processing Room	0	—	2	10	Yes	No
Soiled Linen Collection Room	—	—	—	10	Yes	No
Clean Linen Storage Room	+	—	2	2	—	—

Symbols:

Air Pressure Relationships: + = Positive − = Negative
Air Changes, Supply, Exhaust: — = Optional

[1] Areas with equal or positive pressure relationships to adjacent areas shall be provided with tempered make-up air.

TABLE 67 (e)(B)—VENTILATION
PRESSURE RELATIONSHIPS AND VENTILATION FOR CERTAIN AREAS

Area Designation	Pressure[1] Relationship to Adjacent Areas	All Supply Air From Outdoors	Minimum Air Changes of Outdoor Air per Hour	Minimum Total Air Changes per Hour	All Exhaust Directly to Outdoors	Recirculated Within Room
Resident Bedroom[2]	0	—	2	2	—	—
Dayroom, Activity Area	0	—	2	2	—	—
Resident Corridor	0	—	2	4	—	—
Dining Room	—	—	2	6	—	—
Toilet Room	—	—	—	10	Yes	No
Bathing Area	—	—	—	10	Yes	No
Barber and Beauty Room	—	—	—	10	Yes	No
Janitor's Closet	—	—	—	10	Yes	No
Trash Collection, Garbage Can Washing	—	—	—	10	Yes	No
Food Preparation, Nourishment	0	—	2	10	Yes	No
Dishwashing, Food Cart Cleaning Area	—	—	—	10	Yes	No
Dietary Storage	0	—	—	2	—	No
Laundry Processing Room	0	—	2	10	Yes	No
Soiled Linen Collection Room	—	—	—	10	Yes	No
Clean Linen Storage	+	—	2	2	—	—

Symbols:

Air Pressure Relationships: + = Positive − = Negative

Air Changes, Supply, Exhaust: — = Optional

[1] Areas with equal or positive pressure relationships to adjacent areas shall be provided with tempered make-up air.

[2] For residentes' bedrooms, operable windows may provide adequate ventilation.

(2) **Distribution Panel Boards.**

(aa) **Existing and New:** All circuits in light and power panels[1] shall be identified with a typewritten index.

(bb) **New Construction:** Lighting and appliance panel boards shall be provided for the circuits on each floor, except for emergency system circuits.

(3) **Corridor Receptacles.**

(aa) **New Construction:** Single receptacles on a separate circuit for equipment such as floor cleaning machines shall be installed approximately 50 feet apart in all corridors and within 25 feet of ends of corridors.

(4) **Switches and Receptacles.**

(aa) **New Construction:** Switches shall not be placed higher than 42 inches above the floor. Convenience outlets for electrical appliances shall be located to avoid danger in wet areas.

(5) **Interior Lighting.**

(aa) **Existing Facilities:** Each bedroom shall be provided with general illumination and a reading light for each occupant. General lighting levels,[2] measured 30 inches above the floor and special illumination at work surfaces shall not be less than:

(aa1) 30 footcandles for all reading surfaces or locations.

(aa2) 20 footcandles at work or activity surfaces in kitchen and laundry.

(aa3) 10 footcandles for all other areas, such as bedrooms, dining areas, dayrooms, bathrooms, toilets, corridors and service stairways.

(aa4) 5 footcandles for exit stairways, mechanical equipment rooms and storage areas.

(bb) **New Construction:** Interior lighting[2] for living and service areas for patients and residents shall be provided in accordance with the minimum levels of illumination listed in Table 67 (f)(A). Each bedroom shall be provided with general illumination and a separate reading light for each occupant. The required illumination levels are given in footcandle power. General illumination shall be measured 30 inches above the floor and special illumination at the height of the work or reading surface, or location.

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[1] It is recommended that doors on electrical panel boards accessible to patients or residents be equipped with a lock.

[2] It is recommended that lighting levels for areas not covered in the regulations be provided in accordance with Illuminating Engineering Society Recommended Levels of Illumination, 1966 Edition.

Table 67 (f)(A)—Minimum Illumination Levels

Area	General Illumination	Special Illumination
Exit stairways, central storage, mechanical equipment room	5	
Bedrooms	10	30 (reading)
Corridors, stairways, janitor's closet, dietary storage, clean linen closet	10	
Dayroom, dining room	20	30 (reading)
Activity area	30	100 (work tables)
Toilet, bathing, dietary area, laundry processing room, soiled linen collection room, clean linen storage room	30	
Barber and beauty room	50	

(6) **Fire Alarm Systems.**

(aa) **Existing and New:** Fire alarm systems and sprinkler systems shall be provided in accordance with the requirements by the State Fire Marshal. New construction shall be in accordance with the State Building Code, 1971 Edition.

THE FOLLOWING APPLY TO NURSING HOMES ONLY:

(7) **Interior Lighting.**

(aa) **Existing Facilities:** In addition to the lighting requirements in MHD 67 (f)(5)(aa), nursing and treatment areas shall be provided with the following illumination levels:

(aa1) 30 footcandles at the charting desk and at the medicine preparation surface.

(aa2) 20 footcandles at work surfaces in the medicine storage room, utility rooms, physical therapy and examination room.

(bb) **New Construction:** In addition to the lighting requirement in Table 67 (f)(A), nursing and treatment areas shall be provided with the minimum levels of illumination listed in Table 67 (f)(B). The required illumination levels are given in footcandle power. General illumination shall be measured 30 inches above the floor, and special illumination measured at the height of the work surface.

Table 67 (f)(B)—Minimum Illumination Levels

Area	General Illumination	Special Illumination
Nurse Station	20 (night) 50 (day)	70 (desk)
Medication area, clean utility room, sterilizer room	30	100 (cabinet) 100 (counter)
Soiled utility room	20	
Physical therapy area	20	30 (treatment area)
Examination and treatment room	50	100 (examination table)

(8) **Bedroom Receptacles.**

(aa) **New Construction:** Each patient bedroom shall have duplex receptacles on each side of the head of each bed. Receptacles on other walls shall be provided as required by the State Building Code, 1971 Edition.

(9) **Night Lights.**

(aa) **New Construction:** Each patient bedroom shall be provided with a night light.

(10) **Nurse Call System.**

(aa) **Existing and New:** An electrical nurse call system shall be provided in a nursing home. It shall register a call from the patient at the nursing station and activate a signal light by the bedroom door.

(bb) **New Construction:** A nurse call system shall cover patient and nursing service areas where indicated in Table 67 (f)(C). Nurse calls or emergency calls shall be capable of being inactivated only at the points of origin. A central annunciator shall be provided where the door signal lights are not visible from the nurses' station.

(bb1) A nurse call shall be provided at the head end of each patient's bed. It shall register a call from the patient at the nurses' station and activate a visual signal light in the corridor at the patient's door and a duty signal in all required service areas for nursing. In multi-corridor nursing units, additional visible signal lights shall be provided at corridor intersections.

(bb2) An emergency call shall be provided in each patient toilet and in all areas used for patient bathing. If a pull cord is provided it shall extend to within 6 inches above the floor. A push-button type emergency call shall be installed at a height of 24 inches. An emergency call shall register a call from a patient at the nurses' station, and activate a duty signal in all required service areas for nursing. The emergency duty signal shall provide a visual signal light and an audible alarm.

(bb3) If a nurse call system provides two-way voice communication, it shall be equipped with an indicator light at each call station which lights and remains lighted as long as the voice circuit is operating.[1]

Table 67 (f)(C)—Nurse Call System

Type of Signal	Room or Area
Nurse Call	Patient rooms.
Emergency call[2]	Patients' toilets, patients' bathing and training toilet room.
Duty Signal	Medication room, nourishment area, clean utility room, soiled utility room, sterilizing room.

[1] Nurse calls of this type may be capable of being inactivated at the nurses' station.

[2] An emergency call is recommended for the following areas: dayrooms without visual control from nurses' station, physical therapy and activity areas.

(11) **Patients' Security Signal.**

(aa) **Existing and New:** Exit doors leading directly to the outside which are not under observation from the nurses' station shall be provided with an automatic audible alarm system. Where a local alarm is not audible at the nurses' station, an electric exit alarm system shall register at the nurses' station or other assigned control area.

(12) **Emergency Electric Service.**

(aa) **Existing and New:** To provide electricity during an interruption of the normal electric supply that affects medical care, or safety of the occupants, an emergency source of electricity shall be provided and connected to certain circuits for lighting. The emergency system shall provide lighting for the nurses' stations, the telephone switchboard, the patient corridors, the exits, the boiler or heater room, the emergency generator, if provided; and it shall assure functioning of the fire alarm system. Emergency electrical service shall be provided by one of the following methods:

(aa1) A battery-operated system with automatic controls and recharging if effective for four (4) or more hours, or

(aa2) An on-site emergency generator.[1]

THE FOLLOWING APPLY TO BOTH NURSING HOMES AND BOARDING CARE HOMES:

(g) **Codes and Regulations.**

(1) **New Construction:** All construction, installations and equipment shall conform to the following codes and standards, provided that the requirements of such codes or standards are not inconsistent with the requirements of these regulations.

(aa) State Building Code, 1971 Edition.[2]

(bb) Minnesota Plumbing Code, 1969 Edition.[2]

(cc) Equipment Standards by the National Sanitation Foundation:

(cc1) Standard No. 2—Food Service Equipment—April, 1965

(cc2) Standard No. 3—Spray-Type Dishwashing Machines—April, 1965

(cc3) Standard No. 4—Commercial Cooking & Warming Equipment—April, 1970

(cc4) Standard No. 5—Commercial Hot Water Generating Equipment—January, 1959

(cc5) Standard No. 6—Dispensing Freezers—July, 1970

(cc6) Standard No. 7—Food Service Refrigerators & Storage Freezers—April, 1966

(cc7) Standard No. 8—Commercial Powered Food Preparation Equipment—April, 1965

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[1] It is recommended that the emergency generator system include all items necessary for the functioning of the heating system. An automatic transfer switch is recommended.

[2] Available from the Documents Section, 140 Centennial Building, St. Paul, Minnesota 55155.

(cc8) Standard No. 12—Automatic Ice-Making Equipment—June, 1964

(cc9) Standard No. 25—Vending Machines for Food & Beverages—August, 1968

(cc10) Standard No. 26—Pot, Pan and Utensil Washers—July, 1970

(cc11) Standard No. 29—Detergent & Chemical Feeders for Commercial Spray-Type Dishwashing Machines—September, 1969

(dd) Vending Machines, State Health Department Regulation No. 10950—November, 1966.

(ee) "Illuminating Engineering Society, Lighting Handbook, 1966."

(ff) Nonflammable Medical Gas Systems, National Fire Protection Association, NFPA No. 56F, 1970 Edition.

(gg) State of Minnesota Rules and Regulations of the Department of Labor and Industry, Occupational Safety and Health Rules, January, 1971.[1]

(hh) Air Pollution Control Rules, Regulations, and Air Quality Standards,[1] 1969 Edition.

[1] Available from the Documents Section, 140 Centennial Building, St. Paul, Minnesota 55155.

MHD 68 Definition of Intermediate Care Facility.

(a) For the purposes of Laws of Minnesota 1969, Chapter 387, there are hereby established two classifications of intermediate care facilities, Class I and Class II.

(1) A Class I facility is a nursing home, as licensed by the State Board of Health, which meets the requirements set forth in 34 F.R. 9782, June 24, 1969, to be codified as 45 CFR 234.130.

(2) A Class II facility is a boarding care home, as licensed by the State Board of Health, which meets the requirements set forth in 34 F.R. 9782, June 24, 1969, to be codified as 45 CFR 234.130.

4330-4341

7 MCAR S 1.076 Definitions, general provisions, issuance of licenses.

A. Definitions. For the purpose of these regulations:

1. Hospital. A "hospital" is an institution adequately and properly staffed and equipped; providing services, facilities and beds for the reception and care for a continuous period longer than 12 hours for one or more non-related persons requiring diagnosis, treatment or care for illness, injury or pregnancy; and regularly making available clinical laboratory services, diagnostic x-ray services, and treatment facilities for (a) surgery or (b) obstetrical care or (c) other definitive medical treatment[1] of similar extent. The following are not "hospitals" within the meaning of these regulations: diagnostic or treatment centers, physicians' offices or clinics, and facilities for the foster care of children licensed by the commissioner of welfare.

2. General hospital. A "general hospital" is a hospital providing community service for inpatient medical and surgical care of acute illness or injury and for obstetrics.

3. Specialized hospital. A "specialized hospital" is a hospital providing primarily for one type of care, such as a mental hospital, a psychiatric hospital, a tuberculosis hospital, a chronic disease hospital, a maternity hospital. The specialized hospital shall meet the applicable regulations for a general hospital of corresponding size and all regulations pertaining to such specialized services as are provided by the hospital.

(a) A "mental hospital" is a hospital for the diagnosis, treatment and custodial care of persons with nervous and mental illness. Institutions for the feeble-minded and for epileptics are not "mental hospitals."

(b) A "psychiatric hospital" is a type of mental hospital where patients receive diagnosis and intensive treatment and where usually, only a minimum of continuous long term treatment facilities are afforded.

(c) A "tuberculosis hospital" is a hospital for the diagnosis and treatment of patients with tuberculosis. A sanatorium operated and maintained for the exclusive purpose of caring for patients with tuberculosis is a "tuberculosis hospital."

[1]"Definitive medical treatment" may include psychiatric care, physical medicine and rehabilitation, x-ray therapy and similar specialized treatment.

(d) A "chronic disease hospital" is a hospital, the primary purpose of which is to provide the services and facilities for the diagnosis, treatment and rehabilitation of patients with chronic illness. "Chronic disease" refers to illness or disability which is either permanent or recurrent, which may require long periods of medical supervision or care as well as special rehabilitative services, as distinguished from acute illness which is usually of short duration and self-limiting in nature. Nursing homes and boarding care homes as classified and defined in Regulation MHD 44 and hospitals devoted exclusively to the care of patients with tuberculosis or with mental illness are not "chronic disease hospitals."

(e) A "maternity hospital" is a hospital, the primary purpose of which is to provide services and facilities for obstetrical care.

4. Specialized unit of a general hospital. When a general hospital provides ten or more beds in a segregated unit for a specialized type of care, such as psychiatric, tuberculosis, chronic disease, or nursing home, such a unit is a specialized unit of the general hospital. The services provided in a nursing home unit are not hospital services. For licensing purposes, one license shall be issued to a general hospital having one or more specialized units, when such units are adjacent to or located on property adjoining that of the general hospital. Separate licenses shall be required for institutions which are maintained on separate premises even though they are under the same management. The total bed capacity, including bassinets, shall be used in determining the license fee.

5. Board. The term "board" as used in these regulations shall mean the "Minnesota State Board of Health."

6. Licensee. The "licensee" is the person or governing body to whom the license is issued. The licensee is responsible for compliance with all applicable rules, regulations, and standards of the board.

B. General provisions.

1. Compliance. All hospitals licensed as of the effective date of these regulations shall comply with the requirements contained in Part I of these hospital regulations entitled "Regulations for the Licensing, Maintenance and Operation of Hospitals."

2. Hospital planning. When any individual or group in a given locality believes a need exists for a hospital and would like to investigate the need for and the possibilities of such a hospital, the board shall be so notified in writing. The board shall thereupon make available to such body all of the latest information relative to hospital needs in that hospital area. Nothing in these regulations shall prohibit the development of a hospital in any location, provided such hospital meets the standards of construction, equipment, licensing, maintenance and

operation as prescribed in these regulations.

3. Crowded conditions in existing hospitals. When the occupancy rates of a hospital are determined by the board to be so excessively high as to thereby create serious overcrowding and interference with the provision of proper care for patients, the board shall so inform the governing body which shall thereupon make provisions for expansion of the bed capacity and needed services or make other arrangements to alleviate such conditions.

4. Conversion. On and after the effective date of these regulations, any building or structure not then operating as a hospital but which is to be converted for use as a hospital shall be of fire-resistive construction and upon completion, shall conform with Part II of these hospital regulations entitled "Regulations for Hospital Construction and Equipment." The board shall be advised immediately in writing when the acquisition or purchase of a building or structure is contemplated for use as a hospital.

5. License to be posted. The license shall be posted conspicuously in the hospital.

6. License fees. Each application for either an initial or renewal license to operate a hospital or a related institution within the meaning of Minnesota Statutes, sections 144.50 to 144.56 and these regulations shall be accompanied by a fee based upon the formula established in 7 MCAR S 1.701, Exhibit I. A bed must be licensed if it is available for use by patients. If the number of licensed beds in a nonaccredited hospital is increased during the term of the license, $25 for each additional bed shall be paid. There shall be no refund for a decrease in licensed beds.

7. License expiration date. Initial and renewal licenses issued pursuant to Minnesota Statutes, sections 144.50 to 144.56 and these regulations shall be issued for the calendar year for which application is made and shall expire on December 31 of such year. License renewals shall be applied for on an annual basis. Applications for license renewal shall be submitted no later than December 31 of the year preceding the year for which application is made. Any application for an initial license submitted after November 1 shall be considered as an application for the following year; provided, however, that a license may be issued and be effective prior to January 1 of the year for which application is made without payment of fees for two years.

MHD 77 ADMINISTRATION, MEDICAL STAFF, PERSONNEL

(a) **Administration**[1]

(1) **The Governing Body.** The governing body or the person or persons designated as the governing authority in each institution shall be responsible for its management, control and operation. It shall appoint a hospital administrator[2] and the medical staff. It shall formulate the administrative policies for the hospital.

(2) **Change in Administrators.**[3] Notification of the termination of service of the administrator as well as of the appointment of a new administrator shall be given promptly in writing by the governing body of the hospital to the Board.

(b) **The Medical Staff.**

(1) **Responsibility.** The medical staff shall be responsible to the governing body of the hospital for the clinical and scientific work of the hospital. It shall be called upon to advise regarding professional problems and policies.

(2) **Organization and Duties.** In any hospital used by two or more practitioners, the medical staff shall be an organized group which shall formulate, and with the approval of the governing body, adopt by-laws, rules, regulations and policies for the proper conduct of its work. The medical staff shall:

(aa) Designate one of its members as chief of staff.

(bb) Hold regular meetings for which minutes and records of attendance shall be kept.

(cc) Review and analyze at regular intervals the clinical experience in the hospital.

(3) **Professional Care.** All persons admitted to the hospital shall be under the professional care of a member of the medical staff.

(4) **Orders for Treatment.** No medication or treatment shall be given to a patient except on the written order of a member of the medical staff. Emergency orders given by telephone shall be reduced to writing immediately upon receipt and shall be signed by the staff member within 24 hours after the order is given.

(5) **Emergency Calls.** Provision shall be made for one or more members of the medical staff to be available at all times for emergency calls.

(c) **Personnel.**

(1) **Police and Procedures.** Written policies, procedures, rules and regulations shall be established for the administrative and technical guidance of the personnel of the entire hospital. Employees shall be instructed in the requirements, policies and procedures pertaining to their respective duties.

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[1]It is recommended that the standards of the Joint Commission on Accreditation of Hospitals, 660 North Rush St., Chicago 11, Illinois, be adopted.

[2]The governing body should not employ an administrator until it is determined that he qualifies for registration as a hospital administrator in Minnesota. (See Minnesota Statutes Annotated, Sections 144.59 to 144.65, inclusive.) It is recommended that the governing body officially appoint one or more assistants to the administrator who shall act in his absence.

[3]If a registered administrator is not available to assume the position immediately, such notification to the Board should include the name of the person temporarily in charge of the hospital. This "temporary period" should not exceed 90 days.

(2) **Number of Personnel.** At all times there shall be enough qualified personnel on duty to provide the standard of care and maintenance in the hospital which is necessary for the well-being of the persons received for care. This includes night duty, vacation and other relief periods. A record shall be kept of the length of service of each employee.

(3) **Nurses.** A registered nurse shall be responsible for the nursing care of patients. She shall assign nursing duties to qualified personnel when she is off duty. Additional nursing personnel with training and experience commensurate with the responsibility of the specific assignments shall be employed to assure a high quality of nursing care to all patients both day and night.[1]

(4) **Practical Nurses, Auxiliary, Workers and Volunteers.** All practical nurses, auxiliary workers and volunteers performing nursing service functions shall be under the supervision of a registered nurse. Their duties shall be clearly defined and they shall be instructed in all duties assigned to them.

(5) **Health of Employees.** The governing body of the hospital upon recommendation of its organized medical staff shall provide in its rules and regulations measures to prevent the transmission of communicable diseases. Such regulations shall include provisions for an immunization program; for pre-employment physical examinations including tuberculin tests, x-rays of the chest[2] and other indicated laboratory procedures; and for subsequent chest x-rays and periodic examinations of all hospital employees. Such regulations shall also include the procedures to be followed in the case of illness or absenteeism of any employee or in the case of the exposure of any employee to a communicable disease. All employees shall report any illness or exposure to communicable disease to the administrator and to a designated member of the medical staff.

MHD 78 RECORDS AND REPORTS

(a) **Medical Records.**

(1) **Personnel.** A trained medical record librarian or other authorized hospital employee shall be given the responsibility for the proper custody, supervision, indexing and filing of the completed medical records of patients.

(2) **Facilities and Equipment.** Space and equipment shall be provided for the recording and completion of the record by the physician as well as for indexing, filing and safe storage of medical records.

(3) **Information to be Included.** Accurate and complete medical records[3] shall be maintained on all patients from the time of admission to the time of

[1]It is recommended that nurses in the obstetrical department limit their services to maternity and clean surgical cases.

[2]Routine admission chest x-ray examination of patients is recommended.

[3]To be considered complete, a record should include:
1. Adequate identification data.
2. Admitting diagnosis. (To be completed within 24-48 hours.)
3. History and physical examination, including history of pregnancy on maternity cases. (To be completed within 24-48 hours.)
4. Progress notes.
5. Signed doctors' orders.
6. Operative notes, where applicable. (To include course of delivery on maternity cases.)
7. Special reports and examinations, including clinical and laboratory findings, x-ray findings, records of consultations, anesthesia reports, etc.
8. Nurses' notes.
9. Discharge diagnosis.
10. Autopsy report, where applicable.

discharge. The following additional information shall be obtained and recorded for all maternity patients: (1) full and true name of patient and her husband, (2) the place of residence of the patient prior to hospitalization and place of residence following discharge.

(4) **Records on Newborn Infants.** A medical record shall be maintained on all newborn infants and shall include a physical examination performed and recorded by the physician and a statement relative to the physical condition of the infant at the time of discharge. When the child leaves the hospital with any person other than his parent, the hospital shall obtain and record the true name of the person or persons with whom the child leaves, and the place of residence where it is planned that he is to be taken.

(5) **Completion of the Record.** The medical staff shall have a policy requiring that the medical records shall be completed within a reasonable time following the discharge of the patient. The completion of the medical record shall be the responsibility of the attending physician.

(6) **Surgical Cases.** The history and physical examination record shall be completed and signed by the attending staff member prior to the performance of any surgery except in case of emergency when an admission note including significant findings and diagnosis shall be written.

(b) **Hospital Records.** The following hospital records shall be maintained in a form and manner acceptable to the Board:

(1) Record of admissions and discharges, total patient days, average length of stay and number of autopsies performed. Separate data shall be maintained for: (a) adults and children excluding newborns, and (b) newborn infants excluding stillbirths.

(2) Register of births.

(3) Register of deaths.

(4) Register of operations.

(5) Register of out-patients.

(c) **Narcotic Record.** A record shall be maintained for all narcotics[1] administered. This record shall contain the date, hour, name of patient, name of physician, kind of narcotic, dose, and name of person by whom administered.

(d) **Reports.**

(1) **Annual Report to Board.** On or before the thirty-first day of January of each year, there shall be filed with the Board, on a form provided by the Board, the annual hospital statistical report covering patient service data.

(2) **Hospital Reports.** On or before the 10th of each month, the hospital administrator shall file with the Board, on a blank provided by or approved by the Board for the purpose, a report of all births and deaths or stillbirths occurring in such institution during the previous month.[2]

[1]A Federal permit is necessary for the purchase of narcotics for stock use. Application for this permit must be approved by the Board. This approval is based on the proper storgae of narcotics and the maintenance of a record book of narcotics.

[2]Reg. 78(d)(2) is taken from Reg. MHD 8(c), relating to hospital reporting of vital statistics. It is here made of special application to hospital administrators. Reg. MHD 173 should also be noted. It reads as follows: Any death associated with pregnancy, including abortion and extrauterine pregnancy, or the puerperium for a period of three months postpartum, whether or not it is the actual cause of death, shall be reported by mail within three days after death to the Minnesota Department of Health, Section of Maternal and Child Health, by the attending physician and by the hospital where the death occurred.

MHD 79 CHILD WELFARE PROVISIONS

(a) **Illegitimate Birth Reports.** Every illegitimate birth shall be reported to the Commissioner of Welfare, on a form furnished by him, within 24 hours after the birth of the child.

(b) **Information Confidential.** No member of the hospital staff, or employee of the hospital, shall give information regarding a maternity patient or her child where there is any question relative to the legitimacy of such birth except to a duly authorized representative of the Board or to the Commissioner of Welfare or his duly authorized representatives.

(c) **Boarding Infants in Hospital.** No infant shall be retained in the hospital for care for more than 29 days following discharge of the mother except for prematurity, illness or other physical reason which requires specialized hospital care.

(d) **Placement of Children.** No member of the hospital staff, or employee of the hospital, shall place or participate in the placement of any child born in the hospital with any person other than his natural parent or member of his immediate family except in cooperation with an authorized child-placing agency.

MHD 80 LABORATORY AND X-RAY SERVICES

(a) **Laboratory Service.** Laboratory service shall be provided in the hospital.

(1) **Personnel.** A physician[1] shall have responsibility for the supervision of the laboratory. The laboratory personnel shall be qualified by education, training and experience for the type of service performed.

(2) **Facilities and Equipment.** Facilities and equipment for the performance of routine clinical diagnostic procedures and other laboratory techniques shall be adequate for the services provided.

(3) **Tissue Examination.** Tissue removed at operation or autopsy shall be examined by a competent pathologist and the report of this examination shall be made a part of the patient's record.

(b) **X-Ray Service.** X-Ray service shall be provided in the hospital.

(1) **Personnel.** A physician[2] shall have responsibility for the supervision of the x-ray service. The x-ray personnel shall be qualified by education, training and experience for the type of service performed.

(2) **Facilities and Equipment.** Diagnostic and therapeutic x-ray facilities shall be adequate for the services provided. Protection against radiation hazards shall be provided for the patients, operators and other personnel.

MHD 81 ACCOMMODATIONS, FURNISHINGS AND EQUIPMENT FOR CARE

(a) **Nursing Department.**

(1) **Patient Rooms.**

(aa) All bedrooms used for patients shall be outside rooms, dry, well

[1]It is recommended that this physician be a clinical pathologist.
[2]It is recommended that this physician be a radiologist.

ventilated, naturally lighted, and otherwise suitable for occupancy. Each bedroom shall have direct access to a corridor.

(bb) Rooms extending below ground level shall not be used as bedrooms for patients, except that any patient bedroom in use prior to the effective date of these regulations may be continued provided it does not extend more than three feet below ground level.

(cc) No patient shall at any time be admitted for regular bed care to any room other than one regularly designed as a patient room or ward, except in case of emergency and then only as a temporary measure.

(dd) Patients' beds shall not be placed in corridors, nor shall furniture or equipment be kept in corridors except in the process of moving from one room to another.

(ee) There shall be a space of at least three feet between beds and sufficient space around the bed to facilitate nursing care and to accommodate the necessary equipment for care. Beds shall be located to avoid drafts or other discomforts to patients.

(ff) The window area of each bedroom shall equal at least one-eighth of the total floor area. The minimum floor area shall be at least 100 square feet in single bedrooms and at least 80 square feet per bed in multi-bed rooms. All hospitals in operation as of the effective date of these regulations shall comply with the requirements of regulation MHD 81(a)(1)(ff) to the extent possible, but nothing contained herein shall be so construed as to require major alterations by such hospitals nor shall a license be suspended or revoked for an inability to comply fully with regulation MHD 81(a)(1)(ff).

(2) **Equipment for Patient Rooms.** The following items shall be provided for each patient unless clinically contra-indicated.

(aa) A comfortable, hospital-type bed, a clean mattress, waterproof sheeting or pad, pillows and necessary covering. Clean bedding, towels, washcloths, bath blankets and other necessary supplies shall be kept on hand for use at all times.

(bb) At least one chair.

(cc) A locker or closet for storage of clothing. Where one closet is used for two or more persons, provisions shall be made for separation of patients' clothing.

(dd) A bedside table with compartment or drawer to accommodate personal possessions.

(ee) Cubicle curtains or bed screens to afford privacy in all multi-bed rooms.

(ff) A device for signaling attendants[1] which shall be kept in working order at all times.

(gg) Handwashing facilities located in the room or convenient to the room for the use of patients and personnel.[2]

(hh) A clinical thermometer.

(ii) Individual bedpans, wash basins, emesis basins and mouth wash

[1]Except in psychiatric and pediatric units where an emergency call should be available in each patient's room for the use of the nurse.

[2]It is recommended that these be equipped with gooseneck spouts and wrist-action controls.

cups shall be provided for each patient confined to bed. Such utensils shall be sterilized before use by any other patient.

(3) **Nurses' Station.** There shall be one nurses' station provided for each nursing unit. Each station shall be conveniently located for patient service and observation of signals. It shall have a locked, well-illuminated medicine cabinet. Where narcotics are kept on the nursing station, a separate, locked, permanently secured cabinet for narcotics shall be provided. Adequate lighting, space for keeping patients' charts and for personnel to record and chart shall be provided.

(4) **Utility Rooms.**[1] There shall be at least one conveniently located, well-illuminated and ventilated utility room for each nursing unit. Such room shall provide adequate space and facilities for the emptying, cleaning, sterilizing and storage of equipment. Bathtubs or lavatories or laundry trays shall not be used for these purposes. A segregation of clean and dirty activities shall be maintained.

(5) **Linen Closet.** A linen closet or linen supply cupboard shall be provided convenient to the nurses' station.

(6) **Supplies and Equipment.** Supplies and equipment for medical and nursing care shall be provided according to the type of patients accepted. Storage areas shall be provided for supplies and equipment. A separate enclosed space shall be provided and identified for the storage of sterile supplies. Sterile supplies and equipment for the administration of blood and intravenous or subcutaneous solutions shall be readily available. Acceptable arrangements shall be made for the provision of whole blood whenever indicated.

(7) **Isolation Facilities.** A room, or rooms, equipped for the isolation of cases or suspected cases of communicable disease shall be provided. Policies and procedures for the care of infectious patients including the handling of linens, utensils, dishes, and other supplies and equipment shall be established.

(b) **Surgical Department.**

(1) **Areas to be Provided.** All hospital providing for the surgical care of patients shall have an operating room or rooms, scrub-up facilities,[2] clean-up facilities and space for the storage of surgical supplies and instruments. The surgical suite shall be located to prevent routine traffic through it to any other part of the hospital.[3]

(2) **Operating Room.** The operating room shall be of a sufficient size to accommodate the personnel and equipment needed.

(3) **Illumination.** There shall be satisfactory illumination of the operative field as well as general illumination.

(4) **Sterilizing Facilities.**[4] Adequate work space, sterilizing space and sterile storage space shall be provided. Sterilizers and autoclaves of the proper type and necessary capacity for the sterilization of utensils, instruments, dressings, water[5] and other solutions shall be provided and maintained

[1]It is recommended that a separate subutility room be provided for the exclusive use of maternity patients when other patients are housed on the same floor.
[2]It is recommended that these be located just outside the operating room.
[3]It is recommended that the surgical and obstetrical suites be entirely separate.
[4]A central sterilizing and supply room is recommended.
[5]Provision of sterile water in flasks is recommended.

in an operating condition. Special precautions shall be taken so that sterile supplies are readily identifiable as such and are completely separated from unsterile supplies.

(c) **Anesthesia.**

(1) **Administration.** Anesthesia shall be administered by a person adequately trained and competent in anesthesia administration, or under the close supervision of a physician.

(2) **Equipment.** Suitable equipment for the administration of the type of anesthesia used shall be available. Where conductive flooring is installed in anesthetizing areas, all equipment shall have safety features as defined in Part II of Standard No. 56, issued in May, 1954, entitled **Recommended Safe Practice for Hospital Operating Rooms** by the National Fire Protection Association,[1] which part of said Standard is hereby adopted by the Board with the same force and effect as if the same were fully set forth in and written as part of this regulation.

(3) **Oxygen.** Oxygen and equipment for its use shall be available.

(4) **Storage.** Proper provision shall be made for the safe storage of anesthetic materials.

(d) **Obstetrical Department.**

(1) **Areas to be Provided.** Hospitals providing for the obstetrical care of maternity patients shall have a delivery room or rooms, in the ratio of one for each twenty maternity beds, scrub-up facilities,[2] clean-up facilities and space for the storage of obstetrical supplies and instruments. The obstetrical suite shall be located to prevent routine traffic through it to any other part of the hospital.

An exception is made for those hospitals, which on the effective date of these regulations, provide a single room which is used for both surgery and delivery purposes. Scrub-up facilities, clean-up facilities and space for the storage of supplies and instruments shall be provided in such hospitals. Precautions shall be taken to avoid crossinfection.

(2) **Delivery Room.** The delivery room shall be of sufficient size to accommodate the personnel and equipment needed.

(3) **Illumination.** There shall be satisfactory illumination of the delivery field as well as general illumination.

(4) **Labor Beds.** One labor bed for each ten maternity beds or fraction thereof, shall be provided in a labor room or rooms adjacent to or in the delivery suite unless the patient's own room is used for labor.[3]

(5) **Accommodations.** Maternity patients shall not be placed in rooms with other than maternity patients.

(6) **Minimum Equipment Requirements for Delivery Room.** The following shall be provided in the delivery room:

(aa) Equipment for anesthesia and for the administration of oxygen to the mother.

[1]60 Batterymarch St., Boston 10, Massachusetts.
[2]It is recommended that these be located just outside the delivery room.
[3]It is recommended that the labor room be acoustically-treated and provided with a toilet and lavatory.

(bb) A source of oxygen with a mechanism for controlling the concentration of oxygen and with a suitable device for administering oxygen to the infant.

(cc) A safe and suitable type of suction device for cleaning the infant's upper respiratory tract of mucus and other fluid.

(dd) A properly heated bassinet for reception of the newborn infant. This shall include no hazardous electrical equipment.

(ee) Sterile equipment suitable for clamping, cutting, tying and dressing the umbilical cord.

(ff) Provision for prophylactic treatment of the infant's eyes.

(gg) A device as well as an established procedure for easy and positive identification of the infant before removal from the delivery room. This shall be of a type which cannot be inadvertently removed during routine care of the infant.

(hh) Sterile supplies and equipment for the administration of blood and intravenous or subcutaneous solutions shall be readily available. Acceptable arrangements shall be made for the provision of the whole blood whenever indicated.

(7) **Obstetrical Isolation Facilities.** Maternity patients with infection, fever or other conditions or symptoms which may constitute a hazard to other maternity patients shall be isolated immediately in a separate room which is properly equipped for isolation, in an area removed from the obstetrical department.

(e) **Nursery Department.**

(1) **Newborn Nursery.**[1,2] Each hospital with a maternity service shall provide at least one newborn nursery for the exclusive use of well infants delivered within the institution. The number of bassinets provided shall be at least equal to the number of maternity beds. Each nursery shall be provided with a lavatory with goose-neck spout and other than hand-operated faucets.

(aa) In hospitals constructed after the effective date of these regulations, the total nursery space, exclusive of the work room, shall provide a floor area of at least 24 square feet for each bassinet, with a distance of at least two feet between each bassinet and an aisle space of at least three feet.

(bb) Hospitals operating as of the effective date of these regulations shall comply with regulation MHD 81 (e)(1)(aa), to the extent possible, but no hospital shall have a nursery area which provides less than 18 inches between each bassinet and an aisle space of at least three feet, exclusive of the work room or work area.

(cc) Each bassinet shall be mounted on a single stand and be removable to facilitate cleaning.

(dd) An observation window shall be installed between the corridor and nursery for the viewing of infants.

[1]It is recommended that each newborn nursery be limited to twelve bassinets.

[2]An exit door from the nursery into the corridor is recommended for emergency use.

(ee) Each nursery department shall have one or more incubators[1] whereby temperature, humidity and oxygen can be controlled and measured.[2]

(2) **Examination and Work Room.**

(aa) An adjoining examination and work room shall be provided for each nursery or between each two nurseries.

(bb) The work room shall be of adequate size to provide facilities necessary to prepare personnel for work in the nursery, for the examination and treatment of infants by physicians, for charting, for storage of nursery linen, for disposal of soiled linen, for storage and dispensing of feedings and for initial rinsing of bottles and nipples.

(cc) Each work room shall be provided with a scrub-up sink having foot, knee or elbow-action controls; counter with counter sink having a goose-neck spout and other than hand-operated controls.

(dd) Hospitals operating as of the effective date of these regulations shall comply with regulation MHD 81 (e)(2)(aa), (bb) and (cc), to the extent possible, but if a separate examination and work room is not provided, there shall be a segregated examination and work area in the nursery. The work area shall be of adequate size and provide the facilities and equipment necessary to prepare personnel for work in the nursery, for the examination and treatment of infants by physicians, for storage of nursery linen and for the dispensing of feedings.

(3) **Formula Preparation.**[3] Space and equipment for clean-up, preparation and refrigeration to be used exclusively for infant formulas shall be provided apart from care areas and apart from other food service areas. A registered nurse or a dietitian shall be responsible for the formula preparation.

(4) **Suspect Nursery or Room.** There shall be a room available for the care of newborn infants suspected of having a communicable disease and for newborn infants admitted from the outside. Where a suspect nursery is available, it shall provide 40 square feet per bassinet with a maximum of six bassinets and have a separate work room. Isolation technique shall be used in the suspect nursery.

(5) **Isolation.** Infants found to have an infectious condition shall be transferred promptly to an isolation area elsewhere in the hopsital.

MHD 82 FOOD SERVICE AND FOOD SANITATION

(a) **The Preparation and Serving of Food.**

(1) **Supervision.** The dietary department shall be under the supervision of a trained dietitian or other person experienced in the handling, preparation and serving of foods; in the preparation of special diets; and in the supervision and management of food service personnel. This person shall be responsible for compliance with safe practices in food service and sanitation.

(2) **Kitchen.** There shall be sufficient space and equipment for the proper preparation and serving of food for both patients and personnel. The

[1]A separate premature nursery and work room are recommended for hospitals with 25 or more maternity beds on the basis of 30 square feet per incubator and a maximum of six incubators per nursery.

[2]It is recommended that the oxygen concentration be checked by measurement with an oxygen analyzer at least every 8 hours or that an incubator-attached, minus 40% oxygen concentration limiting device be used.

[3]A separate formula room is recommended; terminal sterilization is recommended.

kitchen shall be used for no other purpose than activities connected with the dietary service and the washing and storage of dishes and utensils.[1] A dining room or rooms shall be provided for personnel.

(3) **Food.** Food for patients and employees shall be nutritious, free from contamination, properly prepared, palatable and easily digestible. A file of the menus served shall be maintained for at least 30 days.

(4) **The Serving and Storage of Food.** All foods shall be stored and served so as to be protected from dust, flies, rodents, vermin, unnecessary handling, overhead leakage and other means of contamination. All readily perishable food shall be stored in clean refrigerators at temperatures of 50 degrees Fahrenheit or lower. Each refrigerator shall be equipped with a thermometer.

(5) **Milk and Ice.** All fluid milk shall be procured from suppliers licensed by the Commissioner of Agriculture or pasteurized in accordance with the requirements prescribed by the Commissioner of Agriculture. The milk shall be dispensed directly from the container in which it was packaged at the pasteurization plant. Ice used in contact with food or drink shall be obtained from a source acceptable to the Board, and handled and dispensed in a sanitary manner.

(6) **Handwashing Facilities.** Handwashing facilities with hot and cold running water, soap, and individual towels shall be accessible for the use of all food handlers and so located in the kitchen to permit direct observation by the supervisor. No employee shall resume work after using the toilet room without first washing his hands.

(7) **Dishwashing Facilities and Methods.** Either of the following methods may be employed in dishwashing:

(aa) **Manual.** A three-compartment sink or equivalent of a size adequate to permit the introduction of long-handled wire baskets of dishes shall be provided. There shall be a sufficient number of baskets to hold the dishes used during the peak load for a period sufficient to permit complete air-drying. Water-heating equipment capable of maintaining the temperature of the water in the disinfection compartment at 170 degrees Fahrenheit shall be provided. Drain boards shall be part of the three-compartment sink and adequate space shall be available for drainage. The dishes shall be washed in the first compartment of the sink with warm water containing a suitable detergent; rinsed in clear water in the second compartment; and disinfected by complete immersion in the third compartment for at least two minutes in water at a temperature not lower than 170 degrees Fahrenheit. Temperature readings shall be determined by a thermometer. Dishes and utensils shall be air-dried.

(bb) **Mechanical.** Water pressure in the lines supplying the wash and rinse section of the dishwashing machine shall not be less than 15 pounds per square inch nor more than 30 pounds per square inch. The rinse water shall be at a temperature not lower than 180 degrees Fahrenheit at the machine. The machines shall be equipped with thermometers which will indicate accurately the temperature of the wash water and rinse water. Dishes and utensils shall be air-dried. New dishwashing machines shall conform to section 1, 2, 3, 4, and 6 on Pages 7-28 inclusive, of Standard No. 3 issued

[1]It is recommended that a separate dishwashing area or room be provided.

in May, 1953, entitled **Spray-Type Dishwashing Machines** by the National Sanitation Foundation,[1] which sections of such Standard are hereby adopted by the Board with the same force and effect as if the same were fully set forth in and written as part of this regulation.

(8) **Ventilation.** All rooms in which food is stored, prepared or served or in which utensils are washed shall be well-ventilated. The cooking area shall be ventilated to control temperatures, smoke and odors.

(9) **Garbage Disposal.** Garbage shall be disposed of in a manner acceptable to the Board. When stored, it shall be retained in water-tight metal cans equipped with tightly fitting metal covers. All containers for the collection of garbage and refuse shall be kept in a sanitary condition.

(10) **Toilet and Lavatory Facilities.** Conveniently located toilet and lavatory facilities shall be provided for employees engaged in food handling. Toilet rooms shall not open directly into any room in which food is prepared or utensils are handled or stored.

MHD 83 SANITATION

(a) **Water Supply.** The water supply shall be of safe sanitary quality, suitable for use, and shall be obtained from a water supply system, the location, construction, and operation of which are acceptable to the Board. Hot water of a temperature required for its specific use shall be available as needed. For the protection of patients and personnel, thermostatically controlled valves shall be installed where indicated.

(b) **Sewage Disposal.** Sewage shall be discharged into a municipal sewerage system where such a system is available; otherwise, the sewage shall be collected, treated, and disposed of in a sewage disposal system which is acceptable to the Board.

(c) **Plumbing.** The plumbing and drainage, or other arrangements for the disposal of excreta and wastes shall be in accordance with the regulations of the Board and with the provisions of the Minnesota Plumbing Code.

(d) **Toilets.**[2] Toilets shall be conveniently located and provided in number ample for use according to the number of patients and personnel of both sexes. The minimum requirement is one toilet for each eight patients or fraction thereof.

(e) **Handwashing Facilities.**[3] Handwashing facilities of the proper type in each instance shall be readily available for physicians, nurses and other personnel. Lavatories shall be provided in the ratio of at least one lavatory for each eight patients or fraction thereof. Lavatories shall be readily accessible to all toilets. Individual towels and soap shall be available at all times. The use of the common towel is prohibited.

(f) **Bathing Facilities.**[2] A bathtub or shower shall be provided in the ratio of at least one tub or shower for each thirty patients or fraction thereof.

[1]Ann Arbor, Michigan.

[2]It is recommended that separate toilet and bathing facilities be provided for maternity patients.

[3]It is recommended that each patient's room be equipped with a lavatory.

(g) **Screens.** Outside openings including doors and windows shall be properly screened or otherwise protected to prevent the entrance of flies, mosquitoes, and other insects.

MHD 84 PHYSICAL PLANT

(a) **General.** The hospital structure and its equipment shall be kept in good repair and operated at all times with regard for the health, treatment, comfort, safety and well-being of the patients and personnel.

(b) **Fire Protection.** Fire protection for the hospital shall be provided in accordance with the requirements of the State Fire Marshal. Approval by the State Fire Marshal of the fire protection of a hospital shall be a prerequisite for licensure.

(c) **Walls, Floors and Ceilings.** Walls, floors and ceilings shall be kept clean and in good repair at all times. They shall be of a type to permit good maintenance including frequent washings, cleaning, or painting.

(d) **Lighting.**

(1) **General Illumination.** All areas shall be adequately lighted.

(2) **Hazardous Areas.** All lighting and electrical fixtures including emergency lighting in operating rooms, delivery rooms and spaces where explosive gases are used or stored shall comply with Part II of Standard No. 56, issued in May, 1954, entitled **Recommended Safe Practice for Hospital Operating Rooms,** by the National Fire Protection Association,[1] which part of said Standard is hereby adopted by the Board with the same force and effect as if the same were fully set forth in and written as part of this regulation.

(3) **Emergency Lighting.**[2] Safe emergency lighting equipment shall be provided and distributed so as to be readily available to personnel on duty in the event of a power failure. There shall be at least a battery operated lamp with vaporproof switch, in readiness at all times for use in the delivery and operating rooms.

(e) **Heating.** The heating system shall be capable of maintaining temperatures adequate for the comfort and protection of all patients at all times.

(f) **Ventilation.** Kitchens, laundries, toilet rooms and utility rooms shall be ventilated by windows or mechanical means to control temperatures and offensive odors. If ventilation is used in operating rooms, delivery rooms or other anesthetizing areas, the system shall conform to the requirements of Regulation MHD 102(a)9. Part II — Regulations for Hospital Construction and Equipment.

(g) **Stairways and Ramps.** All stairways and ramps shall be provided with handrails on both sides and with non-skid treads.

(h) **Safety.** All dangerous areas and equipment shall be provided with proper guards and appropriate devices to prevent accidents. Elevators,

[1]60 Batterymarch St., Boston 10, Massachusetts.
[2]It is recommended that an independent source of power be available for emergency lighting of surgical and obstetrical suites, exits, stairways and corridors.

dumbwaiters and machinery shall be so constructed and maintained as to comply with the regulations of the Division of Accident Prevention, Minnesota Department of Labor and Industry. All electrical wiring, appliances, fixtures and equipment shall be installed to comply with the requirements of the State Board of Electricity.

(i) **Incinerator.** An incinerator shall be provided for the safe disposal of infected dressings, surgical and obstetrical wastes and other similar materials.

(j) **Telephones.** Adequate telephone service shall be provided in order to assure efficient service and operation of the institution and to summon help promptly in case of emergency.

(k) **Laundry.** The hospital shall make provision for the proper laundering of linen and washable goods. Where linen is sent to an outside laundry, the hospital shall take reasonable precautions to see that contaminated linen is properly handled.

(l) **General Storage.** Space shall be provided for the storage of supplies and equipment. Corridors shall not be used as storage areas.

MHD 85 MENTAL AND PSYCHIATRIC HOSPITALS

(a) **Medical Director or Chief of Staff.** There shall be a medical director or chief of staff who shall be a licensed physician with training and experience in psychiatry. He shall assume responsibility for the medical care rendered.

(b) **Medical and Nursing Staff.**

(1) An adequate medical staff shall be provided to assure optimum care of patients at all times.

(2) The director of the nursing service shall be a well-qualified, registered nurse with training and experience in psychiatric nursing. There shall be a sufficient number of nurses, psychiatric aides and attendants under her supervision to assure optimum care of patients at all times.

(c) **Other Staff.** The staff shall include a sufficient number of qualified physical and occupational therapists to provide rehabilitation services for the number of patients accommodated.

(d) **Consultations.** The hospital shall make provisions in its staff organization for consultations in the specialized fields of medicine.

(e) **Dental Service.** Provisions shall be made for dental service either within or outside the institution.

(f) **Segregation of Patients.** Patients with tuberculosis or other communicable disease shall be segregated.

(g) **Protection of Patients and Personnel.** Every reasonable precaution shall be taken for the security of patients and personnel. Drugs, narcotics, sharp instruments, and other potentially hazardous articles shall be inaccessible to patients.

(h) **Seclusion and Restraints.** Patients shall not be placed in seclusion or mechanical restraints without the written order of the physician in charge unless, in the judgment of the supervisor in charge of the service, the safety and protection of the patient, hospital employees, or other patients require such immediate seclusion or restraint. Such seclusion or restraint shall not be continued beyond eight hours except by written or telephone order of the attending physician. Emergency orders given by telephone shall be reduced to writing immediately upon receipt and shall be signed by the staff member within 24 hours after the order is given. Such patient shall be under reasonable observation and care of a nurse or attendant at all times.

(i) **Floor Area in Patients' Rooms.** The following minimum areas shall be provided:

(1) **Psychiatric Units and Wards of General Hospitals, and those Units and Wards of Public and Private Mental Hospitals where Diagnosis and Intensive Treatment are Provided, such as: Receiving, Medical and Surgical, Tuberculosis, Intensive Treatment and Rehabilitation, and Units and Wards for the Acutely Disturbed Patient:** Regulation MHD 81(a)(1), (aa)-(ff), 1-6 shall apply.

(2) **Continued Treatment Areas for Long-Term Patients:**

(aa) In hospitals constructed after the effective date of these regulations, the minimum floor area shall be at least 80 square feet in single rooms and 60 square feet in multi-bed rooms. In dormitory areas, this may include the space devoted to aisles. All main traffic aisles shall be five feet in width except in large dormitories where the aisle serves 10 or more patients, it shall be six feet in width.

(bb) All hospitals in operation as of the effective date of these regulations shall comply with the requirements of regulation MHD 85(1)(2), to the extent possible.

(cc) Beds shall be placed at least three feet from adjacent beds except where partitions or other barriers separate beds or where two beds are placed foot-to-foot.

(dd) Beds shall be so located as to avoid drafts and other discomforts to patients.

(ee) Whenever the patient's condition permits, each individual patient's area shall be equipped with a chair and a bedside cabinet.

(ff) Adequate provision shall be made for the storage of patients' clothes and other personal possessions.

(j) **Dining Room.** A minimum of 12 square feet of dining room space shall be provided for each patient. Arrangements may be made for multiple seatings.

(k) **Recreation and Day Rooms.** Space shall be provided for recreation and day room areas.

(l) **Specialized Treatment Facilities.** Space and equipment for physical, ocupational and recreational therapy shall be provided. Storage space for equipment shall be provided.

MHD 86 INSTITUTIONS FOR THE MENTALLY DEFICIENT AND EPILEPTIC

(a) **Applicable Regulations.**

(1) Hospital sections in institutions for the mentally deficient and epileptic shall comply with the applicable portions of the regulations for general hospitals contained herein.

(2) Regulations MHD 81(1), 81(j), and 81(k) shall apply to the sections of these institutions other than the hospital sections.

(3) Hospital regulations shall not apply to facilities for foster care licensed by the Commissioner of Welfare nor to institutions that do not have hospital units.

MHD 87 TUBERCULOSIS HOSPITALS

(a) **Staff.**

(1) **Medical Director.** There shall be a medical director who shall be a licensed physician with training and experience in the field of tuberculosis and chest diseases. He shall assume responsibility for the adequacy of the medical care rendered.

(2) **Medical and Nursing Staff.**

(aa) An adequate medical staff shall be provided to assure optimum care of patients at all times.

(bb) The director of the nursing service shall be a well-qualified, registered nurse with training and experience in tuberculosis. There shall be a sufficient number of nurses and attendants under her supervision to assure optimum care of patients at all times.

(3) **Other Staff.** The staff shall include a sufficient number of qualified medical social workers, teachers, physical an doccupational therapists to provide services and rehabilitation for the number of patients accommodated.

(b) **Consultations.**

(1) The hospital shal make provisions in its staff organization for consultations in the specialized fields of medicine.

(2) **Sanatorium Consultation Committee.**[1] The sanatorium consultation committee shall be consulted regularly by the hospital in the review of and recommendations for the study, care and treatment of all patients.

(c) **Health of Employees.**

(1) All employees shall be thoroughly instructed and indoctrinated in the use of preventive measures to protect their own health.

(2) Employees shall have a pre-employment physical examination including a Mantoux test and an x-ray of the chest. Periodic x-rays of the chest shall be performed at least every 12 months and preferably every 4 to 6 months depending upon the type of employment and possible exposure. An x-ray of the chest shall be performed at the time of termination of employment.

[1]Joint Committee of Board and Minnesota Trudeau Medical Society.

(3) All employees with negative reactions to tuberculin shall have the tuberculin test repeated at the same intervals recommended for chest films. A Mantoux test shall be performed at the time of termination of employment.

(4) Health records shall be maintained on all employees.

(d) **Medical Records.** The medical record on the tuberculosis patient shall include, in addition to the information required by Regulation MHD 78(a)(3), the tuberculosis classification at the time of discharge, the reason for discharge and the number of days of hospitalization.

(e) **Clinical Classification.** The clinical classification of patients shall be made in accordance with the publication, issued in 1950. entitled **Diagnostic Standards and Classification of Tuberculosis** by the National Tuberculosis Association,[1] which standards and classification are hereby adopted by the Board with the same force and effect as if the same were fully set forth in and written as part of this regulation.

(f) **Records and Statistics.** The hospital shall maintain such records and statistics as required by the Board and the Commissioner of Welfare.

(g) **Private Rooms.** Private rooms shall be available for observation, isolation, surgical and moribund cases. Each new patient shall be placed in a private room or isolated from other patients until the diagnosis has been established.

(h) **Isolation Techniques.** Isolation techniques for the protection of other patients as well as personnel shall be established and followed.

(i) **Patients**

(1) **Patients to be Accepted.** Any person with any form of tuberculosis or suspected tuberculosis shall be accepted for study, care and treatment. Preference in admission shall be given to patients whose clinical condition constitutes a tuberculosis emergency. When indicated, patients shall be transferred to other institutions for special investigation, treatment or surgery.

(2) **Patients to be Instructed.** Each patient shall be seen by a physician within 24 hours after admission and each patient shall be instructed in the practice of proper hygiene as soon as possible after admission.

(j) **Disposal of Sputum.** A rigid routine for at least daily collections of sputum cups and beside paper bags shall be carried out. These shall be burned in an incinerator.

(k) **X-ray and Fluoroscopic Examinations.** The patient shall have a chest film on admission and discharge. The chest film shall be repeated as often as necessary while the patient is hospitalized. Patients receiving pneumotherapy shall have adequate fluoroscopic examinations.

(l) **Laboratory Studies.** Admission laboratory studies shall include culture for the isolation and identification of the causative organism. Cultures and other laboratory investigations shall be repeated as often as the patient's condition indicates.

[1]1790 Broadway, New York 19, New York.

(m) **Other Determinations.** Determinations of the patient's temperature, pulse, respiration and weight shall be made on admission and repeated as often as required for adequate supervision thereafter.

(n) **Report of Condition of Patients.** The nurse in charge shall report the condition of all patients as often as necessary but at least once daily to a physician on the medical staff.

(o) **Treatments Prescribed and Supervised by Physician.** All general and special treatments, including regulation of physical activity, shall be prescribed and supervised by a physician.

(p) **Dental Service.** Provision shall be made for dental service either within or outside the institution.

(q) **Leaves of Absence.** All leaves of absence by patients shall be approved by the attending physician.

(r) **Conference at Time of Discharge.** All patients shall have a conference with the attending physician at the time of discharge at which time the patient shall receive appropriate advice as to his activity, further treatment, follow-up examination and the proper precautions to be exercised.

(s) **Follow-up Study and Care.** Provisions for and the necessary arrangements shall be made for follow-up study and care of all discharged patients.

(t) **Patients' Dishes.** Patients' dishes shall be washed, rinsed, disinfected and stored separately from those used by employees.

(u) **Garbage Disposal.** All garbage shall be disposed of in a manner acceptable to the Board.

(v) **Patients' Laundry.** All patients' laundry shall be stored and sent to the laundry in bags which are clean on the outside and plainly marked to indicate their origin. These shall be tightly closed until the contents are placed in a washer. This laundry shall be washed separately from laundry of other sources. The laundry manager shall be instructed in the safe handling of such laundry.

(w) **Visitors.** The institution shall make specific regulations for the control of visits to patients for the protection of both patients and visitors.

(x) **Dining Room.** A minimum of 12 square feet of dining room space shall be provided for each ambulatory patient. Arrangements may be made for multiple seatings.

(y) **Day Room or Solarium.** Adequate day room or solarium space should be provided for the patients accommodated.

(z) **Specialized Treatment Facilities.** Space and equipment for physical and occupational therapy shall be provided. Storage space for equipment shall be provided.

MHD 88 CHRONIC DISEASE HOSPITALS

(a) **Staff Organization.** A licensed physician with interest, training and experience in the medical and physical rehabilitation of the chronically ill shall be responsible for the adequacy of the medical care rendered.

(b) **Medical and Nursing Staff.**

(1) An adequate medical staff shall be provided to assure optimum care of patients at all times.

(2) The director of the nursing service shall be a well-qualified, registered nurse with experience in rehabilitation nursing. There shall be a sufficient number of nurses and attendants under her supervision to assure optimum care of patients at all times.

(c) **Other Staff.** The services of at least one qualified physical therapist and one qualified occupational therapist shall be available, preferably on a full-time basis. Additional therapists shall be provided to assure optimum care for the number of patients accommodated. There shall be an adequate number of medical social workers. Educational and vocational educational personnel shall be provided where indicated.

(d) **Consultations.** The hospital shall make provisions in its staff organization for consultations in the specialized fields of medicine.

(e) **Dental Service.** Provision shall be made for dental service either within or outside the institution.

(f) **Diagnostic and Treatment Facilities and Services.** Laboratory and x-ray facilities and services as well as basal metabolism and electrocardiograph shall be provided unless available in an adjacent general hospital.

(g) **Dining Room.** Every possible effort shall be made to encourage all patients to eat in a common dining room. A minimum of 15 square feet shall be provided for each ambulatory patient. Arrangements may be made for multiple seatings. Areas in dayrooms and solaria may be utilized for this purpose.

(h) **Dayroom or Solarium.** Every possible effort shall be made to encourage all patients to utilize dayrooms, solaria, recreational and occupational therapy and similar areas. A minimum of 25 square feet per patient shall be provided.

(i) **Specialized Treatment Facilities.** Space and equipment for physical, occupational and recreational therapy shall be provided. Storage space for equipment shall be provided.

MHD 89-95 Reserved for Future Use.

PART II

Regulations for hospital construction and equipment

MHD 96 DEFINITION, GENERAL PROVISIONS

(a) **Definition.** The term "construction" as used in Part II of these regulations means the erection of new buildings[1,2] and the additions to existing buildings commenced on or after the effective date of these regulations.

(b) **Design and Construction.** All design and construction shall conform to all applicable portions of Part II of these hospital regulations entitled

Regulations for Hospital Construction and Equipment.

(c) **Compliance.** All construction including exit lights and fire towers; heating, piping, ventilation and air-conditioning; plumbing and drainage; electrical installations; elevators and dumbwaiters; refrigeration; kitchen equipment; laundry equipment; and gas piping shall be in strict compliance with all applicable state and local codes, ordinances and regulations not in conflict with the provisions contained in Part II of these hospital regulations entitled **Regulations for Hospital Construction and Equipment.**

(d) **Hospitals of Less than Fifty Beds.** In hospitals of less than fifty beds, the size of the various departments will be generally smaller and will depend upon the requirements of the particular hospital. Some of the functions allotted separate spaces or rooms may be combined in such hospitals provided that the resulting plan will not compromise the best standards of medical and nursing practice. In other respects the regulations as set forth herein, including the area requirements, shall apply.

MHD 97 GENERAL HOSPITALS

(a) **Administration Department.**[3] The administration department shall consist of a business office with information counter, administrator's office, medical record room, staff lounge, lobby, public toilets for each sex. If over 100 beds, the following additional areas shall be provided: director of nurses' office; admitting office; library, conference and board room.

(b) **Adjunct Diagnostic and Treatment Facilities.**[4,5]

(1) **Laboratory.** Adequate facilities and equipment for the performance of routine clinical diagnostic procedures and other laboratory techniques in keeping with the services rendered by the hospital shall be provided. Approximately 4½ square feet of floor space per patient bed shall be provided.

(2) **Basal Metabolism and Electrocardiography.** One room shall be provided for basal metabolism and electrocardiography in hospitals with 100 beds or more.

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[1]Prior to the final selection of a hospital site, it is suggested that a request be made to the Board for a study and recommendations relative to the choice of a site.
[2]It is recommended that a site survey and soil investigation be completed prior to starting work on the building design.
[3]It is recommended that the following be provided: a PBX board and night information for all hospitals; director of nurses' office in hospitals under 100 beds; medical social service room and retiring room in hospitals over 100 beds.
[4]It is recommended that these facilities, except for morgue and autopsy, be located convenient to both in-pateints and out-patients.
[5]It is recommended that space be provided for electrotherapy, hydrotherapy, massage and exercise in hospitals with 100 beds or more.

(3) **Radiology.** Radiographic room or rooms with adjoining darkroom, toilet, dressing cubicles and office shall be provided. Protection against radiation hazards shall be provided for the patients, operators and other personnel. To assure adequate protection against radiation hazards, x-ray apparatus and protection shall be installed in accordance with the applicable standards prescribed in Handbook 41, issued March 30, 1949, entitled **Medical X-ray Protection up to Two Million Volts** and Handbook 50, issued May 9, 1952, entitled **X-Ray Protection Design** by the National Bureau of Standards, U. S. Department of Commerce,[1] which standards are hereby adopted by the Board with the same force and effect as if the same were fully set forth in and written as part of this regulation.

(4) **Pharmacy.** A drug room shall be provided.

(5) **Morgue and Autopsy Room.** A morgue and autopsy room shall be provided in hospitals with 100 beds or more. Where morgue and autopsy rooms are provided, they shall be properly equipped and ventilated and of sufficient size to allow for the performance of satisfactory pathological examinations. Definite arrangements for space and facilities for the performance of autopsies outside the hospital shall be made if the hospital does not have an autopsy room.

(c) **Nursing Department.** All patients' rooms shall be outside rooms and have direct access to a hall. The window area shall not be less than one-eighth of the total floor area. No bedrooms shall be located below grade. Minimum room areas shall be 80 square feet per bed in rooms having two or more beds and 100 square feet in single rooms. No bedroom shall have more than four beds. Each bedroom or its adjoining toilet or bathroom shall have a lavatory equipped with goose-neck spout and wrist-action controls. A locker shall be provided for each patient.

(1) **Areas to be Provided.**[2,3] The following areas shall be provided in each nursing unit: Nurses' station, utility room divided into dirty and clean areas, bedpan facilities, toilet facilities for each sex in a ratio of one toilet for each eight patients or fraction thereof,[4] bathtubs or showers in a ratio of one tub or shower for each thirty patients or fraction thereof, linen and supply storage, and janitors' closet. Each nursing floor shall have a floor pantry and nurses' toilet room. Separate subutility, toilet and bathing facilities shall be provided for the maternity section.

(2) **Nurses' Station.** Each nurses' station shall be conveniently located for patient service and observation of signals. It shall have a locked, well-illuminated medicine cabinet. Where narcotics are kept on the nursing station, a separate, locked, permanently secured cabinet for narcotics shall be provided. Adequate lighting, handwashing facilities, space for keeping patients' charts and for personnel to record and chart shall be provided. Refrigeration storage shall be provided for medications and biologics unless provided elsewhere.

(3) **Isolation Suite.** One isolation suite shall be provided in each hospital unless a contagious disease nursing unit is available in the hospital. The isolation suite shall consist of one or more patients' rooms, each having an

[1]Superintendent of Documents, Washington 25, D.C.
[2]It is recommended that a stretcher alcove, treatment room and solarium be provided.
[3]A psychiatric or quiet room is recommended in general hospitals not providing a psychiatric unit.
[4]Adjustments will be made where patients' rooms are provided with individual toilets.

adjacent toilet equipped with bedpan lugs and spray attachment. Each suite shall have a subutility room equipped with utensil serilizer, sink and storage cabinets.

(d) **Surgical Department.** The surgical department shall be so located to prevent routine traffic through it to any other part of the hospital and completely separated from the obstetrical department.

(1) **The Operating Suite.**[1] The operating suite shall consist of major operating room or rooms, each having an area of not less than 270 square feet with a minimum width of 15 feet; separate scrub-up area adjacent to operating room; clean-up room; storage areas for instruments, sterile supplies and anesthesia equipment; and a janitors' closet. In hospitals consisting of 50 or more beds, a surgical supervisor's station, doctors' locker room and toilet and nurses' locker room and toilet shall be provided. In hospitals of less than 50 beds doctors' and nurses' locker and toilet rooms may be provided in a convenient location outside the operating and delivery suites to serve both units.

(2) **Central Sterilizing and Supply Room.**[2] A central sterilizing and supply room shall be provided and divided into work space, sterilizing space and separate storage areas for sterile and unsterile supplies. Sterilizers and autoclaves for adequate sterilization of supplies and utensils shall be provided.

(e) **Emergency Room.** An emergency room shall be provided separate from the operating and delivery suites.

(f) **Obstetrical Department.**[3] The obstetrical department shall be so located to prevent routine traffic through it to any other part of the hospital and completely separated from the surgical department.

(1) **The Delivery Suite.**[4] The delivery suite shall consist of delivery room or rooms, each having an area of not less than 270 square feet with a minimum width of 15 feet; separate scrub-up area adjacent to delivery room; clean-up room; storage areas for instruments and sterile supplies; and a janitors' closet. In hospitals consisting of 50 or more beds, an obstetrical supervisor's station, doctors' locker room and toilet and nurses' locker room and toilet shall be provided. In hospitals of less than 50 beds, doctors' and nurses' locker and toilet rooms may be provided in a convenient location outside the delivery and operating suites to serve both units.

(2) **Delivery Room.** One delivery room shall be provided for each 20 maternity beds.

(3) **Labor Room.** A labor room with a lavatory and an adjacent toilet shall be provided in a convenient location with respect to the delivery room. One labor bed shall be provided for each 10 maternity beds. The labor room shall be acoustically treated or so located to minimize the possibility of sounds reaching other patients.

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[1]A stretcher alcove and a recovery (post-anesthesia) room are recommended.
[2]Provision of sterile water in flasks is recommended.
[3]A combination classroom-parent teaching room is recommended in the obstetrical departments, outside the delivery suite.
[4]A stretcher alcove is recommended.

(g) **Nursery Department.** Each hospital providing a maternity service shall have a nursery department of sufficient size to accommodate the anticipated load.

(1) **Newborn Nursery.**[1] A minimum floor area of 24 square feet per bassinet shall be provided in each newborn nursery with not more than 12 bassinets in each nursery. A connecting examination and work room shall be provided.

(2) **Suspect Nursery.** A suspect nursery with a separate connecting workroom shall be provided in hospitals of 50 beds or more. At least 40 square feet of floor area shall be provided for each bassinet with no more than six bassinets in each suspect nursery.

(3) **Formula Room.**[2] A formula room shall be provided in the nursery area or in the dietary department where adequate supervision can be provided. This room shall be used exclusively for the preparation of infant formulas. The formula room shall contain a lavatory with goose-neck spout and wrist-action controls, a two-compartment sink for washing and rinsing bottles and utensils, and adequate storage and counter space. The work space shall be divided into clean and dirty sections. Equipment shall be provided for sterilization. Refrigerated storage space sufficient for one day's supply of prepared formulas shall be provided in this room or in the nursery workroom.

(h) **Service Department.**

(1) **Dietary Facilities.** Dietary facilities shall consist of main kitchen with provision for the protected storage of clean dishes, utensils and foodstuffs; day storage room; adequate refrigeration; dishwashing facilities; and the necessary space and provisions for the handling and disposal of garbage. A dietitian's office shall be provided in hospitals of 50 or more beds. Handwashing facilities with hot and cold water, soap and individual towels shall be accessible for the use of all food-service personnel and so located to permit direct observation by the supervisor. Dining space for personnel, allowing 12 square feet per person, shall be provided. This space may be designed for multiple seatings.

(2) **Laundry Facilities.** Each hospital shall have a laundry of sufficient capacity to process a full seven days' laundry during the work week unless commercial or other laundry facilities are available. It shall include sorting area; processing area; and a clean linen and sewing room separate from the laundry. The sewing room may be combined with the clean linen room in hospitals of less than 100 beds. Where no laundry is provided in the hospital, a soiled linen room and a clean linen and sewing room shall be provided.

(3) **Housekeeper's Office.** A housekeeper's office shall be provided. This may be combined with the clean linen room in hospitals of less than 100 beds.

(4) **Mechanical Facilities.**[3] A boiler and pump room with engineers' space and maintenance shop shall be provided. In hospitals of more than 100 beds, separate areas for carpentry, painting and plumbing shall be provided.

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[1]A separate premature nursery and work room are recommended for hospitals with 25 or more maternity beds on the basis of 30 square feet per incubator and a maximum of six incubators per nursery.
[2]Terminal sterilization is recommended.
[3]Shower and locker facilities are recommended.

(5) **Employees Facilities.** Locker rooms with lockers, rest rooms, toilets and showers for nurses and female help; and a locker room with lockers, toilets and showers for male help shall be provided.

(6) **Storage.** Inactive record storage shall be provided. General storage of not less than 20 square feet per bed shall be provided. General storage shall be concentrated in one area in so far as possible.

MHD 98 SPECIALIZED UNITS OF THE GENERAL HOSPITAL

(a) **Contagious Disease Nursing Unit.**[1] When ten or more beds are provided for contagious disease, they shall be contained in a separate nursing unit. Each patient room shall have a view window from the corridor, a separate toilet, a lavatory in the room and shall contain no more than two beds. Each nursing unit shall contain a nurses' station, utility room, nurses' work room, treatment room, scrub sinks coveniently located in the corridor, serving pantry with separate dishwashing room adjacent, doctors' locker space and gown room, nurses' locker spare and gown room, janitors' closet, and a storage closet.

(b) **Pediatric Nursing Unit.**[2] Where there are 16 or more pediatric beds a separate pediatric nursing unit shall be provided. Minimum room areas shall be 100 square feet in single rooms, 80 square feet per bed in rooms having two or more beds, and 40 square feet per bassinet in nurseries. Each nursing unit shall contain a nursery with bassinets in cubicles, isolation suite, treatment room, nurses' station with adjoining toilet room, utility room, floor pantry, play room or solarium, bath and toilet room with raised free-standing tub and 50 per cent children's fixtures, bedpan facilities, janitors' closet and a storage closet.

(c) **Psychiatric Nursing Unit.** Where a psychiatric nursing unit is provided, the principles of psychiatric security and safety shall be followed throughout. Layout and design shall be such that the patient will be under close observation and will not be afforded opportunity for hiding, escape or suicide. Care shall be taken to avoid sharp projections, exposed pipes, fixtures or heating elements, to prevent injury by accident. Minimum room areas shall be 100 square feet in single rooms, 80 square feet per bed in rooms having two or more beds, and 25 square feet per patient in dayrooms. Each nursing unit shall contain a doctors office, examination room, nurses' station, dayroom, pantry, dining room, utility room, bedpan facilities, toilet rooms for each sex, shower and bathroom, continuous tub room for disturbed patients, patients' personal laundry for women's wards only, patients' locker room, storage closet for therapy equipment, stretcher closet, linen closet, supply closet, and a janitors' closet.

MHD 99 CHRONIC DISEASE HOSPITALS[3]

(a) **Administration Department.** Where not available in an adjoining general hospital, the following facilities shall be provided in the administration

[1]Glazed partitions between beds and a stretcher alcove are recommended.
[2]Glazed cubicles for each bed in multi-bed rooms, clear glazing between rooms and in corridor partitions and a wheel chair and stretcher alcove are recommended.
[3]For efficiency and economy of operation, a chronic disease hospital is best located as an integral part or unit immediately adjacent to and operated in connection with a large, modern, well-equipped and completely staffed acute general hospital. Essentially all of the services of the general hosptal are necessary for the complete care of the chronic disease patient. The rehabilitation services and facilities of the chronic hospital should be readily available to the acute patient in need of such services and also available on an out-patient basis. The medical and nursing staff of the general hospital can also serve the chronic unit. Some of the basic services (food service, laundry, boiler plant, etc.) can be provided through the general hospital thus making construction and operational costs less expensive.

department: a business office with information counter, telephone switchboard, cashiers' window, administrator's office, medical director's office, medical record room, medical social service office, combination conference room and doctors' lounge, lobby and waiting room, public toilets, and a locker room and toilets for personnel.

(b) **Adjunct Diagnostic and Treatment Facilities.** Where not available in an adjoining general hospital, adjunct diagnostic and treatment facilities shall be provided.

(c) **Specialized Treatment Facilities.**

(1) **Physical Therapy.** Space and equipment shall be provided for electrotherapy, massage, hydrotherapy and exercise. In the larger unit, an office shall be provided for the physical therapist and a conference room shall be provided near the physical therapy area.

(2) **Occupational Therapy.** Space and equipment shall be provided for diversified occupational therapy work. An exhibit space shall be provided. In the larger unit, an office shall be provided for the occupational therapist.

(d) **Special Service Rooms.** Where not available in the adjoining general hospital, the following special service rooms shall be provided: eye, ear, nose and throat room; dental facilities; doctors' office; and a treatment room which may also be used as an emergency operating room. Provision shall also be made for a nurses' office and a patients' waiting room and toilets.

(e) **Nursing Department.** A nursing unit shall not exceed 50 beds unless additional services and facilities are provided. No room shall have more than six beds and not more than three beds deep from the outside wall. A quiet room shall be provided. Room locations, areas and equipment as specified for general hospitals shall apply. In addition to the requirements for the general hospital, the following shall be provided: bathtubs or showers in the ratio of one tub or shower for each twenty patients or fraction thereof; wheelchair parking area; treatment room, one for each two nursing units on a floor; dayrooms or solariums for each nursing floor providing 25 square feet per patient; a dining room with a minimum of fifteen square feet for each ambulatory patient, which may be designed for multiple seatings; assembly room, capable of seating the entire ambulant population with ample space for wheelchairs, adjacent wash rooms and toilets adequate in size to accommodate wheelchairs; and projection facilities. Provision shall be made for beauty parlor and barber shop services.

(f) **Service Department.** In addition to the requirements for the general hospital, adequate space in the main kitchen shall be provided for the preparation of special diets.

(g) **Storage.** In addition to the requirements for the general hospital, a patients' clothes storage room shall be provided. Adequate storage space shall be provided for reserve equipment.

(h) **Miscellaneous.** Space allowance shall be more generous than in other types of hospitals to allow for wheelchair traffic in such areas as dining rooms, recreation rooms and toilets. Corridors shall be not less than eight

feet wide[1] with handrails on both sides.[2] Water closet enclosures, urinals, showers and tubs shall be easily accessible and provided with grab bars. Lavatories shall be of sufficient height to allow for use by wheelchair patients. Doorways shall not have raised thresholds.

MHD 100 DETAILS AND FINISHES, GENERAL REQUIREMENTS FOR ALL HOSPITALS

(a) **Door Widths.** Door widths shall be not less than 3 feet 8 inches at all bedrooms, treatment rooms, operating rooms, x-ray rooms, delivery rooms, labor rooms, solariums, and physical therapy rooms. No doors shall swing into the corridor except closet doors and exit and stairway doors required to swing in the lane of egress travel. The door-swing requirement does not apply to psychiatric units or mental hospitals.

(b) **Corridor Widths.** Corridor widths shall be not less than 7 feet. A greater width shall be provided at elevator entrances and in areas where special equipment is to be used.

(c) **Stair Widths.** Stair widths shall be not less than 3 feet 8 inches. The width shall be measured between handrails where handrails project more than 3½ inches. Platforms and landings shall be large enough to permit stretcher travel in emergencies.

(d) **Laundry Chutes.** Where laundry chutes are used, they shall be not less than 2 feet in diameter.

(e) **Ceiling Heights.** Ceiling heights shall be at least 8 feet clear except for storage closets and other minor auxiliary rooms where they may be lower. Ceiling heights for laundry and kitchen shall be at least 9 feet clear. Special equipment such as x-ray and surgical lights may require greater ceiling heights. Ceilings of boiler rooms located below occupied spaces shall be insulated or the temperatures otherwise controlled to permit comfortable occupancy of the spaces above.

(f) **Floors.** The floors of the following areas shall have smooth, water-resistant surfaces: toilets, baths, bedpan rooms, utility rooms, janitors' closets, floor pantries, pharmacies, laboratories and patients' rooms. The floors of the food preparation and formula rooms shall be water-resistant, grease-resistant, smooth and resistant to heavy wear. The floors of the operating rooms, delivery rooms and rooms or spaces where explosive gases are used or stored shall have conductive flooring as defined in Part II of Standard No. 56, issued in May, 1954, entitled **Recommended Safe Practice for Hospital Operating Rooms** by the National Fire Protection Association,[3] which part of said Standard is hereby adopted by the Board with the same force and effect as if the same were fully set forth in and written as part of this regulation.

(g) **Walls.** The walls of the following areas shall have smooth, waterproof-painted, glazed or similar finishes: kitchens, sculleries, utility rooms, baths, showers, dishwashing rooms, janitors' closets, sterilizing room, spaces with sinks or lavatories, operating rooms and delivery rooms.

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[1]Ten foot corridors are recommended.

[2]It is recommended that walls of corridors, toilet rooms, etc., be constructed of durable material to the level of the hand rails in order to withstand the impact of wheel chairs and heavy equipment. Adjustable height beds are recommended.

[3]60 Batterymarch St., Boston 10, Massachusetts.

(h) **Ceilings.** The ceilings of the following areas shall have smooth, waterproof-painted, glazed or similar finishes: operating rooms, delivery rooms, sculleries and kitchens. The ceilings of the following areas shall be acoustically treated: corridors in patient areas, nurses' stations, floor pantries, quiet rooms and pediatric rooms. The ceiling of the labor room shall be acoustically treated unless it is located apart from the patient areas.

MHD 101 STRUCTURAL WORK — ALL HOSPITALS

(a) **Design Data.** The buildings and all parts thereof shall be of sufficient strength to support all dead, live, and lateral loads without exceeding the working stresses permitted for construction materials in generally accepted good engineering practice. Special provisions shall be made for machines or apparatus loads which would cause a greater load than the specified minimum live load. Consideration shall be given to structural members and connections of structures which may be subject to severe windstorms. Floor areas where partition locations are subject to change shall be designed to support, in addition to all other loads, a uniformly distributed load of 25 pounds per square foot (p.s.f.)

(b) **Live Loads.** The following unit live loads shall be taken as the minimum distributed live loads for:

(1) Bedrooms and all adjoining service rooms which comprise a typical nursing unit, except solariums and corridors, 40 p.s.f.

(2) Solariums, corridors in nursing units, operating suites, examination and treatment rooms, laboratories, toilet and locker rooms, 60 p.s.f.

(3) Offices, conference room, library, kitchen, radiographic room, corridors and other public areas on first floor, 80 p.s.f.

(4) Stairways, laundry, large rooms used for dining, recreation or assembly purposes, workshops, 100 p.s.f.

(5) Records file room, storage and supply rooms, 125 p.s.f.

(6) Mechanical equipment room, 150 p.s.f.

(7) Roofs, 40 p.s.f.

(8) Wind loads, as required by design conditions, but not less than 15 p.s.f. for buildings less than 60 feet above ground.

(c) **Construction.** Foundations shall rest on natural solid ground and shall be carried to depth of not less than one foot below the estimated frost line or shall rest on leveled rock or load-bearing piles when solid ground is not encountered. Footings, piers and foundation walls shall be adequately protected against deterioration from the action of ground water. Reasonable care shall be taken to establish proper soil-bearing values for the soil at the building site. If the bearing capacity of a soil is not definitely known or is in question, a recognized load test shall be used to determine the safe bearing value. Hospitals shall be constructed of incumbustible materials, using a structural framework of reinforced concrete or structural steel except that masonry walls and piers may be utilized for buildings up to three stories in

height not accounting for penthouses. The various elements of such buildings shall meet the following fire-resistive requirements:

Walls:	Hours
Party and firewalls	4
Exterior bearing walls	3
Exterior panel and curtain walls	3
Inner court walls	3
Bearing partitions	3
Non-load bearing partitions	1
Enclosures for stairs, elevators and other vertical openings	2
Columns, girders, beams, trusses	3
Floor panels, including beams and joists in same	2
Roof panels, including beams and joists in same	2

Stairs and platforms shall be reinforced concrete or structural steel with hard incombustible materials for the finish of risers and treads. Rooms housing furnaces, boilers, combustible storage or other facilities which may provide fire hazards shall be of three-hour fire-resistive construction.

MHD 102 MECHANICAL WORK — ALL HOSPITALS

(a) **Heating, Piping, Ventilation and Air-Conditioning.**[1] The heating system, piping, boilers, ventilation and air-conditioning shall be furnished and installed to meet the requirements as set forth herein and the requirements of Part II of Standard No. 56, issued in May, 1954, entitled **Recommended Safe Practice for Hospital Operating Rooms** by the National Fire Protection Association,[2] which part of said Standard is hereby adopted by the Board with the same force and effect as if the same were fully set forth in and written as part of this regulation.

(1) **Boilers.** Boilers shall have the necessary capacity to supply the heating, ventilating and air-conditioning systems, hot water, and steam operated equipment, such as sterilizers, laundry and kitchen equipment. Spare boiler capacity shall be provided in a separate unit to replace any boiler which might break down.

(2) **Heating System.** The building shall be heated by a hot water, steam or equal type heating system. Each radiator shall be provided with a hand control or automatic temperature control valve. The heating system shall be designed to maintain a minimum temperature of 75 degrees Fahrenheit in nurseries, delivery rooms, operating and recovery rooms and similar spaces and a minimum temperature of 70 degrees Fahrenheit in all other rooms and occupied spaces. The outside design temperature for the locality shall be based on the information contained in that portion of Chapter 12 of the publication, issued in 1954, entitled **Heating Ventilating Air Conditioning Guide** by the American Society of Heating and Ventilating Engineers,[3] starting with "Design Outdoor Weather Conditions" on page 240 and ending on page 247 which portion of Chapter 12 of said Guide is hereby adopted by the Board with the same force and effect as if the same were fully set forth in and written as part of this regulation.

[1]It is recommended that ventilating systems be designed for air-cooling or for the future addition of air-cooling.
[2]60 Batterymarch St., Boston 10, Massachusetts.
[3]51 Madison Ave., New York 10, New York.

(3) **Boiler Accessories.** Stand-by boiler feed pumps, return pumps and circulating pumps shall be provided.

(4) **Piping.** Pipe used in heating and steam systems shall not be smaller in size than that prescribed in that portion of Chapter 21 of the publication, issued in 1954, entitled **Heating Ventilating Air Conditioning Guide,** by the American Society of Heating and Ventilating Engineers,[1] starting with "Sizing Piping for Steam Heating Systems" on page 491 and continuing through "Sizing Piping for Indirect Heating Units" on page 506, which portion of Chapter 21 of said Guide is hereby adopted by the Board with the same force and effect as if the same were fully set forth in and written as part of this regulation. The ends of all steam mains and low points in steam mains shall be dripped.

(5) **Valves.** Steam return and heating mains shall be controlled separately by a valve at boiler or header. Each steam and return main shall be valved. Each piece of equipment supplied with steam shall be valved on the supply and return ends.

(6) **Thermostatic Control.** The heating system shall be thermostatically controlled using one or more zones.

(7) **Auxiliary Heat.** Auxiliary heat supply shall be provided for heating in operating rooms, delivery rooms, and nurseries to supply heat when the main heating system is not in operation. This may be accomplished by proper separate zoning.

(8) **Coverings.** Boilers and smoke breeching shall be insulated with covering having a thermal resistance (1/c) value of not less than 1.96 and ½ inch plastic asbestos finish covered with four ounce canvas. All high pressure steam and return piping shall be insulated with covering not less than the equivalent of one inch four-ply asbestos covering. Heating supply mains in the boiler room, in unheated spaces, unexcavated spaces, and where concealed, shall be insulated with a covering of asbestos air cell having a thickness of not less than one inch.

(9) **Ventilation.** Sterilizer rooms, sterilizer equipment chambers, bathrooms, hydrotherapy rooms, garbage storage and can washing rooms shall be provided with forced or suitable exhaust ventilation to change the air at least once every six minutes. A similar ventilating system shall be provided for rooms lacking outside windows such as utility rooms, toilets and bedpan rooms. Kitchens, morgues and laundries which are located inside the hospital building shall be ventilated by exhaust systems which will discharge the air above the main roof or at least 50 feet from any window. The ventilation of these spaces shall comply with the state or local codes but if no code governs, the air in the work spaces shall be exhausted at least once every ten minutes with the greater part of the air being taken from the flat work ironer and ranges. All exhaust ducts shall be provided with control dampers. Summer-time ventilation rate of laundry, in excess of equipment requirements, may be introduced through doors, windows or louvers in laundry room walls and be exhausted by exhaust fans located in walls generally opposite from intakes or arranged to provide the best possible circulation within the room. Rooms used for the storage of inflammable material shall be ventilated in accordance with the requirements of the State Fire Marshal. The operating and delivery rooms shall be provided with a supply ventilating system with heaters and humidifiers which will change the air at least eight

[1] 51 Madison Ave., New York 10, New York.

times per hour by supplying fresh filtered air humidified to reduce the electrostatic hazard. Humidifiers shall be capable of maintaining a minimum relative humidity of 55 per cent at 75 degrees Fahrenheit temperature. No recirculation shall be permitted. The air shall be removed from these rooms by a forced system of exhaust. The sterilizing rooms adjoining these rooms shall be furnished with an exhaust ventilating system. The supply air to operating rooms may be exhausted from operating rooms to adjoining sterilizer or work rooms from where it shall be exhausted. Exhaust systems of ventilation shall be balanced with an approximately equal amount of supply air delivered directly into the rooms or areas being exhausted or to other spaces of the hospital such as corridors. All outdoor supply air shall be tempered and filtered. All outdoor air intake louvers shall be located in areas relatively free from dust, obnoxious fumes and odors.

10. **Incinerator.**[1] An incinerator shall be provided to burn dressings, infectious materials and amputations. When garbage is incinerated, the incinerator shall be of a design that will burn 50 per cent wet garbage completely without objectionable smoke or odor. The incinerator shall be designed with drying hearth, grates and combustion chamber lined with fire brick. The gases shall be carried to a point above the roof of the hospital. Provisions for air supply to the incinerator room shall be made.

(b) **Water Supply.** The water supply shall be of safe sanitary quality, suitable for use, and shall be obtained from a water supply system, the location, construction, and operation of which are acceptable to the Board.

(c) **Plumbing and Drainage.** Problems of a special nature applicable to the hospital plumbing system include the following:

(1) **Vapor Vent Systems.** Permanently installed pressure sterilizers, other sterilizers which are provided with vent openings, steam kettles and other fixtures requiring vapor vents, shall be connected with a vapor venting system extending up through the roof independent of the plumbing fixture vent system. The vertical riser pipe shall be provided with a drip line which discharges into the drainage system through an air-gap or open fixture. The connection between the fixture and the vertical vent riser pipe shall be made by means of a horizontal offset.

(2) **Plumbing Fixtures.** Water closets in and adjoining patients' areas shall be of a quiet-operating type. Flush valves in rooms adjoining patients' rooms shall be designed for quiet operation with quiet-acting stops. Gooseneck spouts and wrist-action controls shall be used for patients' lavatories, nursery lavatories and sinks which may be used for filling pitchers. Foot, knee or elbow-action faucets shall be used for doctors' scrub-up, including nursery work room; utility and clinic sinks; and in treatment rooms. Elbow or wrist-action spade handle controls shall be provided on other lavatories and sinks used by doctors or nurses.

(3) **Special Precautions for Mental Patients.** Plumbing fixtures which require hot water and which are accessible to mental patients shall be supplied with water which is thermostatically controlled to provide a maximum water temperature of 110 degrees Fahernheit at the fixture. Special consideration shall be given to piping, controls and fittings of plumbing fixtures as required by the types of mental patients. No pipes or traps shall be exposed and fixtures shall be substantially bolted through walls. Generally, for disturbed

[1]Gas or oil fired incinerators are desirable.

patients, special-type water closets without seats shall be used and shower and bath controls shall not be accessible to patients.

(4) **Hot Water Heaters and Tanks.** The hot water heating equipment shall have sufficient capacity to supply at least 5 gallons of water at 150 degrees Fahrenheit per hour per bed for hospital fixtures, and at least 8 gallons at 180 degrees Fahrenheit per hour per bed for the laundry and kitchen. The hot water storage tank or tanks shall have a capacity equal to 80 per cent of the heater capacity. Where direct-fired hot water heaters are used, they shall be of the high pressure cast iron type. Submerged steam heating coils shall be of copper. Storage tanks shall be of corrosion-resistant metal or be lined with corrosion-resistant material. Tanks and heaters shall be fiitted with vacuum and relief valves, and where the water is heated by coal or gas, they shall have thermostatic relief valves. Heaters shall be thermostatically controlled.

(5) **Water Supply Systems.** Cold water and hot water mains and branches from the cold water service and hot water tanks shall be run to supply all plumbing fixtures and equipment which require cold or hot water or both for their operation. Pressure and pipe size shall be adequate to supply water to all fixtures with a minimum pressure of 15 pounds at the top floor fixtures during maximum demand periods. Where booster systems are necessary, water shall be supplied to the booster pump through a receiving tank in which the water level is automatically controlled. The receiving tank shall have a properly constructed and screened opening to the atmosphere and a water-tight, overlapping cover. The receiving tank and booster pump shall be situated entirely above the ground level. If a pressure tank is employed in the booster system, it shall also be situated above ground level. Hot water circulating mains and risers shall be run from the hot water storage tank to a point directly below the highest fixture at the end of each branch main. Where the building is higher than three stories, each riser shall be circulated.

(6) **Roof and Area Drainage.** Leaders shall be provided to drain the water from roof areas to a point from which it cannot flow into the basement or areas around the building. Courts, yards, and drives which do not have natural drainage from the building shall have catch basins and drains to low ground, storm water system, or dry wells. Where dry wells are used they shall be located at least 20 feet from the building.

(7) **Valves.** Each main, branch main, riser and branch to a group of fixtures of the water systems shall be valved.

(8) **Insulation.** Hot water tanks and heaters shall be insulated with covering equal to one inch, four-ply air cell. Hot water and circulating pipes shall be insulated with covering equal to canvas jacketed three-ply asbestos air cell. Cold water mains and exposed rain water leaders in occupied spaces and in store rooms shall be insulated with canvas-jacketed felt covering to prevent condensation. All pipes in outside walls shall be insulated to prevent freezing.

(9) **Tests.** Water pipe shall be hydraulically tested to a pressure equal to twice the working pressure.

(d) **Sterilizers.** Sterilizers and autoclaves of the required types and necessary capacity shall be provided to sterilize instruments, utensils, dressings,

water, and other materials and equipment.[1] The sterilizers shall be of recognized hospital types with approved controls and safety features.

(e) **Sewage and Waste Disposal.** All building sewage shall be discharged into a municipal sanitary sewer system, if available, otherwise an independent sewage disposal system shall be provided which is constructed in accordance with the requirements of the Board.

(f) **Gas Piping.** Gas appliances shall bear the stamp of approval of the American Gas Association. Oxygen piping outlets and manifolds where used shall be installed in accordance with publication No. 565, issued in 1951, entitled **Standard for Nonflammable Medical Gas Systems** by the National Fire Protection Association,[2] which standard is hereby adopted by the Board with the same force and effect as if the same were fully set forth and written as part of this regulation.

MHD 103 ELECTRICAL INSTALLATIONS — ALL HOSPITALS

(a) **Electrical Systems.** Electrical systems shall be furnished and installed to meet the requirements as set forth herein and the requirements of Part 2 of the Standard No. 56 issued in May, 1954, entitled **Recommended Safe Practice for Hospital Operating Rooms** by the National Fire Protection Association,[2] which part of said Standard is hereby adopted by the Board with the same force and effect as if the same were fully set forth and written as part of this regulation.

(b) **Feeders and Circuits.** Separate power and light feeders shall be run from the service to a main switchboard and from there sub-feeders shall be provided to the motors and power and light distributing panels. Where there is only one service feeder, separate power and light feeders from the service entrance to the switchboard will not be required. From the power panels, feeders shall be provided for large motors, and circuits from the light panels shall be run to the lighting outlets. Large heating elements shall be supplied by separate feeders from the local utility and installed as directed. Independent feeders shall be furnished for x-ray equipment.

(c) **Light Panels.** Light panels shall be provided on each floor for the lighting circuits on that floor. Light panels shall be located near the load centers not more than 100 feet from the farthest outlet.

(d) **Lighting Outlets, Receptacles and Switches.** All occupied areas shall be adequately lighted as required for the duties performed in the space. Patients' bedrooms shall have as a minimum: general illumination, a bracket or receptacle for each bed, a duplex receptacle for each two beds for doctor's examining light, and a night light. Where ceiling lights are used in patients' rooms, they shall be of a type which does not shine in the patients' eyes. The outlets for night lights shall be independently switched at the door. Receptacles for special equipment shall be of a heavy duty type on separate circuits. Switches in patients' rooms shall be of an approved mercury or equal, quiet operating type, except for cord operated switches on fixtures. No lighting fixtures, switches, receptacles or electrical equipment shall be accessible to disturbed mental patients. Operating and delivery rooms shall be provided with special lights for the tables, each on an independent circuit, and

[1]The flasking system for sterile water supply is recommended.
[2]60 Batterymarch St., Boston 10, Massachusetts.

lights for general illumination. Not less than three explosion-proof receptacles shall be provided in each operating and delivery room except that the explosion-proof type will not be required if the receptacles are above the five-foot level. Each operating room shall have a film-viewing box. All switches, viewing boxes and equipment controls installed below the five-foot level shall be explosion-proof.

(e) **Emergency Electrical System.** Each hospital shall have a source of emergency power which may be an entirely separate outside source from an independent generating plant, a generator operated by a prime mover, or a battery with adequate means for charging. Where the installation consists of a stand-by generator operated by a prime mover, it shall be of a size sufficient to supply all estimated current demands for required areas. The system shall be so arranged that, in the event of failure of the principal source of current, the emergency system shall be automatically placed in operation. Emergency lighting shall be provided for: stairs, exits; patient corridors; corridors leading to exits; exit signs; operating, delivery and emergency rooms; telephone switchboard room; nurseries; emergency generator room; boiler room;[1] and all psychiatric patient areas.

(f) **Nurses Call.** Each patient shall be furnished with a nurses' call which will register at the corridor door, at the nurses' station, and in each floor kitchen and utility room of the nursing unit. A duplex unit may be used for two patients. Indicating lights shall be provided at each station where there are more than two beds in a room. Nurses' call stations will not be required for psychiatric occupancies, pediatric rooms, and nurseries where an emergency call shall be available in each room for the use of the nurse. A call station shall be provided in each operating and delivery room.

MHD 104 ELEVATORS AND DUMBWAITERS — ALL HOSPITALS

(a) **Number of Cars.** Any hospital with patients on one or more floors above the first floor or where the operating or delivery rooms are not on the first floor shall have at least one mechanically driven elevator. Hospitals with a bed capacity of from 60 to 200 above the first floor shall have not less than two elevators. Hospitals with a bed capacity of from 200 to 350 above the first floor shall have not less than 3 elevators, 2 passenger and 1 service.

(b) **Cabs.** Cabs shall be constructed with fire-proof material. Passenger cab platforms for the minimum required number of elevators shall be not less than 5 feet 4 inches by 8 feet with a capacity of at least 3,500 pounds. Cab and shaft doors shall be not less than 3 feet 10 inches clear opening. Service elevators shall be of sufficient size to receive a stretcher with patient.

(c) **Controls.** Elevators, for which operators will not be employed, shall have automatic push-button control, signal control or dual control for use with or without operator. Where two push-button elevators are located together and where one such elevator serves more than three floors and basement, they shall have collective or signal control. Where the car has a sped of more than 100 feet per minute or has a rise of four or more floors, the elevator shall be equipped with automatic self-leveling control which will automatically bring the car platform level with the landing with no load or full load. Multivoltage or variable voltage machines shall be used where

[1]It is recommended that emergency power be provided for the operation of at least one boiler.

speeds are greater than 150 per minute. For speeds above 350 feet per minute, the elevators shall be of the gearless type.

(d) **Dumbwaiters.** Dumbwaiter cabs shall be not less than 24 inches by 24 inches by 36 inches of steel with one shelf to operate at a speed of 50 feet to 100 feet per minute when carrying a load of 100 pounds. Dumbwaiters serving basement and four floors shall have a minimum speed of 100 feet per minute.

(e) **Tests.** Elevator machines shall be tested for speed and load with and without loads in both directions and shall be given overspeed tests as required by the Minnesota Department of Labor and Industry.

MHD 105 REFRIGERATION — ALL HOSPITALS

(a) **Extent of Coverage.** This section shall include portable refrigerators, built-in refrigerators, garbage refrigerators, ice-making and refrigerator equipment and morgue boxes.

(b) **Box Construction.** Boxes shall be lined with nonabsorbent sanitary material which will withstand the heavy use to which they will be subjected and shall be constructed so as to be easily cleaned. Refrigerators of adequate capacity shall be provided in all kitchens and other preparation centers where perishable foods will be stored. In the main kitchen, a minimum of two separate sections or boxes shall be provided, one for meats and dairy products, and one for general storage.

(c) **Refrigerator Machines.** Toxic, "irritant," or inflammable refrigerants shall not be used in refrigerator machines located in buildings occupied by patients. The compressors and evaporators shall have sufficient capacity to maintain temperatoures of 35 degrees Fahrenheit in the meat and dairy boxes, and 40 degrees Fahrenheit in the general storage boxes when the boxes are being used normally. Compressors shall be automatically controlled.

(d) **Tests.** Compressors, piping, and evaporators shall be tested for leaks and capacity.

MHD 106 KITCHEN EQUIPMENT — ALL HOSPITALS

(a) **Equipment.** The equipment shall be adequate, properly constructed and so arranged as to enable the storage, preparation, cooking and serving of food and drink to patients, staff and employees to be carried out in an efficient and sanitary manner. The equipment shall be selected and arranged in accordance with the types of food service adopted for the hospital. Cabinets or other enclosures shall be provided for the storage or display of food, drink and utensils and shall be designed as to protect them from contamination by insects, rodents, other vermin, splash, dust and overhead leakage. All utensils and equipment surfaces with which food or drink comes in contact shall be of smooth, non-toxic, corrosion-resistant material, free of breaks, open seams or cracks, chipped places and V-type threads. Sufficient separation shall be provided between equipment and the walls or floor to permit easy cleaning or the equipment shall be set tight against the walls or floor and the joint properly sealed.

(b) **Dishwashing Facilities.** The necessary equipment shall be provided to accomplish either of the two methods of dishwashing as described under Regulation MHD 82 (a)(7).

MHD 107—LAUNDRY — ALL HOSPITALS

Equipment. Where laundries are provided they shall be complete with washers, extractors, tumblers, ironers and presses which shall be provided with all safety appliances and meet all sanitary requirements.

MHD 108-111 Reserved for Future Use

PART III

Preparation of Plans and Specifications

MHD 112 PLANS AND SPECIFICATIONS

(a) **Preliminary Plans.** When construction is contemplated for new buildings, additions to existing buildings, or for major remodeling or alterations of existing buildings, the preliminary plans or sketches shall be submitted to the Board for review and approval before the preparation of working drawings is undertaken. The preliminary plans shall be drawn to scale and shall indicate the type of construction, the assignment of all spaces, sizes of areas and rooms, and the location and kind of fixed equipment. The proposed roads and walks, service and entrance courts, parking and orientation shall be shown on either a small plot plan or the first floor plan.

(b) **Final Working Drawings and Specifications.** Before construction is begun, plans and specifications covering the construction of new buildings, additions to existing buildings, or for major remodeling or alterations of existing buildings shall be submitted in duplicate to the Board for its approval. These plans shall show the general arrangement of the building, including a room schedule and fixed equipment of each room, together with other pertinent information. Separate drawings shall be prepared for each of the following branches of work: architectural, structural, mechanical and electrical. They shall include or contain the following:

(1) **Architectural Drawings:**

(aa) Approach plan showing all topography; newly established levels and grades; existing structures on the site, if any; new buildings and structures; roadways and walks.

(bb) Plan of each floor and roof.

(cc) Elevations of each facade.

(dd) Sections through building.

(ee) Scale and full size details as necessary.

(ff) Schedule of finishes.

(gg) Large scale drawings of typical and special rooms indicating all fixed equipment.

(2) ***Structural* Drawings:**

(aa) Plans of foundations, floors, roofs and all intermediate levels shall show a complete design with sizes, sections, and the relative location of the various members. A schedule of beams, girders and columns shall be included.

(bb) Floor levels, column centers, and offsets shall be dimensioned.

(cc) Special openings and pipe sleeves shall be dimensioned or otherwise noted for easy reference.

(dd) Details of all special connections, assemblies and expansion joints shall be given.

(ee) Notes on design data shall include the name of the governing building code, values of assumed live loads, wind loads and soil-bearing pressures.

(3) **Mechanical Drawings.** These drawings with specifications shall show the complete installations and equipment as follows:

(aa) Heating, piping, ventilation and air-conditioning.

(.1) Radiators and steam heated equipment, such as sterilizers, warmers and steam tables.

(.2) Heating mains and branches with pipe sizes and provisions for expansions.

(.3) Diagram of heating risers with pipe sizes.

(.4) Sizes, types and heating surfaces of boilers, furnaces, with firing equipment.

(.5) Pumps, tanks, boiler breeching and piping and boiler room accessories.

(.6) Exhaust and supply ventilating systems with steam connections and piping. A supply and exhaust fan schedule shall be shown.

(.7) Air-conditioning systems with refrigerators, water and refrigerant piping and ducts.

(bb) Plumbing, drainage, stand pipe systems and gas piping.

(.1) Size, location and elevation of: street sewer, house sewer, house drains, street water main and water service into the building.

(.2) Location and size of soil, waste and vent stacks with connections to house drains, fixtures and equipment.

(.3) Roof and surface drainage systems.

(.4) Size and location of hot, cold and circulating mains, branches and risers from the service entrance and tanks.

(.5) Riser diagram to show all plumbing stacks with vents, water risers and fixture connections.

(.6) Plumbing fixtures and fixtures which require water and drain connections. A fixture schedule shall be shown unless included in the specifications.

(.7) Standpipe and sprinkler system if required.

(.8) Gas, oxygen and special connections.

(cc) Elevators and dumbwaiters. Shaft details and dimensions, size of car platform and doors, travel, pit and machine room.

(dd) Kitchens, laundry, laboratories, boiler room and mechanical equipment rooms shall be detailed at a satisfactory scale to show the location, size and connections of all fixed and movable equipment.

(4) **Electrical Drawings.** Drawings shall show all electrical wiring, outlets and equipment which require electrical connections as follows:

(aa) Electrical service entrance with service switches, service feeders to the public service feeders and characteristics of the light and power current. Transformers and their connections if located in the building, shall be shown.

(bb) Plan and diagram showing main switchboard, power panels, light panels and equipment. Feeder and conduit sizes shall be shown with schedule of feeder breakers or switches.

(cc) Light outlets, receptacles, switches, power outlets and circuits.

(dd) Telephone layout showing service entrance, telephone switchboard, strip boxes, telephone outlets and branch conduits as approved by the

telephone company. Where public telephones are used for intercommunication, equipment shall be provided as required by the telephone company.

(ee) Nurses' call systems with outlets for beds, duty stations, door signal lights, annunciators and wiring diagrams.

(ff) Doctors' call and doctors' in-and-out systems with all equipment wiring, if provided.

(gg) Fire alarm system with stations, gongs, control board and wiring diagrams.

(hh) Emergency lighting system with outlets, transfer switch, source of supply, feeders and circuits.

(5) **Additions to Existing Buildings.**

(aa) The procedures and requirements for working drawings and specifications shall be followed and in addition the following information shall be submitted:

(.1) Plans and details showing attachment of new construction to the existing structure and mechanical systems as well as a plan of the functional layout of the existing building designating bedrooms and service areas.

(.2) Type of construction of existing building and number of stories.

(c) **Specifications.** Specifications shall supplement the drawings and shall comply with the following:

(1) The specifications shall fully describe, except where fully indicated and described on the drawings, the materials, workmanship, the kind, sizes, capacities, finishes and other characteristics of all materials, products, articles and devices:

(2) The specifications shall include:

(aa) Cover or title sheet.

(bb) General index and index to each section.

(cc) General conditions.

(dd) General and special requirements.

(ee) Sections describing material and workmanship in detail for each class of work.

(d) **Plans for Water Supply and Sewerage Systems.** No water supply or plumbing system or system for the disposal of sewage, garbage, or refuse shall be installed nor shall any such existing system be materially altered or extended until complete plans and specifications for the installation, alteration, or extension, together with such additional information as the Board may require, have been submitted to the Board in duplicate and approved. The plumbing installation in the existing building shall upon completion, comply with the Minnesota Plumbing Code.

(e) **Preparation of Plans and Specifications by a Registered Architect or Engineer.** Plans and revisions shall be prepared and certified by an engineer

or architect registered to practice in the State of Minnesota as provided by State laws.[1]

(f) **Compliance with Approved Plans.** All hospital construction shall take place in accordance with the approved completed plans. If it is desired to make deviations from the approved plans, the Board shall be consulted and approval of the proposed changes obtained before construction changes are started.

(g) **Delayed Construction.** Unless construction is commenced within one year of approval of final working drawings and specifications, the drawings shall be resubmitted for renewal of review and approval.

(h) **Fire Marshal Approval Required.** Fire protection for the hospital shall be provided in accordance with requirements of the State Fire Marshal. Approval by the State Fire Marshal of the fire protection of a hospital shall be a prerequisite for licensure.

MHD 113-116 Reserved for Future Use.

[1]Minnesota Statutes Annotated, Sections 326.02 and 326.03, require that plans be prepared by a registered architect or registered engineer if the total cost of the improvement exceeds $2,000 paid in whole or in part from public funds, or if the total cost exceeds $10,000, paid from funds not public.

Minnesota Health Department Rules and Regulations

CHAPTER THIRTEEN

MINNESOTA PLUMBING CODE

MHD 120 Basic Plumbing Principles. This code is founded upon certain basic principles of environmental sanitation and safety through properly designed, acceptably installed and adequately maintained plumbing systems. Some of the details of plumbing construction may vary but the basic sanitary and safety principles desirable and necessary to protect the health of the people are the same everywhere. As interpretations may be required, and as unforseen situations arise which are not specifically covered in this code, the twenty three principles which follow shall be used to define the intent.

(a) All premises intended for human habitation, occupancy, or use shall be provided with a potable water supply which meets the requirements of the Minnesota State Board of Health. Such water supply shall not be connected with unsafe water sources nor shall it be subject to the hazards of backflow or back-siphonage.

(b) Plumbing fixtures, devices, and appurtenances shall be supplied with water in sufficient volume and at pressures adequate to enable them to function properly and without undue noise under normal conditions of use.

(c) Plumbing fixtures shall be designed and adjusted to use the minimum quantity of water consistent with proper performance and cleaning. Hot water shall be supplied to all plumbing fixtures which normally need or require hot water for their proper use and function.

(d) Devices for heating water and storing it shall be designed and installed to prevent all dangers from explosion and over heating.

(e) Every building with installed plumbing fixtures and intended for human habitation, occupancy or use when located on premises where a public sewer is available within a reasonable distance shall be connected to the sewer.

(f) Each family dwelling unit shall have at least one water-closet, one lavatory, one kitchen type sink, and one bathtub or shower to meet the basic requirements of sanitation and personal hygiene. All other structures for habitation shall be equipped with sufficient sanitary facilities.

(g) Plumbing fixtures shall be made of durable, smooth, non-absorbent and corrosion resistant material and shall be free from concealed fouling surfaces.

(h) The drainage system shall be designed, constructed, and maintained to conduct the waste water with velocities which will prevent fouling, deposition of solids and clogging.

(i) The piping of the plumbing system shall be of durable material free from defective workmanship and so designed and constructed as to give satisfactory service for its reasonable expected life.

(j) The drainage system shall be provided with an adequate number of cleanouts so arranged that in case of stoppage the pipes may be readily cleaned.

(k) Each fixture shall be provided with a separate, accessible, self-scouring, reliable water-seal trap placed as near to the fixture as possible.

(l) The building drainage system shall be designed to provide adequate circulation of air in all pipes with no danger of siphonage, aspiration or forcing of trap seals under conditions of ordinary use.

(m) Each vent terminal shall extend to the outer air and be so installed as to minimize the possibilities of clogging and the return of foul air to the building.

(n) The plumbing system shall be subjected to adequate tests and to inspections in a manner that will disclose all leaks and defects in the work or the material.

(o) No substance which will clog or accentuate clogging of pipes, produce explosive mixtures, destroy the pipes or their joints, or interfere unduly with the sewage-disposal process shall be allowed to enter the drainage system.

(p) Proper protection shall be provided to prevent contamination of food, water, sterile goods, and similar materials by backflow of sewage. When necessary, the fixtures, device, or appliance shall be connected indirectly with the building drainage system.

(q) No water-closet or similar fixture shall be located in a room or compartment which is not properly lighted and ventilated.

(r) If water-closets or other plumbing fixtures are installed in a building where there is no sewer within a reasonable distance, suitable provision shall be made for disposing of the building sewage by methods of disposal which meets the requirements of the Minnesota State Board of Health and the Minnesota Pollution Control Agency.

(s) Where a building-drainage system may be subjected to back flow of sewage, suitable provision shall be made to prevent its overflow in the building.

(t) Plumbing systems shall be maintained in a safe and serviceable condition from the standpoint of both mechanics and health.

(u) All plumbing fixtures shall be so installed with regard to spacing as to be accessible for their intended use and cleansing.

(v) Plumbing shall be installed with due regard to preservation of the strength of structural members and prevention of damage to the walls and other surfaces through fixture usage.

(w) Sewage or other waste shall not be discharged into surface or subsurface water unless it first has been subjected to an acceptable form of treatment.

MHD 121 Definitions

General. For the purpose of this Code, the following terms shall have the meaning indicated in this chapter. No attempt is made to define ordinary words which are used in accordance with their established dictionary meaning except where it is necessary to define their meaning as used in this Code to avoid misunderstanding.

Administrative Authority. The Minnesota State Board of Health, its agents and employees. (When this code is adopted by any subdivision, the

administrative authority shall be the governing body of the adopting unit of government, its agents and employees.)

Air Break (Drainage System). A piping arrangement in which a fixture, appliance, or device is protected from backflow by discharging at or below the flood level rim of another fixture or receptacle whose flood level rim is lower than the bottom of the protected fixture, appliance, or device.

Air Gap (Drainage System). The unobstructed vertical distance through the free atmosphere between the outlet of a waste pipe and the flood level rim of the fixture or receptacle into which it is discharging.

Air Gap (Water Distribution System). The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture or other device, and the flood level rim of the receptacle.

Anchors. See Supports.

Approved. Approved, as applied to a material, device or mode of construction, means approved by the administrative authority in accordance with the provisions of this code, or by other authority designated by law to give approval in the matter in question.

Area Drain. A receptacle designed to collect surface or storm water from an open area.

Backflow. The flow of water or other liquids, mixtures, or substances into the distributing pipes of the potable supply of water, from any source or sources other than its intended source. Back-Syphonage is one type of backflow.

Backflow Connection. Any condition whereby backflow can occur.

Backflow Preventer. A device or means to prevent backflow into the potable water system.

Backflow Preventer (Reduced Pressure Zone Type). An assembly of differential valves and check valves including an automatically opened spillage port to the atmosphere.

Back-Syphonage. The flowing back of used, contaminated or polluted water from a plumbing fixture or vessel or other sources, into a potable water supply pipe due to a negative pressure in such pipe.

Barometric Loop. A loop of water piping rising approximately 35 feet at its topmost point above the highest fixture it supplies.

Battery of Fixtures. Any group of two or more similar adjacent fixtures which discharge into a common horizontal waste or soil branch.

Boiler Blow-Off. An outlet on a boiler to permit emptying or discharge of sediment.

Boiler Blow-Off Tank. A vessel designed to receive the discharge from a boiler blow-off outlet and to cool the discharge to a temperature which permits its safe discharge to the drainage system.

Branch. Any part of the piping system other than a riser, main, or stack.

Branch, Fixture. See Fixture Branch.

Branch, Horizontal. See Horizontal Branch.

Branch Interval. A vertical length of stack corresponding in general to a story height, but in no case less than 8 feet, within which the horizontal branches from one story or floor of the building are connected to the stack.

Branch Vent. A vent connecting one or more individual vents with a vent stack or a stack vent.

Building Classification. The arrangement adopted by the Administrative Authority for the designation of buildings in classes according to occupancy.

Building Drain. That part of the lowest piping of the drainage system which receives the discharge from soil, waste and other drainage pipes inside the walls of the building and conveys it to the building sewer beginning at least one foot outside the building footings.

Building Drain—Sanitary. A building drain which conveys sewage only.

Building Drain—Storm. A building drain which conveys storm water but no sewage.

Building Sewer. That part of the drainage system which extends from the end of the building drain and conveys its discharge to the public sewer, private sewer, individual sewage-disposal system, or other point of disposal.

Building Sewer—Sanitary. A building sewer which conveys sewage only.

Building Sewer—Storm. A building sewer which conveys storm water but no sewage.

Building Sub-Drain. That portion of a drainage system which cannot drain by gravity into the building sewer.

Circuit Vent. A branch vent that serves two or more traps and extends from the downstream side of the highest fixture connection of a horizontal branch to the vent stack.

Combination Fixture. A fixture combining one sink and laundry tray or a two or three compartment sink and laundry tray in one unit.

Common Vent. A vent connecting at the junction of two fixture drains and serving as a vent for both fixture drains.

Conductor. A pipe inside the building which conveys storm water from the roof to a storm drain.

Continuous Vent. A continuous vent is a vertical vent that is a continuation of the drain to which it connects.

Continuous Waste. A drain from 2 or 3 compartments of a fixture connected to a single trap.

Cross Connection. Any connection or arrangement, physical or otherwise, between a potable water supply system and any plumbing fixture, or tank, receptacle, equipment or device through which it may be possible for non-potable, used, unclean, polluted or contaminated water or other substance to enter any part of such potable water system under any condition.

Dead End. A branch leading from a soil, waste, or vent pipe, building drain, or building sewer and terminating at a developed length of 2 feet or more by means of a plug, cap, or other fitting.

Developed Length. The length of pipe measured along the center line of the pipe and fittings.

Downspout. See Leader.

Drain. Any pipe which carries waste water or water-born wastes in a building drainage system.

Drainage System. Includes all the piping which conveys sewage, rain water, or other liquid wastes to a legal point of disposal. It does not include the mains of a public sewer system, or a public sewage-treatment or disposal plant.

Dwelling Unit. One or more rooms with provision for living, sanitary, and sleeping facilities arranged for the use of one family or individual.

Effective Opening. The minimum cross-sectional area at the point of water supply discharge measured or expressed in terms of (1) diameter of a circle, or (2) if the opening is not circular, the diameter of a circle of the equivalent cross sectional area.

Existing Work. Existing work is a plumbing system or any part thereof which has been installed prior to the effective date of this code.

Fixture. See Plumbing Fixture.

Fixture Branch. A fixture branch is a water supply pipe between the fixture supply pipe and a water distributing pipe.

Fixture Drain. The drain from the trap of a fixture to the junction of that drain with any other drain pipe.

Fixture Supply. A fixture supply is a water supply pipe connecting the fixture with the fixture branch.

Fixture Unit (Drainage—d.f.u.) A common measure of the probable discharge into the drainage system by various types of plumbing fixtures on the basis of one d.f.u. being equal to 7.5 gallons per minute discharge. The drainage fixture-unit value for a particular fixture depends on its volume rate of drainage discharge, on the time duration of a single drainage operation, and on the average time between successive operations.

Fixture Unit (Supply - s.f.u.). A common measure of the probable hydraulic demand on the water supply by various types of plumbing fixtures. The supply fixture-unit value for a particular fixture depends on its volume rate of supply operation, and on the average time between successive operations.

Flood Level Rim. The top edge of the receptacle from which water overflows.

Flow Pressure. The pressure in the water supply pipe near the faucet or water outlet while the faucet or water outlet is wide open and flowing.

Flushometer Valve. A device which discharges a predetermined quantity of water to fixtures for flushing purposes and is actuated by direct water pressure.

Flush Valve. A device located at the bottom of a flush tank for flushing water closets and similar fixtures.

Grade. The fall (slope) of a line of pipe in reference to a horizontal plane. In drainage it is usually expressed as the fall in a fraction of an inch per foot length of pipe.

Grease Interceptor. See Interceptor.

Hangers. See Supports.

Horizontal Branch Drain. A drain pipe extending horizontally from a soil or waste stack or building drain with or without vertical sections or branches, which receives the discharge from one or more fixture drains on the same floor as the horizontal branch and conducts it to the soil or waste stack or to the building drain.

Horizontal Pipe. Any pipe or fitting which makes an angle of less than 45 degrees with the horizontal.

Individual Sewage Disposal System. A system for disposal of domestic sewage by means of a septic tank, cesspool or mechanical treatment, designed for use apart from a public sewer to serve a single establishment or building.

Indirect Waste Pipe. A waste pipe that does not connect directly with the drainage system but conveys liquid wastes by discharging into a plumbing fixture, interceptor, or receptacle which is directly connected to the drainage system.

Individual Vent. A pipe installed to vent a fixture trap and which connects with the vent system above the fixture served or terminates in the open air.

Industrial Wastes. Liquid or water borne waste from industrial or commercial processes except domestic sewage.

Insanitary. A condition which is contrary to sanitary principles or injurious to health.

Interceptor. A device designed and installed so as to separate and retain deleterious, hazardous, or undesirable matter from normal wastes while permitting normal sewage or liquid wastes to discharge into the drainage system by gravity.

Leader. The water conductor from the roof to the building storm drain or other means of disposal.

Liquid Waste. The discharge from any fixture, appliance or appurtenance which does not receive fecal matter.

Load Factor. The percentage of the total connected fixture unit flow which is likely to occur at any point in the plumbing system.

Loop Vent. A circuit vent which loops back to connect with a stack vent instead of a vent stack.

Main. The principle pipe artery to which branches may be connected.

Main Vent. The principle artery of the venting system to which vent branches may be connected.

May. The word "may" is a permissive or allowable term for alternative procedures.

Non Potable Water. Water not safe for drinking, personal, or culinary use.

Offset. A combination of elbows or bends which brings one section of the pipe out of line but into a line parallel with the other section.

Plumbing. Plumbing means the business, trade or work having to do with the installation, removal, alteration or repair of plumbing and drainage systems or parts thereof. *(Amended 7-26-73)*

Plumbing Appliance. Any one of a special class of plumbing fixture which is intended to perform a special function. Its operation and/or control may be dependent upon one or more energized components, such as motors, controls, heating elements, or pressure or temperature-sensing elements. Such fixtures may operate automatically through one or more of the following actions: a time cycle, a temperature range, a pressure range, a measured volume or weight, or the fixture may be manually adjusted or controlled by the user or operator.

Plumbing Appurtenance. A manufactured device, or a prefabricated assembly, or an on-the-job assembly of component parts, and which is an adjunct to the basic piping system and plumbing fixtures. An appurtenance demands no additional water supply, nor does it add any discharge load to a fixture or the drainage system. It is presumed that it performs some useful function in the operation, maintenance, servicing, economy, or safety of the plumbing system.

Plumbing Inspector or Official. See Administrative Authority.

Plumbing Fixture. A receptacle or device which is either permanently or temporarily connected to the water distribution system, and demands a supply of water therefrom, or it discharges used water, liquid-borne waste materials, or sewage either directly or indirectly to the drainage system, or which requires both a water supply connection and a discharge to the drainage system. Plumbing appliances as a special class of fixture are further defined.

Plumbing System. The plumbing system means and includes all potable water supplies and distribution pipes, all plumbing fixtures and traps, all drainage and vent pipes and all building drains, including their respective joints and connections, devices and appurtenances within the property lines of the premises and shall include potable water treatment or using equipment. *(Amended 7-26-73)*

Potable Water. Water free from impurities present in amounts sufficient to cause disease or harmful physiological effects. Its bacteriological and chemical quality shall conform to the requirement of the Minnesota State Board of Health.

Private or Private Use. In the classification of plumbing fixtures, private applies to fixtures in residences and apartments, and to fixtures in private bathrooms of hotels, as well as similar installations in other buildings where fixtures are intended for use of one family or an individual.

Public or Public Use. In the classification of plumbing fixtures, public applies to fixtures in general toilet rooms of schools, gymnasiums, hotels,

railroad stations, bars, public comfort stations, and other installations (whether pay or free) where fixtures are installed so that their use is similarly unrestricted.

Receptor. An approved plumbing fixture or device of such material, shape and capacity as to adequately receive the discharge from indirect waste pipes, so constructed and located as to be readily cleaned.

Relief Vent. A vent, the primary function of which is to provide additional circulation of air between drainage and vent systems or to act as an auxiliary vent on a specially designed system.

Return Offset. A double offset installed so as to return the pipe to its original alignment.

Revent Pipe. See Individual Vent.

Rim. An unobstructed open edge of a fixture.

Riser. A water supply pipe which extends vertically one full story or more to convey water to branches or to a group of fixtures.

Roof Drain. A drain installed to receive water collecting on the surface of a roof and to discharge it into a leader or conductor.

Roughing In. The installation of all parts of the plumbing system which can be completed prior to the installation of fixtures. This includes drainage, water supply, and vent piping, and necessary fixture supports.

Sand Interceptor or Trap. See Interceptor.

Sanitary Sewer. A sewer which carries sewage and excludes storm, surface and ground water.

Sewage. Any liquid waste containing animal or vegetable matter in suspension or solution and may include liquids containing chemicals in solution.

Sewage Ejector. A device for moving sewage by entraining it in a high velocity jet of steam, air or water.

Sewer. An artificial conduit, usually underground, for carrying off waste water and refuse.

Slope. See Grade.

Shall. The word "shall" is a mandatory term.

Should. The word "should" is a non-mandatory term, but describes recommended procedures.

Soil Pipe. A pipe which conveys the discharge of water closets or similar fixtures containing fecal matter with or without the discharge of other fixtures to the building drain or building sewer.

Special Wastes. Wastes which require special treatment before entry into the normal plumbing system.

Special Waste Pipe. Pipes which convey special wastes.

Stack. A general term for any vertical line of soil, waste or vent piping extending through one or more stories. Excepting vertical vent branches

which do not extend through the roof and which pass through less than two stories, before being reconnected to a vent stack or stack vent.

Stack Group. A group of fixtures located adjacent to the stack so that by means of proper fittings, vents may be reduced to a minimum.

Stack Vent. The extension of a soil or waste stack above the highest horizontal drain connected to the stack.

Storm Drain. See Building Drain, Storm.

Storm Sewer. A sewer used for conveying ground water, rain water, surface water, or similar non-pollutional wastes.

Sump. A water-tight tank which receives sewage or liquid waste and which is located below the normal grade of the gravity system and must be emptied by mechanical means.

Sump Pump. A mechanical device other than an ejector for removing sewage or liquid waste from a sump.

Supports. Devices for supporting and securing pipe, fixtures, and equipment.

Trap. A fitting or device which provides, when properly vented, a liquid seal to prevent the emission of sewer gases without materially affecting the flow of sewage or waste water through it.

Trap Seal. The vertical distance between the crown wire and the top dip of the trap.

Vacuum. Any pressure less than that exerted by the atmosphere.

Vacuum Breaker Non-Pressure Type (Atmospheric). A vacuum breaker which is not designed to be subjected to static line pressure.

Vacuum Breaker Pressure Type. A vacuum breaker designed to operate under conditions of static line pressure.

Vent Pipe. Any pipe provided to ventilate a building drainage system and to prevent trap syphonage and back pressure.

Vent Stack. A vertical vent pipe installed to provide circulation of air to and from the drainage system.

Vent System. A pipe or pipes installed to provide a flow of air to or from a drainage system or to provide a circulation of air within such system to protect trap seals from syphonage and back pressure.

Vertical Pipe. Any pipe or fitting which makes an angle of 45 degrees or less with the vertical.

Waste. See Liquid waste and Industrial waste.

Waste Pipe. A pipe which conveys only liquid waste free from fecal material.

Water Distributing Pipe. A pipe which conveys water from the water service pipe to the point of usage.

Water Outlet. A discharge opening through which water is supplied to a fixture, into the atmosphere (except into an open tank which is part of

the water supply system), to a boiler or heating system, or to any devices or equipment requiring water to operate.

Water Service Pipe. The pipe from the water main or other source of water supply to the water distributing system of the building served.

Water Supply System. The water service pipe, the water distributing pipes, and the necessary connecting pipes, fittings, control valves, and all appurtenances within the building or outside the building within the property lines.

Wet Vent. A vent which also serves as a drain.

Yoke Vent. A yoke vent is a pipe connecting upward from a soil or waste stack to a vent stack for the purpose of preventing pressure changes in the stacks.

MHD 122 General Regulations

(a) **Grades of Horizontal Piping.** (See MHD 131(b)(1) and Table 131(a)(2)(A).

(b) **Changes of Direction.** (See MHD 131(b)(2)).

(c) **Prohibited Fittings.** (See MHD 131(b)(3)).

(d) **Protection of Material.** All pipes passing under or through walls shall be protected from breakage. All pipes passing through or in contact with cinder, concrete or other corrosive material shall be protected against external corrosion by protective coating, wrapping, or other means that will resist such corrosion.

(e) **Workmanship.** Workmanship shall be of such character as to secure fully the results sought to be obtained in all sections of the code.

(f) **Exclusion of Materials Detrimental to Drainage System.** (See MHD 129(d)).

(g) **Use of Public Sewer and Water Systems Required.**

(1) Where a public sewer is accessible in a street or alley to a building or premises and the connection is feasible, liquid wastes from any plumbing system in said building shall be discharged into the public sewer unless otherwise prohibited by this code or local ordinance.

(2) Where a public water supply system is accessible, the water distribution system shall be connected to it unless otherwise permitted by the Administrative Authority.

(3) Where either a public sewer or water supply system or both are not available, an individual water supply or sewage disposal system/or both, conforming to the published standards of the Administrative Authority shall be provided.

4369
4377

(4) Connection to public or private sewer. Every building shall have its own independent connection with a public or private sewer, except that a group of buildings may be connected to one or more manholes which are constructed on the premises, and connected to a public or private sewer.

(h) **Conformance with Code**

(1) **New Buildings.** All plumbing materials and plumbing systems or parts thereof shall be installed to meet the minimum provisions of this code.

(2) **Existing Buildings.** In existing buildings or premises in which plumbing installations are to be altered, renovated or replaced, such new materials and work shall meet the provisions of this code. Where the Ad-

ministrative Authority shall find that the full performance of bringing such work into compliance with all requirements of this code would result in exceptional or undue hardship by reason of excessive structural or mechanical difficulty, or impracticability, a deviation may be granted by the Administrative Authority only to the extent such deviation can be granted without endangering the health and safety of the occupants and the public.

(3) **Alternate Fixtures, Appurtenances, Materials and Methods.** The Administrative Authority may approve the use of fixtures, appurtenances, materials, and methods of a type not expressly approved, nor expressly prohibited by, this code after determination that such fixtures, appurtenances, material or method is of such design or quality, or both, as to appear to be suitable, safe and sanitary for the use for which it is intended.

Any person desiring to install or use a fixture, appurtenance, material or method of a type not expressly authorized, nor expressly prohibited by this code shall, prior to such installation or use, submit to the Administrative Authority such proof as may be required to determine whether such fixture, appurtenance, material or method is of such design or quality, or both, as to appear to be suitable, safe, and sanitary for the use for which it is intended. If the Administrative Authority determines that it does appear to be suitable, safe, and sanitary for the use for which it is intended, it may permit such use.

(aa) **Tests.** When there is insufficient evidence to verify claims for alternate materials, the Administrative Authority may require as proof of suitability a test by a testing laboratory approved by the Administrative Authority, at the expense of the applicant, demonstrating that the performance characteristics of the alternate materials are substantially equal to or exceed those of authorized materials.

(bb) **Test Procedure.** Tests shall be made in accordance with generally recognized standards; but in the absence of such standards, the Administrative Authority shall specify the test procedure.

(cc) **Repeated Tests.** The Administrative Authority may require tests to be repeated if at any time there is reason to believe that an alternate material no longer conforms to the requirements on which its approval was based.

(i) **Advisory Board.** The Administrative Authority may appoint an Advisory Board to study and make recommendations concerning the uses of new fixtures, appurtenances, materials and methods.

(j) **Health and Safety.** Where a health or safety hazard exists by reason of an existing plumbing installation or lack thereof, the owner or his agent shall be responsible for installing additional plumbing or making such corrections as may be necessary to abate such nuisance and bring the plumbing installation within the provisions of this code.

(k) **Condemned Equipment.** Any plumbing equipment condemned by the Administrative Authority because of wear, damage, defects or sanitary hazards, shall not be reused for plumbing purposes.

(l) **Used Material or Equipment.** It shall be unlawful to install any used plumbing material or equipment unless it conforms to the standards and regulations set forth in this code.

(m) **Freezing.** Water service piping shall be installed below normal frost penetration for below grade piping unless special provisions are made to prevent freezing. Plumbing piping in exterior building walls shall be adequately protected against freezing by insulation or heat or both.

MHD 123 Materials

(a) **Quality of Materials.** All materials used in any drainage or plumbing system or part thereof, shall be free from defects, and no materials which are damaged or defective, shall knowingly be installed.

(b) **Identification of Materials.** All materials must be marked, unless otherwise easily identifiable, so as to provide a visual means of identification as to types, grades, weights, and strengths. The installer shall, as far as possible, position the identification marks so as to provide ease of inspection by the Administrative Authority.

(c) **Standards for Plumbing Materials**

(1) **Approved Materials.** A material shall be considered approved if it meets one or more of the standards cited in Table 123(c)(3) **Standards for Plumbing Materials.** Materials not listed in Table 123(c)(3) shall be used only as provided for in MHD 122(h)(3), or as permitted elsewhere in this Code.

(2) **Abbreviations.** Abbreviations in Table 123(c)(3) refer to the following:

ANSI — **American National Standards Institute**
10 East 40th Street
New York, New York 10016

ASTM — **American Society for Testing and Materials**
1916 Race Street
Philadelphia, Pennsylvania 19103

AWWA — **American Water Works Association**
2 Park Avenue
New York City, New York 10016

CS — **Commercial Standards Available From:**
Commodity Standards Division
Office of Industry and Commerce
U. S. Department of Commerce
Washington, D. C. 20234

FS — **Federal Specifications Available From:**
Federal Supply Service
Standards Division—General Services Administration
Washington, D. C. 20406

NSF — **National Sanitation Foundation**
Ann Arbor, Michigan 48106

FHA — **Federal Housing Authority**
Architectural Standards Division
Washington, D. C.

TABLE 123 (C) (3)

STANDARDS FOR PLUMBING MATERIALS

DESCRIPTION	ANSI	ASTM	FS	OTHER
I. CAST IRON PIPE & FITTINGS	A21.2 A21.6	A-74	WW.P.401C	CS188
1A Cast Iron Pipe & Fittings Extra Heavy	A21.8			
1B Cast Iron Pipe Centrifugally Cast only and fittings Service Weight	A21.6 A21.8	A-74	WW.P.401C	CS188
1C Cast Iron Mechanical (Gland Type) Pipe	A21.11 A21.2 A21.6		WW-P-421a	
1D Cast Iron Mechanical (Gland Type) Pipe Cement Lined	A21.8 A21.4 A21.2 A21.6 A21.8			
1E Cast Iron Short Body Water Service Fittings (2"-12")	A21.10			AWWA C100
1F Cast Iron Threaded Pipe	A40.5			
1G High Silicon Pipe, Fittings Cast Iron				
1H Cast Iron Threaded Fittings Black and galvanized 125#	B16.4		WW-P-501	
1J Cast Iron Drainage Fittings Black and Galvanized	B16.12		WW-P-491	
1K Hubless Cast Iron Pipe and Fittings (amended 8-31-72)				CISPI Standard 301-69T
II. STEEL AND WROUGHT IRON PIPE FITTINGS				
2A Steel Pipe, Welded and Seamless Galvanized, Schedule 40 and above	B36.1 B36.20			WW-P-406 6(1)

2B Wrought Iron Pipe, Galvanized Schedule 40 and above	B36.2			
2C Stainless Steel Pipe	B36.19			
2D Galvanized Malleable Fittings 150 PSI and above	B16.3	A197		
2E Steel Unions, Galvanized			WW-V-531 C	
III COPPER AND COPPER BASE PIPE AND FITTINGS				
3A Red Brass Pipe, Regular and Heavier	H27.1	B42B		
3B Seamless Brass Tube	H36.1			
3C Brass or Bronze threaded fittings 125 lbs. and over	B16.15	B62	WW-P-460	
3D Brass or Bronze Flare fittings 125 lbs and over, heavy duty long collar type		B62		
3E Seamless Copper Tube Type K, Soft Temper	H23.1	B88		
3F Seamless Copper Tube Type K, Hard Temper	H23.1	B88		
3G Seamless Copper Tube Type L, Soft Temper	H23.1	B88		
3H Seamless Copper Tube Type L, Hard Temper	H23.1	B88		
3H(a) Welded Copper Alloy 194 Water, Tube, Type "Heavy", Hard Temper		B543-72		OFT194-101A Navfac TS-15400
3H(b) Stainless Steel Water Tubing, Type SL, Copper Plated Coating (HWT-T439)		A-268 A-651		
3J Seamless Copper Tube, Type M Hard and Soft Temper	H23.1	B88		
3J(a) Welded Copper Alloy 194 Water Tube, Type "Standard", Hard Temper		B543-72		OFT194-101A Navfac TS-15400
3J(b) Stainless Steel Water Tubing, Type SM, Copper Plated Coating (HWT-T439)		A-268 A-651		

TABLE 123 (C) (3)—Continued

	DESCRIPTION	ANSI	ASTM	FS	OTHER
3K	Seamless Copper Tube Type DWV	H23.3	B306		
3L	Copper Pipe I.P.S.	H26.1	B42		
3M	Copper Pipe, Threadless Type T P and Fittings	H26.2	B302		
3N	Cast Bronze and Wrought Solder Joint Pressure fitting	B16.22 H23.1 B16.18			
3O	Cast Bronze and Wrought Solder Joint D W V fittings	B16.23			
3P	Copper Alloy Water Tube		B447		
	½ inch and ¾ inch		B75		
3Q	Welded Brass Water Tube ½ inch and ¾ inch		B587		
IV.	**LEAD PIPE AND FITTINGS**				
4A	Lead Pipe AA			WW.P.325-44	
4B	Lead Pipe AAA			WW.P.325-44	
4C	Lead Bends and Traps			WW.P.325.44	
4D	Sheet Lead			QQ-L201d	
V.	**SILICA AND EARTH PRODUCTS PIPE AND FITTINGS, NON METALLIC**				
5A	Asbestos–Cement		C500	SS-P351	
	Pressure Pipe and Fittings		C296		
5B	Asbestos–Cement Water Pipe and Fittings		C500	SS-P-351	AWWA C400
5C	Asbestos–Cement Non Pressure Pipe and Fittings		C428	XX-P-331	
5D	Asbestos–Cement Perforated Underdrain Pipe and Fittings		C508		
5E	Vitrified Clay Pipe, Standard		C13		
	Strength and Stronger fittings		C200		
5F	Unglazed Clay Pipe, Extra Strength and fittings		C278		
5G	Perforated Clay Pipe and Fittings		C211		
5H	Borosilicate Glass Pipe and Fittings 60 psi				
5J	Non Reinforced Concrete Draintile		C412		AASHO M178

5K Non Reinforced Concrete Pipe.....	C14	SS-P-371	AASHO M86
5L Perforated Concrete Pipe, Underdrainage...	C444		
5M Reinforced Concrete Pipe.....	C76	SS-P-375	
5N Reinforced and Prestressed Concrete Pipe, Pressure Type and Fittings.....			
5O Bituminized Fiber Drain and Sewer Pipe...	D1861	SS-P-1540A	(Amended 8-31-72)
5P Perforated Bituminized Fiber Pipe for General Drainage.....	D2311	SS-P-1540A	(Amended 8-31-72)

VI. PLASTIC PIPE AND FITTINGS DRAIN, WASTE AND VENT

6A Acrylonitrile-Butadiene-Styrene (ABS)..... Type 1, Schedule 40.....	D2661	L-P-322a FHA-MPS	HSF14 CS270
6B Polyvinyl Chloride (pvc)..... Schedule 40 Unthreaded..... Schedule 80 can be threaded	D2665	L-P-320a FHA-MPS	NSF14 CS272
BUILDING SEWER.....		L-P-001221	
6C (1) Styrene—Rubber.....	D2852	(Filed 4-5-73)	CS228
6C (2) Polyvinyl Chloride (pvc)..... (Amended 4-5-73)	D3033 D3034	FHA-UM-26 WW-P-00380a	
(3) Acrylonitrile-Butadiene-Styrene (ABS)..	D2751		

4369-4377

WATER SERVICE - Minimum working pressure rating shall be at least 150 psi for municipal water service and 100 psi for other service.

6D Polyethelyne (PE).....B72.1	D2239	LP-315a FHA-UM-31C	NSF14 CS255
6E Acrylonitrile-Butadiene-Styrene (ABS).....B72.3	D2282		NSF14 CS254
6F Polyvinyl Chloride (PVC).....B72.2	D2241	L-P-1036 FHA UM-41	NSF14 CS256
6G Polybutylene.....	D2662 D2666		NSF14
SPECIAL WASTES (Amended 12-26-72)			
6H Polyethylene.....	D2239	LP 315a	PS10-69 PS11-69 PS12-69
6J Polypropylene (Type II 24308) ...	D2146		

(d) Piping System Materials

(1) Water Supply Systems

(aa) **Allowance for Character of Soil and Water.** When selecting the material and size for water service pipe, tubing, or fittings, due consideration shall be given to the action of the water on the interior of the pipe and of the soil, fill or other material on the exterior of the pipe.

(2) Water Service Pipe

(aa) Cast iron pipe 1C and 1D both with 1E fittings with the provisions that bends, tees, and plugs shall be anchored by rods. Poured in place concrete thrust blocks or anchor rods shall be used behind all changes of direction of 45° or greater so as to maintain a water tight joint.

(bb) Steel pipe 2A, wrought iron pipe 2B, both with 2D and 2E fittings, with the provision that all exposed threads must be coal tar enamel coated and wrapped.

(cc) Red brass pipe 3A, and copper 3L, with 3C fittings, with the provision that every joint is supported by durable non-metallic support and pipe to be laid on a continuous granular bed.

4369-4377

(dd) Copper tube 3E or 3G and 3D fittings 3D or 3N.

(ee) Lead pipe 4B with heavy duty bronze unions or wiped joints with the provision that each joint must be supported by a durable support without abrasive or cutting edge.

(ff) Asbestos cement pipe 5A and fittings with the provision that this material be supported continuously and laid in granular soil and only in yard areas. Further that it not be used to convey extremely soft water, and shall pass through the floor within three feet of the outside wall.

(gg) Concrete pipe 5N.

(hh) Plastic pipe 6D, 6E, 6F and 6G may be used for water service pipe only up to the water meter or pressure tank and provided there is no more than two feet of such piping exposed within the building. These materials shall be installed in accordance with ASTM D.2774-72. Particular care shall be taken to avoid sharp edges in contact with the pipe and to provide for expansion and contraction.

(3) Water Distribution Pipe

(aa) Cast Iron with 1C and 1D fittings.

(bb) Steel pipe 2A and wrought iron 2B with 2D and 2E fittings with the provision that this material may not be laid underground nor embedded in masonry construction unless all threads are coal tar enamel coated and wrapped.

(cc) Steel pipe 2C, stainless.

(dd) Brass 3A pipe or tube 3B with 3C fittings.

(ee) Copper tube 3E or 3G with 3N wrought fittings or 3D fittings with provisions that it be installed to allow for expansion or contraction and that all stubs through concrete floors must be sleeved or protected by resilient material.

4309
4317

(ff) Copper Tube 3H with 3N fittings except that this material may not be buried under or embedded in a concrete slab.

(gg) Copper 3J, 3J(a), 3J(b), 3P or 30 with 3N fittings may be installed exposed or in frame partitions, or in tunnels and shafts, except that this material may not be laid underground or embedded in masonry or concrete.

(hh) Copper 3L and 3C fittings.

(ii) Copper 3M with fittings.

(jj) Lead pipe 4B with heavy duty bronze fittings or wiped joints.

(4) Building Sewers

(aa) Cast Iron 1A and 1B and fittings and Hubless Cast Iron 1K. *(Amended 6-26-72)*

(bb) Cast Iron 1C and 1D with 1E fittings.

(cc) Asbestos cement 5A and 5C and fittings laid on a continuous granular bed.

(dd) Clay pipe and fittings 5E laid on a continuous granular bed.

(ee) Concrete pipe 5K in yard areas and not under permanent streets, laid on a continuous granular bed.

(ff) Concrete 5M and 5N and fittings.

(gg) Plastic 6A, 6B, 6C(1), 6C(2), and 6C(3) laid a continuous granular bed.

(hh) Bituminized-fiber drain and sewer pipe 50, laid on a continuous granular bed. *(Amended 8-31-72)*

(5) Storm Water and Yard Drainage (Outside Foundation Walls)

(aa) Approved materials shall be as specified in MHD 123(d)(4).

(6) Storm Water or Clear Water Drainage (Within Buildings Underground)

(aa) Approved materials shall be as specified in MHD 123(d)(8) with the following addition.

(bb) Concrete 5M and 5N and fittings.

(7) Storm Water or Clear Water Drainage (Within Buildings Above Ground)

(aa) Materials shall be as specified in MHD 123(d)(9).

(8) Soil and Waste Piping (Except Special Wastes) Underground or Embedded in Masonry Construction

(aa) Cast Iron 1A or 1B and fittings, and Hubless Cast Iron 1K. *(Amended 6-26-72)*

(bb) Cast Iron 1C or 1D with 1E fittings.

(cc) Lead 4A pipe with wiped joints, fittings 4C.

(dd) Plastic 6A and 6B and fittings which shall be laid on a continuous granular bed. Reference ASTM D2321-72.

(9) Soil and Waste Piping (Except Special Wastes) Above Ground

(aa) Cast Iron 1A and 1B and fittings, and Hubless Cast Iron 1K. This pipe may be uncoated above ground. *(Amended 6-26-72)*

(bb) Cast Iron 1F with 1J fittings.

(cc) Steel Pipe 2A and Wrought Iron 2B with 1J fittings.

(dd) Copper 3F, 3H, 3J and 3K with 3O fittings except these materials shall not be used to receive the wastes from urinals nor wastes from water closets in battery. (These materials are not recommended for use in buildings served by septic tank sewage disposal systems.)

(ee) Lead 4A with wiped joints and fittings 4C.

(ff) Plastic 6A or 6B with corresponding fittings may be installed except that no horizontal drain may exceed 35 feet in total length. No stack may exceed 35 feet in total height unless an approved expansion and contraction joint is installed at intervals not to exceed 35 feet.

(10) Vent Piping, Below Ground

(aa) Cast Iron 1A and 1B and fittings, and Hubless Cast Iron 1K. *(Amended 12-26-72)*

(bb) Cast Iron 1F with fittings and with 1H fitting.

(cc) Brass 3A or 3B with 3C fittings.

(dd) Copper 3F or 3B with 3C fittings.

(ee) Copper 3L with 3C fittings.

(ff) Copper 3M with fittings.

(gg) Plastic 6A and 6B fittings.

(11) Vent Piping, Above Ground

(aa) Cast Iron 1A and 1B and fittings, and Hubless Cast Iron 1K. Pipe may be uncoated. *(Amended 6-26-72)*

(bb) Cast Iron 1F with 1H fitting.

(cc) Steel 2A pipe and wrought iron 2B with 1H fitting.

(dd) Brass 3A or 3B with 3C fittings.

(ee) Copper 3F, 3H, 3J and 3K, with 3N or 3O fittings, except– see (d)(9)(dd).

(ff) Copper pipe 3L with 3C fittings.

(gg) Copper pipe 3M with 3M fittings.

(hh) Plastic 6A or 6B with corresponding fittings may be installed except that no horizontal vent may exceed 35 feet in total length. No vent stack or stack vent may exceed 35 feet in total height unless an approved expansion and contraction joint is installed at intervals not to exceed 35 feet.

(12) **Special Wastes**

(aa) Chemical wastes of cast iron 1G; lead 4B; borosilicate glass 5H; plastic 6H; or other materials approved by the Administrative Authority. *(Amended 12-16-72)*

(bb) Pressure wastes or non-pressure wastes which are completely exposed or accessible, and which discharge indirectly to the drainage system may be of any materials in Table 123(c)(3) with due regard to the type of liquid being wasted.

(13) **Subsoil Drains**

(aa) All materials listed in (d)(8) plus asbestos cement 5D, clay 5G, cement 5J and cement 5L, perforated bituminized fiber pipe for general drainage 5P, and plastic 6A, 6B, 6C. *(Amended 6-26-72)*

(14) **Special Materials**

(aa) **Sheet Lead.** Sheet lead for the following uses shall weigh not less than:

a) General use—4 pounds per square foot.

b) Safe pans—4 pounds per square foot.

c) Flashings for vent pipes—3 pounds per square foot.

(bb) **Lead Bends and Traps.** The walls of lead bends and traps shall be at least 1/8 inch thick.

(cc) **Sheet Copper.** Sheet copper for the following uses shall weigh not less than:

a) General use—12 ounces per square foot.

b) Flashing for vent pipes—8 ounces per square foot.

(dd) **Floor Flanges.** Floor flanges for water closets or similar fixtures shall be not less than 1/8 inch thick for brass; 1/4 inch thick and not less than 2 inch caulking depth for cast iron or galvanized malleable iron.

If of hard lead, they shall weigh not less than 1 pound 9 ounces, and be composed of lead alloy with not less than 7.75 percent antimony by weight. Flanges shall be soldered or threaded into other metal. Closet screws and bolts shall be of non-corrodible material.

(ee) **Flush Pipes and Fittings.** Flush pipes and fittings shall be of non-ferrous material. When of brass or copper tubing, the material shall be not less than No. 20 U.S. gauge.

(ff) **Brass Tubing Traps and Trap Arms.** All brass tubing used for traps and trap arms shall be not less than 17 gauge (.045") in thickness. Nuts used with brass tubing shall be of brass or other non-corrodible material.

(gg) **Plastic Tubular Traps, Plastic (ABS and PVC) Tube and Tubular Fittings for Waste Connections.** All tubular, fittings must comply with the requirements of ASTM Standard F 409.

(15) **Fixture Materials**

(aa) **Quality of Fixtures.** Plumbing fixtures shall have smooth, impervious surfaces, be free from defects and concealed surfaces. All

receptacles used as water-closets, urinals, or otherwise, for the disposal of human excreta, shall be vitreous china, or other material acceptable to the Administrative Authority, except trough urinals may be cast iron, enameled on the inside. Drinking fountains shall be constructed of impervious non-oxidizing material and shall be so designed that they may be easily cleaned. Plumbing fixtures shall conform to the applicable Commercial Standards, where such standards exist. *(Amended 12-26-72)*

MHD 124 Joints and Connections

(a) **Types of Joints for Piping Materials**

(1) **Tightness.** Joints and connections in the plumbing system shall be gastight and watertight for the pressure required by test, with the exception of those portions of perforated or open joint piping which are installed for the purpose of collecting and conveying ground or seepage water.

(2) **Types of Joints**

(aa) **Caulked Joints.** Caulked joints for cast-iron bell and spigot soil pipe shall be firmly packed with oakum or hemp and filled with molten lead not less than 1 inch deep and shall extend not more than ⅛ inch below rim of hub. No paint, varnish, or any other coatings shall be permitted on the jointing material until after the joint has been tested and approved. Lead shall be caulked tight.

(bb) **Threaded Joints—Screwed Joints.** Threaded joints shall conform to American National taper pipe thread, ASA - B2.1 - 1945 or FS GGG - P - 351a. All burrs shall be removed. Pipe ends shall be reamed out to size of bore and chips removed. Pipe joint compound shall be used on male threads only.

(cc) **Wiped Joints.** Joints in lead pipe or fittings, or between lead pipe or fittings and brass or copper pipe, ferrules, solder nipples, or traps, shall be full wiped joints. Wiped joints shall have an exposed surface on each side of the joint not less than ¾ inch, and a minimum thickness at the thickest part of the joint of not less than ⅜ inch. Joints between lead pipe and cast iron, steel, or wrought iron shall be made by means of a caulking ferrule, soldering nipple, or bushing.

(dd) **Soldered or Brazed Joints.** Joints with copper tube with solder joint fittings shall be soldered or brazed. Surfaces to be soldered or brazed shall be thoroughly cleaned. Joints to be soldered shall be properly fluxed with non-corrosive paste type flux. Solder used for joints shall have a nominal composition of 50% tin and 50% lead, or 95% tin and 5% antimony, conforming to ASTM Standard Specification for soft solder metal B32-60T. Joints to be brazed shall be properly fluxed with a flux suitable for brazing material which is used. Brazing material shall conform to ASTM Standard Specification for Brazing Filler Metal B260-52T.

(ee) **Flared Joints.** Flared joints for soft copper water tubing shall be made with fittings meeting approved standards. (See Table 123(c)(3)) The tubing shall be reamed and expanded with proper flaring tools.

(ff) **Hot-poured Joints.** Hot-poured compound for clay or concrete sewer pipe, or other materials, shall not be water absorbent, and when poured against a dry surface shall have a bond of not less than 100 pounds per square inch. All surfaces of the joint shall be clean and dried before pouring. If wet surfaces are unavoidable, a suitable primer shall be applied.

The compound shall not soften sufficiently to destroy the effectiveness of the joint when subjected to a temperature of 160° Fahrenheit nor soluable in any of the waste carried by the drainage system. Approximately 25% of the joint space at the base of the socket shall be filled with jute or hemp. A pouring collar, rope, or other device shall be used to hold the hot compound when pouring. Each joint shall be poured in one operation until the joint is filled. Joints shall not be tested until one hour after pouring.

(gg) **Cold Joint Compound (Tar Base).** Cold joint compound (tar base) for clay and concrete pipe shall not be water absorbent, and shall bond itself to vitrified clay and concrete pipe. Half of the joint must be packed with oakum, and the remainder with cold tar compound.

(hh) **Gasket Type Joints. Resilient Rubber Joints for Clay or Concrete.** Flexible joints between lengths of clay or concrete pipe may be made by using approved resilient or rubber materials, both on the spigot end and in the bell end of the pipe.

(ii) **Cement Mortar Joints.** Except for repairs and connections of existing lines constructed with such joints, cement mortar joints are prohibited. Where permitted, cement mortar joints shall be made in the following manner: A layer of jute or hemp shall be inserted into the base of the annular joint space and packed tightly to prevent mortar from entering the interior of the pipe or fitting. Not more than 25% of the annular space shall be used for jute or hemp. The remaining space shall be filled in one continuous operation with a thoroughly mixed mortar composed of one part cement and two parts sand, with only sufficient water to make the mixture workable by hand. Additional mortar of the same composition shall then be applied to form a one to one slope with the barrel of the pipe. The bell or hub of the pipe shall be left exposed and when necessary the interior of the pipe shall be swabbed to remove any mortar or other material which may have found its way into such pipe.

(jj) **Burned Lead Joints.** Burned (welded) lead joints shall be fused together to form a uniform weld at least as thick as the lead being joined.

(kk) **Asbestos Cement Sewer Pipe Joints.** Joints in asbestos cement pipe shall be made with sleeve couplings of the same composition as the pipe, sealed with rubber rings. Joints between asbestos cement pipe and metal pipe shall be made by means of an adapter coupling caulked as required in MHD 124(a)(2)(aa). No adapted coupling shall be used that does not have a center ridge. Pipe must not be able to pass through the coupling.

(ll) **Mechanical Joints**

(ll-1) **Mechanical Joints for Cast-Iron Water Pipe.** Mechanical joints in cast-iron water pipe shall be made by means of a flanged collar and rubber ring gasket, secured by the use of an adequate number of

steel bolts. The rubber sealing ring shall conform to A.S.A. A21-Point 11 Requirements.

(ll-2) **Mechanical Joints in Cast-Iron Soil Pipe.** Mechanical joints in cast-iron soil pipe shall be made by means of a preformed molded rubber ring, secured by pulling the pipe and fittings together in such a way as to compress the molded rubber ring in a manner that will assure a gas and water tight joint. The rubber sealing ring shall conform to A.S.T.M. 564-65 requirements.

(ll-3) **Mechanical Joints in Chemical Waste Pipe.** Mechanical joints in chemical waste pipe, of prestressed, low-expansion borosilicate glass pipe and high silicon content cast-iron pipe, shall be joined by means of a stainless steel corrosion resistant clamp assembly, or a clamp assembly utilizing a fiberglass reinforced nylon shell surrounding a sealing sleeve of an elastomeric material containing an approved acid and corrosion resistant seal ring or gasket in such a manner that the sleeve and ring seal or gasket are firmly compressed by the tightening device in order that a gas and water tight joint is provided. The sleeves or bands for this type joint shall be marked with the words "All Stainless", or the recognized abbreviation therefore, and marked with the pipe size for which its use is intended. Fiberglass reinforced shells must bear the manufacturer name. The sleeve must be used as factory assembled. During installation assembly, the pipe or fittings must be inserted into the sleeve so as to be firmly seated against the center rib or shoulder of the gasket, and on all field cut lengths the ends must be as square and smooth as possible. *(Amended 6-26-72)*

4369-337

(ll-4) Mechanical joints in hubless cast iron soil pipe. Mechanical joints for hubless cast iron soil pipe and fittings may be made by using a neoprene sleeve and stainless steel retaining band as specified in CISPI standard 301, by using a transition fitting made of elastomeric material (ASTM C 425 and ASTM C 564) and 300 series stainless steel bands and bolts, or by using a two part coupling whose housing is fabricated of grey-cast iron (ASTM A 48), with a coupling gasket made of neoprene rubber (ASTM C 564), and coupling bolts and nuts made of 18-8 stainless steel.

(ll-5) **Mechanical Pipe Couplings and Fittings.** Couplings shall be made with the housing fabricated in two or more parts of malleable iron castings in accordance with Federal Specification QQ-I-666c, Grand 11, or with ASTM A47 or ASTM A339. The coupling gasket shall be molded synthetic rubber, per ASTM D-735-61, Grade No. R615BZ. Coupling bolts shall be oval neck track head type with hexagonal heavy nuts, per ASTM-A-183-60, or ASTM A325.

Pipe fittings used with these pipe couplings shall be fabricated or malleable iron castings in accordance with Federal Specifications QQ-I-666c, Grade 11, or with ASTM A47; ductile iron ASTM A339; segweld steel ASTM53 or A106.

These couplings and fittings may be used above ground, for storm drains and leaders and for water distribution pipe provided exposed parts in contact with water are galvanized. *(Amended 6-26-72)*

(mm) **Plastic Joints.** Every joint in plastic piping shall be made with approved fittings by either solvent welded or fusion welded connections or with approved insert fittings and metal clamps and screws of corrosion-resistant material or threaded joints according to accepted standards. All solvent materials must meet approved recognized standards. Expansion and contraction joint materials and dimensions shall conform to ASTM D 2661 or ASTM D 2665 and shall be of an approved type.

(nn) **Bituminized Fiber Drain Pipe Joint.** Pipe and bends shall be provided with accurately machined or molded tapered joints, and a taper-

sleeve coupling shall be provided for each length of pipe and for each bend. The slope of the taper in both pipe and coupling shall be 2°. *(Amended 6-26-72)*

(3) **Use of Joints**

(aa) **Clay Sewer Pipe.** Joints in clay sewer pipe, or between such pipe and metal pipe shall be made as provided in MHD 124(a)(2)(ff),(gg), (hh), and (ii).

(bb) **Concrete Sewer Pipe.** Joints in concrete sewer pipe, or between pipe and metal pipe, shall be made by means as provided in MHD 124(a)(2)(ff),(gg),(hh) and (ii).

(cc) **Cast-Iron Pipe.** Joints in cast-iron shall be either caulked or screwed, as provided in MHD 124(a)(2)(aa),(bb), and (cc).

(dd) **Cast-Iron Soil Pipe.** Joints in cast-iron soil pipe may be made by means as provided in MHD 124(a)(2)(aa) or (ll-2).

(ee) **Threaded Pipe to Cast-Iron.** Every joint between wrought iron, steel, brass, copper and cast-iron pipe shall be either caulked or threaded joints as provided in MHD 124(a)(2)(aa),(bb) and (cc) and shall be made with approved adapter fittings.

(ff) **Lead to Cast-Iron, Wrought Iron and Steel.** Joints between lead and cast-iron, wrought iron, or steel shall be made by means of wiped joints to a caulking ferrule, soldering nipple or bushing as provided in MHD 124(a)(2)(cc).

(gg) **Copper Water Tube.** Joints in copper water tubing shall be made either by the appropriate use of approved brass or wrought copper water fittings properly soldered or brazed, or by means of approved flared fittings as provided in MHD 124(a)(2)(ee).

(hh) **Plastic Pipe Joints.** Joints in plastic pipe or between plastic and cast-iron, steel, brass or copper pipe shall be made as provided in MHD 124(a)(2)(mm).

(ii) **Bituminized Fiber Pipe Joints.** Joints in bituminized fiber pipe shall be made as provided for in MHD 124(a)(2)(nn). *(Amended 6-26-72)*

(4) **Special Joints**

(aa) **Copper Tubing to Threaded Pipe Joints.** Joints from copper tubing to threaded pipe shall be made by the use of brass or copper adapter fittings. The joint between the copper pipe and fitting shall be properly soldered, brazed or flared.

(bb) **Cast-Iron to Copper Tube.** Caulked joints between copper tubing and cast-iron soil pipe shall be made by means of brass or copper ferrules or other approved adapter fittings.

(cc) **Slip Joints.** In drainage piping, slip joints shall be used only on the inlet side of the trap or in the trap seal. Every slip joint shall be made using approved packings of gasket material or approved ground joint brass compression rings. Ground faced connections which allow

adjustments of tubing but provide a durable rigid joint when made up shall not be considered as a slip joint.

(dd) **Expansion Joints.** Every expansion joint shall be of an approved type and the material used in its manufacture shall be compatible with the type of piping in which it is installed. Every expansion joint, other than an expansion loop, shall be accessible. (Also see MHD 133(i))

(ee) **Bituminized Fiber to Other Types of Pipe.** When connecting bituminized fiber pipe to other types of materials, only approved types of fittings and adaptors designed for the specific transition intended shall be used. *(Amended 6-26-72)*

4369
4377

(ff) Transition Couplings. A transition coupling is one which is to be used when pipes made of different materials are to be joined. A transition coupling may be made of elastomeric materials (ASTM C 425 and ASTM C 564) and 300 series stainless steel bands and bolts. Any transition coupling joining plastic to plastic, copper to copper, or galvanized to galvanized, must be approved by the administrative authority.

(5) **Flanged Fixture Connections.** Fixture connections between drainage pipes and water closets, pedestal urinals, and earthenware trap standards shall be made by means of brass, plastic, or iron flanges, caulked, soldered, solvent welded, or screwed to the drainage pipe. The connection shall be bolted, with an approved gasket, washer or setting compound between the earthenware and the connection. Floor flanges of other equivalent materials may be used when approved by the Administrative Authority.

The bottom of the floor flange shall be set on the top of the finished floor or on a structurally firm base. Closet bends or stubs must be cut off so as to present a smooth surface, even with the top of the closet flange. Use of commercial putty or plastic as fixture setting compound is prohibited.

(6) **Prohibited Joints and Connections.** See MHD 131(b)(3).

(7) **Increasers and Reducers.** Brass or cast-iron body cleanouts shall not be used as a reducer or adapter from cast-iron soil pipe to steel or wrought iron pipe. Where different sizes of pipe or pipes and fittings are to be connected, the proper size increasers, reducers, or reducing fittings shall be used between the two sizes. Hexagon screwed bushings shall not be used in drainage piping.

MHD 125 Traps and Clean Outs

(a) **Fixture Traps**

(1) **Trap Requirements**

(aa) Each plumbing fixture, except those having an integral trap, shall be separately trapped by a water seal trap, installed as close to the fixture as possible, and in such a manner as to be readily accessible for cleaning and repairing.

(bb) A single trap may serve a two or three compartment sink or laundry tray. The trap shall be located not more than 30 inches from each compartment outlet. The vertical distance between the fixture outlet and the trap weir shall be as short as possible, but in no case more than 24 inches in length.

(cc) No food waste disposal unit shall be installed in a set of restaurant, commercial or industrial sinks, served by a single trap. Each such disposal unit shall be individually trapped and connected to a separate waste opening.

(dd) Each trap shall have the manufacturer's name or identification stamped legibly thereon and each tubing trap shall show the gauge of the tubing used in its manufacture.

(2) **Trap Protection**

(aa) All fixture traps, except as otherwise provided in this code, shall be protected against siphonage and back pressure by means of a properly installed vent pipe. The vent shall be so located that the developed length from the fixture trap to the vent shall not exceed the distance given in Table 132(l)(1).

(bb) The vent pipe opening from a soil or waste pipe, except for water closets and similar fixtures, shall not be below the weir of the trap. The trap arm direction may be changed by the use of not more than two 45° or one 90° long turn elbows.

(3) **Traps described.** Every fixture trap shall be self-cleaning. Traps for bathtubs, lavatories, sinks, showers, laundry tubs, urinals, drinking fountains and similar fixtures, shall be of standard design and weight and shall be of lead, brass, cast-iron, or other approved materials, and have a smooth and uniform interior water-way.

(4) **Slip Joints and Unions.** Union joints on the sewer side of the trap shall be ground faced, shall be accessible and shall provide a rigid connection when made up tight. Slip joints shall be used only on the inlet side of the trap or in the trap seal.

(5) **Sizes of traps.** The minimum size (nominal interior diameter) of a trap for a given fixture shall be determined by Table 131(a)(1).

(6) **Trap seals**

(aa) Fixture traps shall have a water seal depth of not less than two (2) inches and not more than four (4) inches, except where, under special conditions, a trap with a deeper seal may be found necessary by the Administrative Authority.

(bb) The horizontal length of the seal of any fixture trap shall not exceed 6 inches where the waste pipe required is 2 inches or less in diameter.

(cc) Traps shall be set true and level with respect to their water seals and where necessary shall be protected from freezing.

(7) **Traps Prohibited**

(aa) No form of trap which depends for its seal upon the action of moveable parts or concealed interior partitions shall be used.

(bb) Full "S" traps, bell traps and crown vented traps, are prohibited.

(cc) Traps shall not be made up with fittings, unless authorized by the Administrative Authority.

(dd) Water cooled grease traps are prohibited.

(ee) No fixture shall be double trapped.

(ff) Drum traps shall be installed only when permitted by the Administrative Authority for special conditions. (laboratory tables, dental chairs, etc.)

(8) **Trap Cleanouts.** An accessible trap is considered a cleanout for the fixture branch serving the individual fixture.

(b) **Drainage Pipe Cleanouts**

(1) **Location.** There shall be at least 2 cleanouts in the building drain, one at or near the base of the stack and one near the connection between the building drain and the building sewer. The cleanout at the outside wall may be inside or outside the building, and shall be made with a full "Y" branch fitting and shall extend at least 2 inches above grade or finished floor, except that the Administrative Authority may grant permission to use a flush cover in traffic areas.

A cleanout which is easily accessible shall be provided at or near the foot of each vertical soil or waste stack.

Each horizontal branch drain pipe shall be provided with a cleanout at its upper terminal, except that a fixture trap or a fixture with an integral trap, readily removable without disturbing concealed piping, may be accepted as a cleanout equivalent for this purpose.

(2) **Size of Cleanouts.** The cleanout shall be of the same nominal size as the pipes they serve up to 4 inches in diameter and not less than 4 inches for larger piping.

The distance between cleanouts in horizontal piping shall not exceed 50 feet for 3 inch or less in size and not over 100 feet for 4 inch and over in size.

(3) **Cleanout Materials.** The bodies of cleanout ferrules shall be made to standard pipe sizes, conform in thickness to that required for pipe and fittings of the same material and extend not less than ¼ inch above the hub. The cleanout cover or plug shall be of brass, cast-iron or approved plastic and be provided with a raised nut or recessed socket for removal.

Neoprene or nordel rubber with a plastic disc and a single stainless steel (300 series) band may be used for a cleanout cover provided that it is exposed and readily accessible. Cleanout covers shall conform to specifications and details as shown in Figure 125(b)(3), Appendix B.

(4) **Cleanouts to be Accessible.** Each cleanout, unless installed under an approved cover plate or left flush with the finished floor, shall be at least 2 inches above grade, readily accessible and shall not be covered with cement, plaster, or other permanent finish material. Where a soil stack cleanout is located within 10 feet of where the building drain leaves the building, the cleanout at the outside wall may be eliminated.

MHD 126 Interceptors, Separators and Backwater Valves

(a) **Interceptors and Separators**

(1) **Interceptors and Separators Required.** Interceptors for oil, grease, sand and other substances harmful or hazardous to the building drainage system shall be provided as stated elsewhere in this chapter.

(2) **Approval of Interceptors and Separators.** The size, type, and location of each interceptor, and of each separator shall conform to the requirements of this chapter, and no waste other than those requiring treatment or separation shall discharge into any interceptor.

(3) **Grease Interceptors**

(aa) **Commercial Buildings**

(aa1) A grease interceptor of sufficient size and efficiency shall be installed in the waste line leading from sinks, drains, or other fixtures when, in the opinion of the Administrative Authority, greasy wastes can be introduced into the drainage system in quantities that can cause line stoppage.

(aa2) Grease interceptors shall be placed as near as possible to the fixture and the grease interceptor shall be vented. No food waste disposer or dishwashing machine shall discharge into the building drainage system through a grease interceptor. Sinks or other fixtures served by grease interceptors shall be trapped and vented ahead of the grease interceptor when the distance from the sink to the grease interceptor exceeds five feet.

(bb) **Grease Interceptor Capacity.** Grease interceptors, when used, shall have a grease retention capacity in pounds of grease, of at least twice the flow-through rate, in gallons per minute.

(cc) **Rate of Flow Controls.** Grease Interceptors shall be equipped with devices to control the rate of water flow through the interceptors so that it does not exceed the rated flow of the interceptor.

(4) ***Oil and Flammable Liquids Separator***

(aa) **Separators Required.** Enclosed garages housing more than four (4) motor vehicles, repair garages, gasoline stations with grease racks, work or wash racks, auto washes, and all buildings where oily and/or flammable liquid wastes are produced shall have a separator installed into which all oil, grease, and sand bearing and/or flammable wastes shall be discharged before emptying into the building drainage system or other point of disposal.

(bb) **Design of Separators**

(bb1) Each separator shall be of water tight construction and of not less than 35 cubic feet holding capacity, be provided with a water seal of not less than three (3) inches on the inlet and not less than eighteen (18) inches on the outlet. The minimum depth below the invert of the discharge drain shall be three (3) feet. The minimum size of the discharge drain shall be four (4) inches. The separator may be constructed of monolithic poured reinforced concrete with a minimum floor and wall thickness of six (6) inches, or of iron or steel of a minimum thickness of 3/16 inches, protected with an approved corrosion resistant coating.

(bb2) The separator shall be provided with a non-perforated iron or steel cover and ring of not less than 24 inches in diameter, the air space in the top of the tank shall have a 3 inch vent pipe extending separately to a point at least 12 inches above the roof of the building. Drains and piping from motor vehicle areas shall be a minimum of 3 inch in size. Drains discharging to an interceptor shall not be trapped.

(bb3) No cleanout or backwater valve shall be installed inside the separator which could provide a bypass of the trap seal. Only wastes that require separation shall discharge into the separator, except that a water supplied and trapped sink may be connected to the vent of the separator. Whenever the outlet branch drain serving a separator is more than 25 feet from a vented drain, such branch drain shall be provided with a 2 inch vent pipe. A backwater valve shall be installed in the outlet branch drain whenever in the judgment of the Administrative Authority backflow from the building drain could occur. (See Figure 126(a)(4)(bb)). Appendix B.

(5) Interceptors and Separators for Specific Installations

(aa) **Sand Interceptors — Commercial Establishments.** Sand and similar interceptors for heavy solids shall be so designed and located as to be readily accessible for cleaning, and shall have a water seal of not less than six inches.

(bb) **Laundries.** Commercial laundries shall be equipped with an interceptor having a wire basket or similar device, removable for cleaning, that will prevent passage into the drainage system of solids ½ inch or larger in size, string, rags, button, or other material detrimental to the public sewerage system.

(cc) **Bottling Establishments.** Bottling plants shall discharge their process wastes into an interceptor which will provide for separation of broken glass or other solids before discharging liquid wastes into the drainage system.

(dd) **Slaughter Houses.** Slaughtering and dressing room drains shall be equipped with separators or interceptors approved by the Administrative Authority, which shall prevent the discharge into the drainage system of feathers, entrails, or other material likely to clog the drainage system.

(6) Venting of Interceptors and Separators. Interceptors and separators shall be so designed that they will not become airbound if closed covers are used. Each interceptor or separator shall be properly vented.

(7) Interceptors and Separators to be Accessible. Each interceptor and separator shall be so installed that it is readily accessible for removal of cover, servicing and maintenance. If installed substantially below grade a manhole with flush manhole cover should be provided.

(8) Maintenance of Interceptors and Separators. Interceptors and separators shall be maintained in efficient operating condition by periodic removal of accumulated grease, scum, oil, or other floating substances, and solids, deposited in the interceptor or separator.

(b) Backwater Valves

(1) Where Used. Drainage piping serving fixtures that are located below the elevation of the curb or property line at the point where the building sewer crosses under the curb or property line, and above the crown level of the main sewer, shall drain by gravity into the main sewer, and shall be protected from back flow of sewage by installing an approved back water valve, and each such back water valve shall be installed only in that branch or section of the drainage system which receives the discharge from fixtures located below the elevation of the curb or property line.

Further, in every building hereafter erected or remodeled so that the erection or remodeling creates a new dwelling use which is located below the elevation of the point where the building sewer crosses under the curb or property line, all fixtures installed below such point shall be connected to a separate branch drain. Each such branch drain shall be protected by an approved back water valve and a gate valve. The gate valve shall be located on the sewer connection side of the back water valve.

Further, the back water valve and gate valve may be waived by the Administrative Authority whenever the building is located at a sufficient height above the public sanitary sewer so flooding by backflow will not occur, in the opinion of the Administrative Authority.

(2) **Construction of Backwater Valves.** Backwater valves shall be constructed so that a mechanical seal against backflow will be provided. Backwater valves shall have all balls or bearing parts of non-corrodible material and shall have bolted covers and be readily accessible for cleaning.

(3) **Venting of Backwater Valves.** Where the installation and operation of backwater valves interfere with the proper ventilation of the plumbing system, additional vents shall be provided so as to assure adequate ventilation of the plumbing system when the backwater valves are in a closed position.

(4) **Accessibility of Backwater Valves.** Backwater valves shall be installed so their working parts will be readily accessible for service and repairs. If installed substantially below grade a manhole with flush manhole cover shall be provided.

MHD 127 Plumbing Fixtures

(a) Connections to Plumbing System Required

(1) All plumbing fixtures and drains used to receive or discharge liquid wastes or sewage shall be connected to the drainage system of the building in accordance with the requirements of the Code.

(b) Required Minimum Number of Fixtures

(1) Plumbing fixtures shall be provided for the type of building occupancy and in the minimum number shown in Table 17-B of the Uniform Building Code as amended in SBC 111. Types of building occupancy not shown, or special construction will be considered individually by the Administrative Authority.

(2) **Separate Facilities.** In other than residential installation where toilet facilities are provided to serve members of both sexes, separate facilities should be installed for each sex.

(c) Installation of Fixtures

(1) **Access for Cleaning.** Plumbing fixtures shall be so installed as

TABLE NO. 17-B REQUIRED SANITATION FIXTURES BASED ON OCCUPANCY AND OCCUPANT LOAD

OCCUPANCY	USE	S. F. per Occ.	WATER CLOSETS	URINALS	LAVATORIES	DRINKING FOUNTAINS	BATHTUBS OR SHOWERS	KITCHEN SINKS	SERVICE SINKS
Group A Occupancies	Auditoriums Bowling Alleys Churches Conference Rooms Dance Floors Dining, Drinking Exhibit Rooms Gymnasiums Libraries Lodge Rooms Lounges Rinks Stadiums, Grandstands Theaters Waiting Rooms	30 30 60 50 30 30 50 30 100 80 80 30 60 30 80	Churches 1/ea. 100 Men 1/ea. 300 Women Other Occupants Fixtures 1-100 1 101-200 2 201-400 3 Over 400 1 add'l/ ea. 500	Churches (3) (3)	Churches 1 for each 300 Other Occupants Fixtures 1-200 1 201-400 2 401-750 3 Over 750 1 add'l for each 500	1 for ea. 300	–	–	1
Group E Occupancies (6)	Elementary Secondary	85 130	Boys Girls 1/ea. 100 1/ea. 30 1/ea. 100 1/ea. 25	1/ea. 30	1 for each 100 1 for each 100	1 for each 75	–	–	1 per floor
Group I Occupancies	Prisons, Jails	100	1/ea. cell 1/ea. exercise rm.		1 in each cell 1 ea. exercise rm.	1 for each 100	1 at ea. cell block floor	–	1 per floor
	Hospitals, Nursing Homes	100	1/ea. 8 patients 1 in ea. waiting rm. Other 1/ea. 25 men 1/ea. 20 women	Other 1/ea. 50	1 for ea. 10 patients Other 1 for ea. 10		1 for ea. 20 Other 1 for ea. 10		

Group H Occupancies			Factories, Warehouses Occupants	Fixtures	Factories, Warehouses Occupants	Fixtures	Factories, Warehouses Occupants	Fixtures	Factories-Warehouses			
			1-10	1								
	Aircraft Hangars	500	11-25	2								
	Factories	200	36-50	3	(3)							
Group B	Municipal Buildings	80	51-75	4								
Occupancies	Office Buildings	200	76-100	5				for ea.				
	Sales	200	Over	1 add'l			1-100	1-10				
	Service Stations	500	100	for 30			Over 100	1-15	1 for ea. 75			
	Storage Garages	500										
	Warehouses	500	Sales, Office, etc. Occupants	Fixtures	Sales, Offices		Sales, Offices Occupants	Fixtures	Sales, Offices	–	–	1 per floor
Group B-4 Occupancies			1-15	1			1-15	1	1 for ea. 150			
			16-35	2	(3)		16-35	2				
	Factories	200	36-55	3			36-60	3				
	Sales	200	56-80	4			61-90	4				
	Warehouses	500	81-110	5			91-125	5				
			111-150	6			Over 125	1 to 45				
			Over 150	1 add'l for ea. 50								
Group R-1 Occupancies	Dwelling Units, Apt.	–	1		–		1		–	1	1	1 laundry tray for ea. 10 dwelling units or guest rooms
	Motel, Hotel Units	–	1/ea. 10				1 for ea. 10		–	1 for ea. 10	–	
	Rooming Houses	200	1/ea. 10				1 for ea. 10			1 for ea. 10		
	Dormitories	200	1/ea. 10				1 for ea. 10			1 for ea. 10		
Groups R-3 and R-4 Occupancies	1 and 2 Family	–	1		–		1		–	1	1	–
Group M Occupancies	–	–	–		–		–		–	–	–	–
TEMPORARY FACILITIES	–	–	1/ea. 30		1/ea. 30		–		1 for ea. 100	–	–	–

Footnotes:

(1) Occupant load is computed using the equation: $\frac{A}{\text{S.F. per Occ.}}$ = Occupant Load.

(2) Square feet per occupant is only for computing the occupant load to determine the plumbing fixtures required.

(3) Urinals may be furnished in of water closets at the rate of one urinal for one water closet, but not to exceed one-third of the required water closets.

(4) 1 fixture for each 10 occupants.

(5) 1 fixture for each 15 occupants.

(6) For waterclosets, and lavatories, these numbers are minimum and equal number for each sex is required.

A–Area of building occupancy classification served.
S.F.–per Occ.–from Column 3 of this table.

to afford easy access for cleaning both the fixture and the area about it. Where practical, all pipes from fixtures shall be run to the nearest wall.

(2) **Convenient and Accessible.** Fixtures shall be set level and in proper alignment with reference to adjacent walls. No water closet shall be set closer than 15 inches from its center to any side wall or partition nor closer than 30 inches, center to center, between toilets.

No urinal shall be set closer than 15 inches from the center to any side wall or partition, nor closer than 24 inches, center to center, between urinals.

(3) **Water-Tight Joints.** Joints formed where fixtures come in contact wtih floors shall be sealed.

(4) **Securing Wall Hung Bowls.** Wall hung water closet bowls shall be rigidly supported by a concealed metal hanger which is attached to the building structural members so that no strain is transmitted to the closet connector or any other part of the plumbing system.

(5) **Overflows**

(aa) **Design of Overflows.** In any fixture which is provided with an overflow, the waste shall be designed and installed so that the standing water in the fixture cannot rise in the overflow when the stopper is closed, nor shall any water remain in the overflow when the fixture is empty.

(bb) **Connection of Overflows.** The overflow from any fixture shall discharge into the drainage system on the inlet or fixture side of the trap.

(6) **Access to Concealed Slip Joint Connections.** Fixtures having concealed slip joint connections shall be provided with an access panel or utility space or other convenient access so arranged as to make the slip joint connections accessible for inspection and repair.

(d) **Water Closets**

(1) **Prohibited Water Closets.** Pan, valve, plunger, offset, latrine, and frostproof water closets are prohibited. Water closets which have an invisible seal, an unventilated space, or walls that are not thoroughly washed at each discharge, are prohibited. Any water closet which might permit siphonage of the contents of the bowl back into the flush tank is prohibited.

(2) **Water Closet Bowls.** All water closet bowls shall be of the elongated type, except that regular type round bowls may be used in residential or dwelling type occupancy.

(3) **Water Closet Seats.** Water closets shall be equipped with seats of smooth nonabsorbent material. All seats of water closets, of elongated type provided for public use shall be of the open-front type. Integral water closet seats shall be of the same material as the fixture.

(e) **Urinals**

(1) **Prohibited Urinals.** Floor-type trough urinals are prohibited.

(f) **Flushing Devices for Water Closets and Urinals**

(1) **Flushing Devices Required.** Each water closet, urinal, clinical sink or similar fixture shall be provided with a flushometer valve, flush

tank, or similar device designed and installed so as to supply water in sufficient quantity and rate of flow to flush to the sewer the contents of the fixture to which it is connected to cleanse the fixture and refill the fixture trap.

(aa) **Separate for Each Fixture.** A flushing device shall serve only one fixture with the exception that a single flush tank may be used to flush more than one urinal provided that the flushing cycle is controlled automatically and that each urinal or section thereof is thoroughly flushed. Automatically controlled flushometer valves may be substituted for flush tanks.

(2) **Flushometer Valves.** Flushometers shall be installed so that they will be readily accessible for repair. Flushometer valves shall not be used where the water pressure is insufficient to properly operate them. (See Table 130(c)(7)) When the valve is operated, it shall complete the cycle of operation automatically, opening fully and closing positively under the water line pressure. Each flushometer shall be provided with a means for regulating the flow through it. Flushometer valves installed on any plumbing fixture or equipment whose water supply inlet or portion thereof can be submerged shall be provided with a vacuum breaker.

(3) **Flush Tanks**

(aa) **Water Supply for Flush Tanks.** An adequate quantity of water shall be provided to flush and clean the fixture served. The water supply to flush tanks equipped for manual flushing shall be controlled by a float valve or other automatic device designed to refill the tank after each discharge and to completely shut off the water flow to the tank when the tank is filled to operational capacity. Provision shall be made to automatically supply water to the fixture so as to refill the trap seal after each flushing, the water supply to flush tanks equipped for automatic flushing shall be controlled by a suitable timing device. (See Table 130(c)(7))

(bb) **Overflows in Flush Tanks.** Flush tanks shall be provided with overflows discharging to the water closet or urinal connected thereto and of sufficient size to prevent flooding of the tank at the maximum rate of water supply. Where the float valve is below the rim of the flush tank, it shall be elevated above the overflow and provided with a vacuum breaker or air gap. (See Table 130(e)(9)(gg1) Protective Devices)

(g) **Lavatories**

(1) **Lavatory Waste Outlets.** Lavatories shall have waste outlets not less than 1¼ inches in diameter. A strainer, pop-up stopper, crossbars or similar device shall be provided.

(2) **Multiple Type Fixture.** Each 18-inch unit of usable length of a straight-line or circumference of a circular multiple use lavatory shall be considered equivalent to one lavatory as it affects the fixture usage requirements; provided hot and cold or tempered water suitable for handwashing is available for each eighteen inch interval.

(3) **Water Supply to Public Lavatories.** Water supply to public lavatories shall not be spring closing unless they are of the delayed action type.

(h) **Bathtubs**

(1) **Bathtub Waste Outlets and Overflows.** Bathtubs shall have waste outlets and overflows at least 1½ inches in diameter. The waste control device shall be located at the tub outlet. *(Amended 6-26-72)*

(i) Showers

(1) Water Supply Riser. Every water supply riser from the shower valve to the shower head outlet, whether exposed or not, shall be securely attached to the structure.

(2) Shower Waste Outlet. Waste outlets, other than those in bathtubs, serving a single shower shall be at least 1½ inch in diameter and have removable strainers not less than three (3) inches in diameter having strainer openings not less than ¼ inch in minimum dimension. Waste outlets shall be securely fastened to the waste pipe making a water-tight connection thereto.

(3) Shower Floors or Receptors. Floors or receptors under shower compartments shall be laid on or be supported by a smooth and structurally sound base. Floors under shower compartments, other than those laid directly on the ground surface or where prefabricated receptors have been provided, shall be lined and made water-tight by the provision of suitable shower pans of durable material. Such pans shall turn up on all sides at least 2 inches above the finished threshold level. Pans shall be securely fastened to the waste outlet at the seepage entrance making a water-tight joint between the pan and the outlet. Finished floor surfaces shall be constructed of smooth, non-corrosive, non-absorbent, and waterproofed materials.

(4) **Shower Compartments.** No shower stall or receptor shall have a finished interior dimension which is less than "30" inches, and each shower compartment shall be of a finished size capable of completely encompassing a "30" inch circle when the door or curtain is closed, and of a horizontal cross sectional area of not less than 900 square inches. The "30" inch requirement shall not apply to a bathtub used as a shower or to showers installed in remodeling. *(Amended 6-26-72)*

(j) **Sinks**

(1) **Sink Waste Outlets.** Sinks shall be provided with waste outlets not less than 1½ inches in diameter. A strainer, crossbar, or similar device shall be provided. Sinks, on which a food grinder is installed, shall have a waste opening of not less than 3½ inches in diameter.

(k) **Food-Waste-Grinder Units**

(1) **Domestic Food-Waste-Grinder Waste Outlets.** Domestic food-waste-grinders shall be connected to a drain of not less than 1½ inches in diameter.

(2) **Commercial Food-Waste-Grinder Waste Outlets.** Commercial food-waste-grinders shall be connected to a drain of sufficient size to serve the unit, but in no case connected to a drain of less than 2 inches in diameter, and shall be connected, trapped and vented separately from any other fixtures or compartments.

(3) **Water Supply Required.** All food-waste-grinders shall be provided with an adequate supply of water in sufficient flow rate to insure proper functioning of the unit. The water supply line to a commercial food waste grinder, which is equipped with a water rinsed funnel, shall be protected against back siphonage by an air gap or vacuum breaker.

(4) **Grinders Not to be Connected with Grease Interceptors.** No food-waste-grinders shall be connected so as to discharge through a grease interceptor.

(l) **Dishwashing Equipment**

(1) **Dishwashing Machines.** Every dishwasher in a building for public use shall discharge to the drainage system through an air break. If a floor drain constructed without a back-water valve is installed on the horizontal dishwasher branch, the dishwasher may be connected directly to the drainage system. The water supply to any dishwasher in which the supply opening is located below the spill line of the machine shall be protected with a vacuum breaker.

(m) **Automatic Clothes Washers.** A water supply line to an automatic clothes washer shall be protected against backflow by the use of an air gap or vacuum breaker. The discharge shall be through an air break.

(n) **Laundry Trays**

(1) **Laundry Tray Waste Outlet.** Each compartment of a laundry tray shall be provided with a waste outlet not less than 1½ inches in diameter. A strainer or crossbar shall be provided to restrict the clear opening of the waste outlet.

(2) **Laundry Tray Water Supply.** The water supply faucet shall have a plain end spout or if threaded, shall be equipped with a vacuum breaker.

(o) **Garbage Can Washers.** Garbage can washers shall be separately trapped and vented. The receptacle receiving the wash from the garbage cans shall be provided with a removable basket or strainer to prevent discharge of large particles into the building drainage system. Any water supply connection shall be protected against backflow by an air gap or a vacuum breaker.

(p) **Special Plumbing Fixtures**

(1) **Water Connections.** Baptisteries, ornamental and lily pools, aquaria, ornamental fountain basins, swimming pools, and similar constructions when provided with water supplies shall be protected from backsiphonage as required in MHD 130(e)(9).

(q) **Floor Drains**

(1) **Floor Drain Trap and Strainer.** A floor drain shall be considered a plumbing fixture and shall be provided with a trap seal and a removable strainer. The open area of the strainer shall be at least equal to the cross-section area of the drain line to which it connects.

(2) **Basement Floor Drains.** Basement floor drains or floor drains installed in floors which are laid directly on the ground shall be provided with either an integral trap constructed with a spigot outlet or cast iron soil "P" trap with a spigot outlet and provisions for a calked connection to the drain body. A vacuum breaker shall be installed on the water supply to flush rim floor drains.

(3) **Provision for Evaporation.** Where floor drains are subject to evaporation, they shall be of the deep seal type, with a minimum water seal of 3 inches and may be provided with a water supply through an air gap, from a plumbing fixture, automatic priming device or other approved means, to maintain the minimum water seal.

(4) **Venting of Floor Drains.** Floor drains used for shower drains, recessed slop or similar receptors, shall be vented in accordance with Table

132(a)A and 132(a)B and/or MHD 132(f)(3), sized in accordance with Table 131(a)(1). Floor drains installed more than 25 feet from a vented main or branch, shall be provided with a vent installed on the floor drain branch.

(r) **Drinking Fountains.** Drinking fountains shall be constructed of impervious non-oxidizing material and shall be so designed that they may be easily cleaned. The water should be carried to the fixture in an independent pipe, and no part of the fixture shall be used in conveying water to the jet. The design of the fixture shall be such that no part of the supply pipe can be submerged in the fixture, or in the waste pipe from the fixture. The jet shall be slanting and the orifice of the jet shall be protected in such a manner that it cannot be contaminated by droppings from the mouth or by splashing from the basin. The orifice of the jet shall be at least ½ inch above the rim of the basin. All fountains should be so designed that their proper use is self-evident.

MHD 128 Hangers and Supports

(a) **Material.** Hangers, anchors, and supports shall be made of metal or other material of sufficient strength to support the piping and its contents. Piers may be concrete, brick or other approved material.

(b) **Attachment to Building.** Hangers and anchors shall be securely attached to the building construction at sufficiently close intervals to support the piping and its contents.

(c) **Intervals of Support**

(1) **Vertical Piping.** Vertical piping shall be secured at sufficiently close intervals to keep the pipe in alignment. *(Amended 6-26-72)*

(2) Vertical piping of the following materials shall be supported at not more than the distance intervals shown.

(aa) Cast-iron soil pipe—at base and at each story height. Neoprene jointed pipe at 5 ft. intervals, except where 10 foot lengths are used.

(bb) Threaded pipe (SPS)—every other story height.

(cc) Copper tubing—at each story. *(Amended 6-26-72)*

(dd) Lead pipe—4 foot intervals.

(ee) Plastic pipe—1¼ inch and 1½ inch sizes—Exposed pipe at 4 foot intervals, concealed pipe same as (ff)(2" and over).

(ff) Plastic pipe—2 inch and over—at each story. *(Amended 6-26-72)*

(3) Horizontal piping shall be supported at sufficiently close intervals to keep it in alignment and prevent sagging.

(aa) Cast-iron soil pipe—5 foot intervals except where 10 foot lengths of cast-iron soil pipe are used, 10 foot intervals between supports are acceptable.

(bb) Threaded pipe—12 foot intervals.

(cc) Copper tubing (1¼ inch or less) 6 foot intervals.

(dd) Copper tubing (1½ inch or over) 10 foot intervals.

(ee) Lead pipe—on continuous metal or wood strips for its entire length.

(ff) Plastic pipe—32 inch intervals except where conveying waste from dishwashers or similar hot water wastes it shall be supported on continuous metal or wood strips for its entire length.

(4) Closet Bends—Joined to a stack by means of neoprene gasketed or solvent welded joints shall be adequately supported both vertically and horizontally to prevent movement in any direction.

(d) **Base of Stacks.** Stacks shall be adequately supported at their bases.

(e) Piping in the ground shall be laid on a firm bed for its entire length, except where support is otherwise provided which is adequate in the judgement of the Administrative Authority.

MHD 129 Indirect Waste Piping and Special Wastes

(a) **Indirect Wastes**

(1) **Indirect Waste Connections.** No cold storage room, refrigerator, cooling counter, compartment, receptacle, appurtenance or device, which is used, designed or intended to be used for the storage or holding of food or drink, shall have any drain pipe in connection therewith directly connected to any soil, waste or vent pipe. Such equipment shall be discharged to the drainage system through an airbreak as defined in MHD 129(b)(2).

The foregoing does not apply to a dishwashing or culinary sink in a food preparation room.

(2) **Indirect Waste Piping.** Except as otherwise herein provided, the size and construction of indirect waste piping shall be in accordance with MHD 131 and 132, regulating the installation of waste and vent piping.

Indirect waste pipes from appliances, devices, or other equipment not regularly classed as plumbing fixtures, but which are equipped with drainage outlets, shall be trapped, but such traps need not be vented and the waste pipe need be no larger in size than the outlet or tail piece of the fixture, appliance or equipment served; but, in no case shall it be less than 1¼ inch in size. However, overflow pans and drip outlets need not be trapped and may be the same size as the outlet.

(3) **Connections from Water Distribution System.** Indirect waste connections shall be provided for drains, overflows, or relief vents from the water distribution system by means of an airgap.

(4) **Sterilizers.** Appliances, devices, equipment or other apparatus such as stills, sterilizers and similar equipment requiring water and waste shall be indirectly connected, or provided with an airgap between the trap and the appliance.

(5) **Potable Clear Water Wastes.** Expansion tanks, cooling jackets, sprinkler systems, or any similar device which are directly connected to the potable water system and which waste clear water only, shall be discharged to the drainage system through an air gap.

(6) **Drinking Fountains.** Drinking fountains may be installed with indirect wastes.

(7) **Swimming Pools.** Piping carrying waste water from swimming pools or wading pools, including pool drainage, back wash from filters,

water from scum gutter drains or floor drains which serve walks around pools, shall be installed as an indirect waste. Pumps may be utilized to lift waste water when the indirect waste line is below the sewer grade.

(b) Methods of Providing an Air Gap or Air Break

(1) **Method of Providing an Air Gap.** The air gap between the indirect waste pipe and the building drainage system shall be at least twice the effective diameter of the drain served and shall be provided by one of the following methods:

(aa) **To a receptor.** Extend an indirect waste pipe to an open, accessible, individual waste sink, floor drain, or other suitable fixture which is properly trapped and vented.

The indirect waste pipe shall terminate a sufficient distance above the flood level rim of the receiving fixture to provide the required air gap. Only clear water wastes should be discharged to a floor drain.

(bb) **To the inlet side of a trap.** Provide an air gap in the drain ahead of the connection to the inlet side of the trap, which receives the waste from the indirect waste.

(2) **Method of Providing an Air Break.** The air break shall be so installed as to prevent back flow into the fixture, appliance or device by one of the following methods:

(aa) Discharging to the inlet side of the trap of a floor drain, sink, or receptor whose flood level rim is below the bottom of the fixture to be protected.

(bb) Discharging at or below the spill rim of a floor drain, sink or receptor whose flood level rim is below the bottom of the fixture to be protected.

(c) **Receptors or Sumps.** Waste receptors or sumps receiving the indirect waste, shall not be installed in any toilet room, nor in inaccessible or unventilated space, such as a closet or storeroom.

(1) **Clean Out Location.** If the indirect waste receptor is set below floor level, it shall be equipped with a running trap adjacent thereto, with the trap cleanout brought up to floor level.

(2) All plumbing receptors receiving the discharge of the indirect waste pipes, shall be of such shape and capacity as to prevent splashing or flooding.

(3) **Domestic or Culinary Fixtures Prohibited as Receptors.** No plumbing fixture which is used for domestic or culinary purposes shall be used to receive the discharge of an indirect waste. Domestic dishwashers may discharge into a sink, sink tail-piece, or food waste grinder.

(4) **Stand Pipe Receptors.** The stand pipe receptor for an automatic clothes washer shall be individually trapped, and vented. The stand pipe shall extend not more than 30 inches, nor less than 18 inches above its trap, and the trap shall be installed at least 6 inches above the floor.

(5) **Installation of Indirect Waste Piping.** Indirect waste piping shall be installed so as to permit ready access for flushing and cleaning, and shall meet the material and pipe sizing requirements of this code.

(d) Special Wastes

(1) Chemical Wastes

(aa) Chemical or industrial liquid wastes which are likely to damage or increase maintenance costs on the drainage system, shall be pretreated to render them innocuous prior to discharge into the drainage system, when required by the Administrative Authority. *(Amended 6-26-72)*

(bb) Piping conveying industrial, chemical or process wastes from their point of origin to sewer connected pre-treatment facilities, shall be of such material and design as to adequately perform its intended function to the satisfaction of the Administrative Authority. Drainage discharge piping from pre-treatment facilities or interceptors shall conform to standard drainage installation procedure.

(cc) No chemical vent shall intersect or tie into any vent for other services, except where permitted by the Administrative Authority.

(dd) The provision of this section relative to materials and construction for chemical piping need not apply to domestic photographic darkroom installations.

(2) Steam and Hot Water Wastes

(aa) The end of the blow off piping from any boiler or the vent pipe from any blow-off tank shall not terminate in any location where the discharge can endanger the safety of any person or property.

(bb) The exhaust, blow-off, or drain from a boiler or heat exchanger shall not connect directly with any part of the drainage system, but may connect indirectly.

(cc) All such pipes from a high pressure steam source shall be indirectly connected by discharging into a blow-off tank or condenser as required by the State of Minnesota high pressure steam code.

(dd) All such pipes from low pressure steam boilers and hot water boilers rated at 150 horsepower or more shall discharge into a tank or condenser such that the discharge shall be effectively lowered below 180° and the pressure reduced to atmospheric.

(ee) In a similar manner, all other such pipes which would cause a discharge of steam or water to enter the sewer above 180° for a period of more than ten minutes shall be equipped with a means of lowering the entering temperature below 180°. This provision is not meant to be applied to boilers or heat exchangers which are drained on rare occasions. Drains from pressing machines and similar equipment may waste into an open floor drain.

(ff) Any closed condenser or sump shall be provided with a relief vent not less than one pipe size larger than the largest inlet, which relief pipe or vent should be taken off the top, and extended separately full size through the roof.

MHD 130 Water Supply and Distribution

(a) Water Required

(1) Buildings. Every building equipped with plumbing fixtures and used for human occupancy or habitation shall be provided with a supply

of potable water, which meets the standards of the State Board of Health, in the amounts and at the pressures specified in this chapter. For permanent residences or buildings in which people are employed, hot water shall be provided to all plumbing fixtures requiring hot water for proper use.

(2) **Use of Non-Potable Water Prohibited.** Only potable water shall be accessible to plumbing fixtures supplying water for drinking, bathing, culinary use or the processing of food, medical or pharmaceutical products.

(b) Water Service

(1) **Size of Water Service.** The water service pipe shall be of sufficient size to furnish water to the building in quantities and at the pressures required elsewhere in the code. It shall, in no case, be less than ¾ inch nominal diameter. Methods for sizing the water service pipe are described in Appendices C and D.

(2) **Separation of Water Service and Building Sewer**

(aa) **Distance Limits and Methods of Installing.** Except as permitted below, the underground water service pipe and the building drain or building sewer shall not be less than 10 feet apart horizontally and shall be separated by undisturbed or compacted earth.

The water service pipe may be placed in the same trench with the building drain and the building sewer provided approval is given by the Administrative Authority and the following conditions are met:

(aa1) The bottom of the water service pipe, at all points, shall be at least 12 inches above the top of the sewer line at its highest point.

(aa2) The water service pipe shall be placed on a solid shelf excavated at one side of the common trench. The water service pipe shall preferably be of one piece. Where this is not feasible the number of joints in the service pipe shall be kept to a minimum.

(aa3) The sewer and water service pipes shall be tested prior to backfilling, as described in MHD 134(d) and (j) of the Code, or by methods acceptable to the Administrative Authority.

4369-4377

(aa4) Where the provisions of subsections (aa1) and (aa2) cannot be met, the sewer pipe shall be of cast iron or plastic 6A, 6B, 6C(2) or 6C(3) and the water pipe of copper, or cast iron, or plastic 6D, 6E, 6F or 6G (MHD Table 123(c)(3)VI.)

(aa5) Where the water service pipe must cross the building sewer, the bottom of the water service pipe located within ten feet of the point of crossing shall be at least 12 inches above the top of the sewer, except where this is not feasible, the sewer shall be of cast iron or plastic 6A, 6B, 6C(2) or 6C(3) (MHD Table 123(c)(3)VI.) for at least ten feet on either side of the crossing.

(bb) **Water Service Near Sources of Pollution.** Potable water service pipes shall not be located in, under or above cesspools, septic tanks, septic tank drainage fields or seepage pits. A separation of 10 ft. shall be maintained.

(c) **Design of Building Water Distribution System.** The design of the building hot and cold water distribution system shall conform to good engineering practice. Methods used to determine pipe sizes shall be acceptable to the Administrative Authority. (A guide to the design of building water supply systems is given in Appendices C and D.)

(1) **Size of Fixture Branch.** The minimum size of the fixture branch pipe shall be as shown in Table 130(c)(1). The branch pipe to any fixture shall terminate not more than 30 inches from the point of connection to the fixture and in every instance shall be brought to the floor or wall adjacent to the fixture. No concealed water branch pipe shall be less than ½ inch in size. In single family dwelling units, not more than 3 fixtures located in the same room may be supplied by a ½ inch size pipe.

TABLE 130 (c) (1)
MINIMUM SIZES OF FIXTURE WATER BRANCH LINES

Type of Fixture or device	Nominal Pipe Size (Inches)	Type of Fixture or device	Nominal Pipe Size (Inches)
Bath tubs	½	Sinks (service, slop)	½
Combination sink and tray	½	Sinks flushing rim	¾
Cuspidor	½	Urinal (flush tank)	½
Drinking Fountain	½	Urinal (direct flush valve)	¾
Dishwasher (domestic)	½	Water Closet (tank type)	½
Kitchen Sink (res.)	½	Water Closet (flush valve type)	1
Kitchen Sink (com.)	¾	Hose bibs	¾
Lavatory	½	Wall hydrant	¾
Laundry tray	½	Domestic clothes washer	½
		Shower (single head)	½

(2) **High Water Pressure.** When street main pressure exceeds 80 p.s.i., an approved pressure reducing valve shall be installed in the water service pipe near its entrance to the building to reduce water pressure to 80 p.s.i. or lower.

(3) **Water Hammer.** In all building supply systems in which devices or appurtenances are installed which cause noises due to water hammer, protective devices such as air chambers or approved mechanical shock absorbers shall be installed as close as possible to the quick acting valve causing the water hammer.

(aa) **Air Chambers.** Where air chambers are installed, they shall be in an accessible place.

(bb) **Mechanical Devices.** Where mechanical devices are used the manufacturer's specifications shall be followed as to location and method of installation.

(4) **Inadequate Water Pressure.** Whenever water pressure from the street main or other source of supply is insufficient to provide flow pressure at fixture outlets as required under MHD 130(c)(7), a booster pump and pressure tank or other approved means shall be installed on the building water supply system. See MHD 130(d)(2)(cc) for installation.

(5) **Variable Street Pressures.** Where street water main pressures fluctuate significantly, the building water distribution system shall be so designed for the minimum pressure available.

(6) **Supply Demand.** The supply demand in gallons per minute in the building water distribution system shall be determined on the basis of the

load in terms of supply fixture units and of the relationship between load and supply demand.

(7) **Minimum Pressures Required in Water Distribution System.** Based on the minimum static water pressure available, pipe sizes shall be selected so that under conditions of peak demand a minimum flow pressure at the point of discharge shall not be less than shown in Table 130(c)(7) Minimum Flow Pressure and Flow Rates.

In determining minimum pressures at the outlets, allowance shall be made for the pressure drop due to friction loss.

TABLE 130 (c) (7)
MINIMUM FLOW PRESSURE AND FLOW RATES

Location	FLOW PRESSURE p.s.i.	FLOW RATE g.p.m.
Ordinary basin faucet	8	2.0
Self-closing basin faucet	8	2.5
Sink faucet, ⅜ inch	8	4.5
Sink faucet, ½ inch	8	4.5
Bathtub faucet	8	6.0
Laundry tub cock, ½ inch	8	5.0
Shower	8	5.0
Ball-cock for closet	8	3.0
Flush valve for closet	15	15-35
Flushometer valve for urinal	15	15.0
Drinking fountains	15	0.75
Sill cock-wall hydrant	10	5.0

(d) Installing the Building Water Distribution System

(1) Water Supply Control Valves

(aa) **Stop and Waste Valves Prohibited.** Combination stop-and-waste valves or cocks should not be installed underground in water service piping. They may be installed only if approved by the Administrative Authority and when located at least two feet above the water table and at least 10 feet from any sewer.

(bb) **Underground Stop Valve.** On each water service from a street main to a building an approved gate valve or ground key stopcock shall be installed. This valve or stopcock shall be provided with an approved valve box and shall not be under the driveway. However, if there is an accessible stop valve in the street, no other stop is necessary underground.

(cc) **Building Valve.** Each building water service shall be provided with a gate valve or other full-way valve located inside the building near the point that the water service enters.

(dd) **Meter Valve.** A gate valve or other full-way valve shall be installed in the line on the discharge side of each water meter. The valve shall not be less in size than the building water supply.

(ee) **Valves in Dwelling Units.** In each single or multiple unit dwelling, each family unit shall be controlled by an arrangement of shut-off valves which will permit each group of fixtures or the individual fixtures to

be shut off without interference with the water supply to any other family unit or portion of the building.

(ff) **Valves, Buildings other than Dwellings.** In all buildings other than dwellings, shut-off valves shall be installed, which permit the water supply to all equipment in each separate room or to each individual fixture to be shut off without interference with the water supply to any other room or portion of the building.

(gg) **Valves for Sill Cocks.** All sill cocks and wall hydrants shall be separately controlled by a valve inside the building.

(hh) **Tank Controls.** Supply lines to and from pressure or gravity tanks shall be valved at or near the tanks.

(ii) **Water Heating Equipment Valve.** The cold water branch to each hot water storage tank or water heater shall be provided with a full way valve located near the equipment. Each tank or heater shall be equipped with an approved automatic relief valve as specified in MHD 130(f)(2).

(jj) **Valves to be Accessible.** All water supply control valves shall be placed so as to be accessible.

(kk) **Control Valve Design.** Except to single fixtures, control valves on all water lines shall be full-way type and the same size as the line on which they are installed.

(2) **Water Pressure Booster Systems**

(aa) **Water Pressure Booster Systems Required.** When the water pressure in the public water main or individual water supply system is insufficient to supply the probable peak demand flow to all plumbing fixtures and other water needs freely and continuously with the minimum pressures and quantities specified in MHD 130(c)(7) or elsewhere in this Code and in accordance with good practice, the rate of supply shall be supplemented by an elevated water tank, a hydropneumatic pressure booster system or a water pressure booster pump installed in accordance with MHD 130(d)(2)(ee).

(bb) **Support.** All water supply tanks shall be adequately supported.

(cc) **Covers.** All water supply tanks shall be covered to keep out contaminents. The covers of gravity tanks shall be vented with a return bend vent pipe having an area not less than the area of the down feed riser pipe and the vent shall be screened with corrosion resistant screen of not less than 16 mesh.

(dd) **Overflows for Water Supply Tanks.** Each gravity or suction water supply tank shall be provided with an overflow having a diameter not less than shown in Table 130(d)(2)(dd). Sizes of Overflow Pipes for Water Supply Tanks. The overflow outlet shall discharge above and within not less than 6 inches of a roof or roof drain, floor or floor drain, or over an open water supplied fixture. The overflow outlet shall be covered by a corrosion resistant screen of not less than 16 mesh.

(ee) **Water Supply to Booster Pumps.** When a booster pump is used on a water pressure booster system, it shall be supplied through a surge tank or if supplied through a direct connection, a low pressure cut-off switch (10 p.s.i.) and a vacuum relief valve or tank shall be installed on the suction side of the booster pump to prevent the creation of a vacuum or a negative pressure on the suction side of the pump. If installed below grade

TABLE 130 (d) (2) (dd)
SIZES OF OVERFLOW PIPES FOR WATER SUPPLY TANKS

Maximum Capacity of Water Supply Line to Tank	Diameter of Overflow Pipe (Inches ID)	Maximum Capacity of Water Supply Line to Tank	Diameter of Overflow Pipe (Inches ID)
0— 50 gpm.....	2	400— 700 gpm.....	5
50—150 gpm.....	2½	700—1000 gpm.....	6
100—200 gpm.....	3	Over 1000 gpm.....	8
200—400 gpm.....	4		

it shall be installed in a normally occupied area and on a pedestal at least 24 inches above the floor.

(ff) **Potable Water Inlet to Tanks.** Potable water inlets to gravity, surge or break tanks shall be controlled by a ballcock or other automatic supply valve so installed as to prevent the tank from overflowing. The inlet shall be terminated so as to provide an accepted air gap but in no case less than 4 inches above the overflow.

(gg) **Tank Drain Pipes.** Each tank shall be provided at its lowest point with a valved pipe to permit emptying the tank, which shall discharge as required for overflow pipes, and not smaller in size than shown in Table 130(d)(2)(gg). Size of Drain Pipes for Water Tanks.

TABLE 130 (d) (2) (gg)
SIZE OF DRAIN PIPES FOR WATER TANKS

Tank Capacity (gallons)	Drain Pipe (inches)	Tank Capacity (gallons)	Drain Pipe (inches)
Up to 750.....	1	3001 to 5000.....	2½
751 to 1500.....	1½	5001 to 7500.....	3
1501 to 3000.....	2	Over 7500.....	4

(hh) **Prohibited Location of Potable Supply Tanks.** Potable water tanks shall not be located directly under any soil or waste piping.

(ii) **Pumps and Other Appliances.** Water pumps, filters, softeners, tanks, and all other devices and appliances used to handle or treat potable water shall be protected against contamination.

(e) **Protection of Potable Water Supply**

(1) **General.** A potable water supply system shall be designed, installed and maintained in such manner as to prevent contamination from non-potable liquids, solids, or gases, from being introduced into the potable water supply through cross connection or any other piping connections to the system.

(2) **Identification of Potable and Non-Potable Water.** In all buildings where dual water distribution systems, one potable water and other non-

potable water, are installed, each system shall be identified, either by color marking or metal tags.

(aa) **Color Marking.** When color marking is used, potable water lines should be painted green and non-potable water lines should be painted yellow. This requirement may be met by painting 3 inch wide bands green or yellow at intervals of not more than 25 feet and at points where piping passes through walls, floors, or roofs in which case the bands shall be applied to the piping on both sides of the walls and both above and below the floor or roof. Points of outlets for non-potable water shall be marked with a tag or color coded.

(bb) **Metal Tags.** When tags are used, potable water lines shall be identified by 3 inch diameter metal tags bearing the legend SAFE WATER in letters not less than ½ inch in height.

Non-potable water lines shall be identified by firmly attached metal tags having the shape of a 4 inch equilateral triangle bearing the legend WATER UNSAFE in letters not less than 7/16 inch in height.

As in the use of color bands, tags shall be attached to pipes at intervals of not more than 25 feet, and, at either side of points where pipes pass through walls and above and below points where pipes pass through floors or roofs.

(3) **Cross Connection Control.** Cross connections between potable water systems and other systems or equipment containing water or other substances of unknown or questionable safety are prohibited, except when and where, as approved by the authority having jurisdiction, suitable protective devices such as break tanks, reduced pressure zone backflow preventer, or equal, are installed, tested and maintained to insure proper operation on a continuing basis.

(aa) **Individual Water Supplies.** Cross connections between an individual water supply and a potable public supply shall not be made unless specifically approved by the authority having jurisdiction.

(4) **Toxic Materials**

(aa) **Construction.** Piping conveying potable water shall be constructed of nontoxic material.

(bb) **Materials and Substances.** No material or substances that could produce either toxic conditions, taste, odor, or discoloration in a potable water system shall be introduced into or used in such systems.

(cc) **Painting of Water Tanks.** The interior surface of a potable water tank shall not be lined, painted, or repaired with any material which will affect either the taste, odor, color or potability of the water supply when the tank is placed in or returned to service.

(dd) **Used Piping.** Piping which has been used for any other purpose than conveying potable water shall not be used for conveying potable water.

(5) Potable water connections to heating or cooling systems. Potable water connections to boiler feed water systems, cooling systems, or other liquid systems, in which water conditioning chemicals may be introduced shall be made through an air gap or provided with an approved backflow preventer located in the potable water line before the point where such chemicals may be introduced. Where a system is

filled with an antifreeze or toxic solution a permanent tag will be placed in plain view stating "Caution, this system contains anti-freeze/toxic solution." There shall be no permanent direct connection between this system and the potable water supply to the building.

(6) **Prohibited Connections to Fixtures and Equipment.** Connections to the potable water supply system for the following shall be protected against backflow:

(aa) Bidets.

(bb) Operating, dissection, embalming, and mortuary tables or similar equipment; in such installation the hose used for water supply shall be equipped with a vacuum breaker installed at least 6 ft. 6 in. above the floor.

(cc) Pumps for nonpotable water, chemicals, or other substances; priming connections may be made only through an air gap.

(dd) Building drainage, sewer or vent systems.

(ee) Any other fixture of similar hazard.

(7) **Refrigerating Unit Condensers and Cooling Jackets.** Except where potable water provided for a refrigerator condenser or cooling jacket is entirely outside the piping or tank containing a toxic refrigerant, with two separate thicknesses of metal separating the refrigerant from the potable water supply, inlet connection shall be provided with an approved check valve. Also, adjacent to and at the outlet side of the check valve, an approved pressure relief valve set to relieve at 5 psi above the maximum water pressure at the point of installation shall be provided if the refrigeration units contain more than 20 pounds of refrigerants.

(8) **Used Water Return Prohibited.** Water used for cooling of equipment or other processes shall not be returned to the potable water system. Such water shall be discharged into the drainage system through an air gapped indirect waste, or other approved method of disposal.

(9) **Protection Against Backflow and Backsiphonage**

(aa) **Water Outlets.** A potable water system shall be protected against backflow and backsiphonage by providing and maintaining at each outlet:

(aa1) Air Gap: An air gap as specified herein between the potable water outlet and the flood level rim of the fixture it supplies or between the outlet and any other source of contamination or

(aa2) Backflow Preventer: A backflow preventer device or vacuum breaker to prevent the drawing of contamination into the potable water system.

(bb) **Minimum Required Air Gap**

(bb1) How Measured: The minimum required air gap shall be measured vertically from the lowest end of a potable water outlet to the flood rim or line of the fixture or receptacle into which it discharges.

(bb2) Size: The minimum required air gap shall be twice the effective opening of a potable water outlet unless the outlet is a distance less than 3 times the effective opening away from a wall or similar vertical surface in which cases the minimum required air gap shall be 3 times the effective opening of the outlet. In no case shall the minimum required air gap be less than shown in 130(e)9.

TABLE 130 (e) 9
MINIMUM AIR GAPS FOR PLUMBING FIXTURES

Fixture	Minimum Air Gap	
	When Not Affected By Near Wall (1) (Inches)	When Affected By Near Wall (2) (Inches)
Lavoratories and other fixtures with effective opening not greater than ½ inch diameter	1.0	1.50
Sink, Laundry trays, goose-neck bath faucets and other fixtures with effective openings not greater than ¾ inch diameter	1.5	2.25
Over rim bath fillers and other fixtures with effective openings not greater than 1 inch diameter	2.0	3.0
Drinking water fountains	1.0	1.50
Effective openings greater than one inch	2x diameter of effective opening	3x diameter of effective opening

(1) Side walls, ribs or similar obstructions do not affect air gaps when spaced from inside edge of spout opening a distance greater then three times the diameter of the effective opening for a single wall, or a distance greater than four times the diameter of the effective opening for two intersecting walls.

(2) Vertical walls, ribs, or similar obstructions extending from the water surface to or above the horizontal plane of the spout opening require a greater air gap when spaced closer to the nearest inside edge of spout opening than specified in Note 1, above. The effect of three or more such vertical walls or ribs has not been determined. In such cases, the air gap shall be measured from the top of the wall.

(cc) **Devices for the Protection of the Potable Water Supply.** Approved backflow preventers or vacuum breakers shall be installed with any plumbing fixture or equipment, the potable water supply outlet of which may be submerged and which cannot be protected by a minimum air gap.

(dd) **Approval of Devices.** Before any device for the prevention of backflow or backsiphonage is installed, it shall have first been certified by a recognized testing laboratory acceptable to the Administrative Authority. Devices installed in a building potable water supply distribution system for protection against backflow shall be maintained in good working condition by the person or persons responsible for the maintenance of the system.

(ee) **Installation of Devices**

(ee1) **Vacuum Breakers:** Vacuum breakers shall be installed with the critical level at least six (6) inches above the flood level rim of the fixture they serve and on the discharge side of the last control valve to the fixture.

No shut off valve or faucet shall be installed beyond the vacuum breaker. For closed equipment or vessels such as pressure sterilizers the top of the vessel shall be treated as the flood level rim but a check valve shall be installed on the discharge side of the vacuum breaker.

(ee2) Reduced Pressure Zone Backflow Preventor: A reduced pressure zone type backflow preventer may be installed subject to full static pressure.

(ee3) Devices of All Types: Backflow and backsiphonage preventing devices shall be accessibly located preferably in the same room with the fixture they serve. Installation in utility or service spaces, provided they are readily accessible, is also permitted.

(ff) Tanks and Vats Below Rim Supply

(ff1) Where potable water outlet terminates below the rim of a tank or vat and the tank or vat has an overflow of a diameter not less than given in Table 130(d)(2)(dd) Sizes of Overflow Pipes for Water Supply Tanks, the overflow pipe shall be provided with an air gap as close to the tank as possible.

(ff2) The potable water outlet to the tank or vat shall terminate a distance not less than 1½ times the height to which water can rise in the tank above the top of the overflow. This level shall be established at the maximum flow rate of the supply to the tank or vat with all outlets except the air gap, overflow outlet closed.

(ff3) The distance from the outlet to the high water level shall be measured from the critical point of the potable water supply outlet.

(gg) **Protective Devices Required.** Approved devices to protect against backflow and backsiphonage shall be installed at all fixtures and equipment where backflow and/or backsiphonage may occur and where a minimum air gap cannot be provided between the water outlet to the fixture or equipment and its flood level rim.

(gg1) Connections not subject to back pressure: Where a water connection is not subject to back pressure an atmospheric type vacuum breaker shall be installed on the discharge side of the last valve on the line serving the fixture or equipment. Where a valve is installed on the discharge side of a vacuum breaker, that vacuum breaker must be a pressure-type vacuum breaker which complies with MHD 130(e)(9)(dd). A list of some conditions requiring protective devices of this kind is given in Table 130(e)(9)(gg1) Cross Connections Where Protective Devices are Required and Critical Level (C-L) Settings for Backflow Preventers.

(gg2) Connections Subject to Back Pressure: Where a potable water connection is made to a line, fixture, tank, vat, pump or other equipment with a hazard of backflow or backsiphonage, where the water connection is subject to backpressure, and an air gap cannot be installed, the Administrative Authority may require the use of break tank and booster pump or, where conditions permit, an approved reduced pressure zone backflow preventer. A partial list of such connections is shown in Table 130(e)(9)(gg2), Partial List of Cross Connections Subject to Back Pressure.

(hh) **Barometric Loop.** Water connections where an actual or potential backflow or backsiphonage hazard exists may in lieu of devices specified in 130(e)(9)(gg) be provided with a barometric loop. Barometric loops shall precede the point of connection.

TABLE 130 (e) (9) (gg1)

CROSS CONNECTIONS WHERE PROTECTIVE DEVICES ARE REQUIRED AND CRITICAL LEVEL (C-L) SETTINGS FOR BACKFLOW PREVENTERS*

Fixture or Equipment	Method of Installation
Aspirators and Ejectors	C-L at least 6 inches above flood level of receptacle.
Dental Units	On models without built-in vacuum breakers C-L at least 6 inches above flood level rim of bowl.
Dishwashing Machines	C-L at least 6 inches above flood level of machine. Install on both hot and cold water supply lines.
Flushometer (Closet & Urinal)	C-L at least 6 inches above top of fixture supplied.
Garbage Can Cleaning Machine	C-L at least 6 inches above flood level of machine. Install on both hot and cold water supply lines.
Hose Outlets	C-L at least 6 inches above highest point on hose line.
Laundry Machines	C-L at least 6 inches above flood level of machine. Install on both hot and cold water supply lines.
Lawn Sprinklers	C-L at least 12 inches above highest sprinkler or discharge outlet.
Steam Tables	C-L at least 6 inches above flood level.
Tank and Vats	C-L at least 6 inches above flood level rim or line.
Trough Urinals	C-L at least 30 inches above perforated flush pipe.
Flush Tanks	Equip with approved ball cock. Where ball cocks touch tank water equip, with vacuum breaker with 3-L at least 1 inch above overflow outlets. Where ball cock does not touch tank water, install ball cock outlet at least 1 inch above overflow outlet or provide vacuum breaker as specified above.
Hose Bibs (Where aspirators or ejectors could be connected)	C-L at least 6 inches above flood level of receptacle served.

*Critical Level (C-L) is defined as the level to which the backflow preventer (vacuum breaker) may be submerged before backflow will occur. Where the C-L is not shown on the preventer, the bottom of the device shall be taken as the C-L.

TABLE 130 (e) (9) (gg2)

PARTIAL LIST OF CROSS CONNECTIONS SUBJECT TO BACK PRESSURE

Chemical Lines
Dock Water Outlets
Individual Water Supplies
Industrial Process Water Lines
Pressure Tanks
Pumps
Steam Lines
Tanks and Vats—Bottom Inlets

(f) **Hot Water Supply System.** Hot water shall be supplied to all plumbing fixtures and equipment used for bathing, washing, culinary purpose, cleansing, laundry or building maintenance, where necessary for proper functioning.

(1) **Return Circulation—Where Required.** Hot water supply systems in four story buildings or buildings where the developed length of hot water piping from the source of hot water supply to the farthest fixture supplied exceeds 100 feet should be of the return circulation type, to conserve water.

(2) **Pressure Relief Valves and Temperature Relief Valves Devices Required**

(aa) Equipment used for heating water or storing hot water shall be protected by approved safety devices in accordance with one of the following methods:

(aa1) A separate pressure relief valve and a separate temperature relief valve; or

(aa2) A combination pressure and temperature relief valve. All safety devices shall meet the current requirements of the A.N. Standards Institute, American Society of Mechanical Engineers, or the Underwriters Laboratories. Listing by Underwriters Laboratories, American Gas Association or National Board of Boiler and Pressure Vessel Inspectors shall constitute evidence of conformance with these standards. Where a device is not listed by any of these, it must have certification by an approved laboratory as having met these requirements.

(bb) **Pressure Relief Valves.** Pressure relief valves shall have a relief rating adequate to meet the pressure conditions in the equipment served. They shall be installed in the cold water supply line to the heating equipment served except where scale formation from hard water may be encountered in which case they may be installed in the hot water supply line from the heating equipment served. There shall be no shutoff valve between the pressure relief valve and the tank. The setting shall not exceed the tank working pressure.

(cc) **Temperature Relief Valves.** Temperature relief valves shall be of adequate relief rating, expressed in BTU/HR, for the equipment served. They shall be installed so that the temperature sensing element is immersed in the hottest water within the top 6 inches of the tank. The valve shall be set to open when the stored water temperature is 210°F. (or less).

(dd) **Combination Pressure—Temperature Relief Valves.** Combination pressure temperature relief valves may be used for storage equipment provided the other applicable requirements for individual pressure and individual temperature relief valves are met.

(ee) **Installation of Relief Valves.** No check valve or shutoff valve shall be installed between any safety device and the hotwater equipment used, nor shall there be any shutoff valve in the discharge pipe from the relief valve. The discharge pipe shall be full size and run to within 18" of the floor or a safe place of disposal.

(3) **Pressure Marking of Hot Water Storage Tank.** Hot water storage tanks shall be permanently marked in an accessible place with the maximum allowable working pressure.

(4) **Drain Cocks or Valves for Hot Water Storage Tanks.** Drain cocks or valves for emptying shall be installed at the lowest point of each hot water storage tank.

(5) **Tankless and Instantaneous Type Heaters.** Tankless and instantaneous type water heaters require pressure relief valves only.

4369-437

(6) Every water heater installation shall be readily accessible for inspection, repair or replacement. The appliance space shall be provided with an opening or doorway of sufficient size to provide such access.

(g) **Disinfection of Potable Water System.** New or repaired potable water systems shall be disinfected prior to use whenever required by the authority having jurisdiction. The method to be followed shall be that prescribed by the health authority or, in case no method is prescribed by him, the following:

(1) The pipe system shall be flushed with clean, potable water until no dirty water appears at the points of outlet.

(2) The system or part thereof shall be filled with a water chlorine solution containing at least 50 parts per million of chlorine and the system or part thereof shall be valved off and allowed to stand for 24 hours or

(3) The system or part thereof shall be filled with a water-chlorine solution containing at least 200 parts per million of chlorine and allowed to stand for 3 hours.

(4) Following the allowed standing time the system shall be flushed with clean potable water until no chlorine remains in the water coming from the system.

(h) **Installation of Reduced Pressure Backflow Preventors.** The installation of reduced pressure backflow preventors shall be permitted only when a periodic testing and inspection program conducted by qualified personnel will be provided by an agency acceptable to the Administrative Authority. Inspection intervals shall not exceed 1 year, and overhaul intervals shall not exceed 5 years. They shall be inspected frequently after initial installation to assure that they have been properly installed and that debris resulting from the piping installation has not interfered with the functioning of the device.

(i) **Double Check—Double Gate Valves.** The Administrative Authority may authorize the installation of approved, double check - double gate valve assemblies with test cocks as protective devices against back flow in connections between a potable water system and other non-toxic fluid systems which present no significant health hazards.

(j) **Water Meter Installation.** Water meters shall be placed at least 12 inches above the basement floor and shall be rigidly supported with a permanent support in order to prevent the meter from vibrating when the water is passing through it.

MHD 131 Drainage Systems

(a) Determining Size of Drainage System

(1) **Load on Drainage Piping.** The load on drainage system piping shall be computed in terms of drainage fixture units in accordance with Table 131(a)(1) and MHD 131(a)(1)(aa), except the Administrative Authority may allow variations where it is shown by a hydraulic analysis of the piping system, submitted to the Administrative Authority, that such variation would result in a more desirable flow rate in the piping system.

TABLE 131 (a) (1)

FIXTURE UNIT VALUES FOR VARIOUS PLUMBING FIXTURES

Type of Fixture	Fixture Unit Value	Minimum Fixture Trap and drain size
Clothes Washer (Domestic Use)	2	1½
Clothes Washer (Public Use in Groups of 3 or more)	6 each	
Bath tub with or without shower	2	1½
Bidet	2	1½
Dental unit or cuspidor	1	1¼
Drinking Fountain	1	1¼
Dishwasher, Domestic	2	1½
Dishwasher, Commercial	4	2
Floor Drain with 2 inch waste	2	2
Floor drain with 3 inch waste	3	3
Floor Drain with 4 inch waste	4	4
Lavatory	1	1¼
Laundry Tray (1 or 2 Compartment)	2	1½
Shower Stall, Domestic	2	1½
Shower (Gang) per head	1	
SINKS:		
Combination, Sink and Tray (with disposal unit)	3	1½
Combination, Sink and Tray (with one trap)	2	1½
Domestic	2	1½
Domestic, with disposal unit	2	1½
Surgeons	3	1½
Laboratory	1	1½
Flushrim or Bedpan washer	6	3
Service	3	2
Pot or Scullery	4	2
Soda Fountain	2	1½
Commercial, Flat Rim, Bar or Counter	3	1½
Wash, Circular or Multiple (per set of faucets)	2	1½
URINAL Pedestal, Wall Hung, with 3 inch trap (Blowout and Syphon Jet)	6	3
Wall Hung with 2 inch trap	3	2
Wall Hung with 1½ inch trap	2	1½
Trough (per 6 foot section)	2	1½
Stall	3	2
WATER CLOSET	6	3
Unlisted Fixture or Trap Size		
1¼ inch	1	
1½ inch	2	
2 inch	3	
2½ inch	4	
3 inch	5	
4 inch	6	

(aa) **Values for Continuous Flow.** Fixture unit values for continuous or semi-continuous flow into the drainage system, such as from a pump, sump ejector, air conditioning equipment, or similar device shall be computed on the basis of one fixture unit for each gallon per minute flow.

(2) **Selecting Size of Drainage Piping.** Pipe sizes shall be determined from Table 131(a)(2)A and Table 131(a)(2)B on the basis of drainage load computed from Table 131(a)(1) and MHD 131(a)(1)(aa).

TABLE 131 (a) (2)A

MAXIMUM LOADS FOR HORIZONTAL DRAINS IN FIXTURE UNITS

Diameter of Drain	Horizontal Fixture Branch*- ¼ in/ft.	Building Sewer*****, Building Drain and Building Drain Branches--from Stacks**** Slope			
		1/16 in/ft.	⅛ in/ft.	¼ in/ft.	½ in/ft.
(inches)	(f.u.)	(f.u.)	(f.u.)	(f.u.)	(f.u.)
1¼	1				
1½	3				
2	6			21	26
2½	12			24	31
3**	32***		36***	42***	50***
4	160		180	216	250
5	360		390	480	575
6	620		700	840	1,000
8	—	1,400	1,600	1,920	2,300
10	—	2,500	2,900	3,500	4,200
12	—	3,900	4,600	5,600	6,700
15	—	7,000	8,300	10,000	12,000

*Includes Horizontal Branches of the Building Drain.
**No water closet shall discharge into a drain less than 3 inch.
***Not over 2 Water Closets.
****Every building drain that receives the discharge of (3) or more water closets, shall not be less than 4 inch in diameter. *(Amended 7-26-73)*

*****No building sewer shall be less than four inches in diameter.

(3) **Minimum Size of Soil and Waste Stacks.** No soil or waste stack shall be smaller than the largest horizontal branch connected thereto except that a 4x3 water closet connection shall not be considered as a reduction in pipe size.

(4) ***Minimum Size of Stack Vent or Vent Stack.*** Any structure in which a building drain is installed shall have at least one stack vent or vent stack carried full size through the roof not less than 3 inches in diameter. Where one or more soil stacks are required to extend through the roof undiminished in size they should be the stack or stacks most remote from the location where the building drain leaves the building. When a soil or waste stack receives the discharge of fixtures located on 2 or more floors, and the uppermost fixture is located 3 or more floors above the building drain, such stack and stack vent shall continue undiminished in size through the roof. *(Amended 4-5-73)*

(5) **Provision for Future Fixtures.** When provision is made for future installation of fixtures, those provided for shall be considered in determining the required sizes of drain and vent pipes. Construction to provide for such future installations shall be terminated with a plugged fitting or fittings.

TABLE 131 (a) (2)B

MAXIMUM LOADS FOR SOIL AND WASTE STACKS IN FIXTURE UNITS

Diameter of Stack	Stacks of not more than 3 stories or Branch Intervals	Stacks of more than 3 stories or Branch Intervals	Total at One Story or Branch Interval
1¼*	2	2	1
1½*	4	4	2
2*	9	18	6
2½*	20	42	9
3	36***	72***	24**
4	240	500	90
5	540	1,100	200
6	960	1,900	350
8	—	3,600	600
10	—	5,600	1,000
12	—	8,400	1,500

*No water closets permitted.
**Not over 2 water closets permitted.
***Not over 6 water closets permitted, and not over 6 branch intervals on a 3 inch soil stack.

(Amended 12-26-72)

(6) **Minimum Size of Underground Drainage Piping.** No portion of the drainage system installed underground shall be less than 2 inches in diameter.

(7) **Sizing of Offsets on Drainage Piping**

(aa) **Offsets of 45 Degrees or Less.** An offset in a vertical stack with a change of direction of 45° or less from the vertical, may be sized as a straight vertical stack.

(bb) **Offsets of more than 45 Degrees.** A stack with an offset of more than 45 degrees from the vertical shall be sized as follows:

The portion of the stack above the offset shall be sized as for a regular stack based on the total number of fixture units above the offset.

The offset shall be sized as for a building drain branch. Table 131(a)(2)A Maximum Loads for Horizontal Drains.

The portion of the stack below the offset shall be sized at least as large as the offset. *(Amended 4-5-73)*

(cc) **Above Highest Branch.** An offset above the highest branch connection is an offset in the stack vent and shall be considered only as it affects the developed length of the vent.

(dd) **Below Lowest Branch.** In the case of an offset in a soil or waste stack below the lowest branch connection, there shall be no change in diameter required if the offset is made at an angle of not greater than 45 degrees from the vertical.

If such offset is made at an angle of greater than 45 degrees from the vertical, the required diameter of the offset and the stack below it shall be sized as for a building drain. (Table 131(a)(2)A)

(8) **Fixture Connections to an Offset of More than 45° or at Base of Stack.** When stacks in buildings of 5 or more stories in height receive the discharge of fixtures 4 or more stories above the offset, no fixtures on the floor at which the offset occurs shall be connected to the stack within 8 feet of the base of the offset measured vertically or horizontally. Said fixtures may also be connected into vertical section of the stack more than 2 feet below the offset. Fixture connections to horizontal piping at the bases of such stacks shall be made in the same manner, or at a point acceptable to the Administrative authority.

(b) **Drainage Piping Installation**

(1) **Pitch or Horizontal Drainage Piping.** Horizontal drainage piping shall be installed in uniform alignment at uniform slopes in accordance with the following requirements and in no case at a slope which will produce a computed velocity of less than 2 feet per second, unless otherwise permitted by the Administrative Authority, based on hydraulic analysis of the piping system.

Size of Piping	Minimum Slope
Less than 3 inches	1/4 inch per foot
3 inches to 6 inches	1/8 inch per foot
8 inches and over	1/16 inch per foot

(2) **Change in Direction.** Changes in direction in drainage piping shall be made by the appropriate use of 45 degree wyes, long or short sweep quarter bends, sixth, eighth, or sixteenth bends, or by combination of these or equivalent fittings. Single and double sanitary tees, quarter bends, and long turn ells may be used in drainage lines only where the direction of the flow is from the horizontal to the vertical.

(aa) **Short Sweeps Permitted.** Short sweep bends or long turn ells 3 inch or larger in diameter may be used in soil or waste lines where the change in direction of flow is from either the horizontal to the vertical or from the vertical to the horizontal.

(3) **Prohibited Fittings and Connections.** No fittings having a hub in the direction opposite to flow, or straight tee branch shall be used as a drainage fitting. No fitting or connection which has an enlargement chamber or recess with a ledge or shoulder, or reduction in pipe area shall be used. No drainage or vent piping shall be drilled, tapped, or welded unless otherwise permitted by the Administrative Authority. Fittings used for back-to-back, wall outlet, blowout type water closet bowls shall have a baffle plate or other device to prevent the waste water from one water closet from entering the opposite water closet. No fixture connection shall be made to a closet bend. No running threads, bands, or saddles shall be used. The short pattern fitting in a horizontal position is prohibited in underground work.

(aa) **Heel or Side-Inlet Bends.** A heel or side-inlet quarter bend shall not be used as a vent when the inlet is placed in a horizontal position or any similar arrangement of pipe or fittings producing a similar effect.

(bb) **Obstruction to Flow.** No fitting, connection, device or method of installation which obstructs or retards the flow of water, wastes, sewage, or air in the drainage or venting system in an amount greater than the normal frictional resistance to flow, shall be used unless it is indicated as acceptable to this Code by having a desirable and acceptable function and as of ultimate benefit to the proper and continuing functioning of the plumb-

ing system. The enlargement of a 3 inch closet bend or stub to 4 inches shall not be considered an obstruction, provided the horizontal flow line or insert is continuous without forming a ledge.

(4) **Dead Ends.** In the installation of a drainage system, dead ends shall be avoided except where necessary to extend piping for a cleanout so as to be accessible.

(5) **Building Drains Below Building Sewer.** Building drains which cannot be discharged to the sewer by gravity flow shall discharge into an approved watertight, gas tight vented sump or receiving tank, so located as to receive the sewage or wastes by gravity. From such sump or receiving tank the sewage or other liquid wastes shall be lifted and discharged into the building gravity drain by approved automatic pumping equipment. The system or drainage piping entering such sump shall be installed and vented as required in this section for a gravity system.

(aa) **Design of Sumps**

(aa1) Sumps and receiving tanks shall be constructed of poured concrete, metal, or other approved materials. If constructed of poured concrete, the walls and bottom shall be adequately reinforced and designed to acceptable standards. Metal sumps or tanks shall be of such thickness as to serve their intended purpose and shall be treated internally and externally to resist corrosion.

(aa2) The discharge line from such pumping equipment shall be provided with an accessible back-water valve and gate valve, and if the gravity drainage line to which such discharge line connects is horizontal, the method of connection shall be from the top through a wye branch fitting. The minimum size of any pump or discharge pipe from a sump having a water closet connected thereto shall not be less than 2 inches.

(aa3) Building drains or building sewers receiving discharge from any pumping equipment shall be adequately sized to prevent over-loading. In all buildings, other than single and 2 family dwellings, should 3 or more water closets discharge into the sump, duplicate pumping equipment shall be installed.

(aa4) Sumps and receiving tanks shall be provided with gastight metal covers, except that float control or switch rods shall operate without binding. Such cover shall be of a bolt and gasket type or equivalent manhole opening to permit access for inspection, repairs, and cleaning.

4369 4377

(aa5) In single family dwellings the minimum capacity of a sump shall be 18 gallons.

(bb) **Sump Vent.** The top of the sump tank shall be provided with a vent pipe which shall extend separately through the roof, or may be combined with other vent pipes. Such vent shall be large enough to maintain atmospheric pressure within the sump under all normal operating conditions and in no case less than in accordance with the number of fixture units discharging into the sump. When the foregoing requirements are met and the vent after leaving the sump, is combined with vents from fixtures discharging into the sump, the size of the combined vent need not exceed that required for the total number of fixtures discharging into the sump. No vent from an air operated sewage ejector shall combine with other vents.

(cc) **Clear Water Sumps.** Sumps and receiving tanks which receive only clear water drainage, and from which sewage is excluded, need not be air tight or vented.

MHD 132 Vents and Venting

(a) **Selecting Size of Vent Piping**

(1) **General.** Vent pipe sizes shall be determined from Tables 132(a) A and 132(a)B on the basis of length and drainage load computed from Table 131(a)(1) and MHD 131(a)(1)(aa).

(2) **Minimum Diameter of Vent Piping.** No vent pipe shall be less than 1¼ inches in diameter.

(3) **Individual Vents.** The diameter of the individual vents shall be determined from Table 132(a)B but shall in no case be less than ½ the diameter of the fixture drain served.

(4) **Relief and Yoke Vents.** The diameter of relief and yoke vents shall be at least ½ the diameter of the soil and waste branch or stack served, nor less than the size of the vent to which they are connected.

(5) **Circuit or Loop Vents.** The diameter of circuit or loop vents shall be at least ½ the diameter of the horizontal soil or waste branch to which they connect. Maximum developed length as shown for fixture units in Table 132(a)B. See MHD 132(j).

(6) **Branch Vents.** The diameter of branch vents connecting more than one individual vent to a vent stack or stack vent shall be in accordance with Table 132(a)B. The branch vent size shall be based upon the number of fixture units connected thereto, and the developed length of the branch vent measured from its vent stack (or stack vent) connection to the farthest fixture drain connection served by the branch vent.

(7) **Vent Headers.** The diameter of vent headers shall be in accordance with Table 132(a)B. The vent header size shall be based upon the sum of the fixture unit loads at the stacks vented through such section of the header, and the developed length shall be that of the vent stack having the longest developed length to the open air.

(8) **Vent Stacks.** The diameter of the vent stacks shall be determined from Table 132(a)A, based upon the size of the soil or waste stacks served thereby, the number of fixture units connected to the soil or waste stack, and the developed length of the vent stack. Such developed length shall be measured from the lowest connection of the vent stack with the soil or waste stack to the open air.

(b) **Protection of Trap Seals.** The protection of trap seals from siphonage or back pressure shall be accomplished by the appropriate use of soil or waste stacks or vents, installed in accordance with requirements of this chapter, so that at no time the trap shall be subjected to a pressure differential of more than one inch of water.

(c) **Vent Stacks and Stack Vents**

(1) **Vent Stack Required.** Every building in which plumbing is installed shall have at least one 3 inch vent stack (or stack vent) carried full size through the roof as provided in MHD 131(a)(4). A vent stack or main vent shall be installed with a soil or waste stack whenever individual vents, relief vents, or branch vents are required in a building of 3 or more branch intervals.

TABLE 132 (a)A
SIZE AND LENGTHS OF VENT STACKS

SIZE OF SOIL OR WASTE STACK IN INCHES	FIXTURE UNITS CONNECTED in d. f. u.	DIAMETER OF VENT IN INCHES										
		1¼	1½	2	2½	3	4	5	6	8	10	12
		MAXIMUM DEVELOPED LENGTH OF VENT, IN FEET										
1¼	2	50										
1½	4	40	200									
2	9		100	200								
2	18		50	150								
2½	42		30	100	300							
3	72			50	80	400						
4	240			40	70	250						
4	500				50	180	700					
5	540					150	600					
5	1100					50	200	700				
6	1900						50	200	700			
8	2200							150	500			
8	3600							60	250	800		
10	3800								200	600		
10	5600								60	250	800	
12	6000									200	600	
12	8400									100	300	900
15	10500									50	200	600
15	50000										75	180

(Amended 12-26-72)

TABLE 132 (a) B

SIZE AND LENGTH OF VENTS— INDIVIDUAL, BRANCH, CIRCUIT AND HEADER

Fixture Units connected in d.f.u.	DIAMETER OF VENT, IN INCHES							
	1¼	1½*	2	2½	3	4	5	6
	MAXIMUM DEVELOPED LENGTH OF VENT, IN FEET							
2	50	ul						
4	40	200	ul					
8	np	150	250					
10		100	200	ul				
24		50	150	400	ul			
42		30	100	300	500			
72		np	50	80	400			
240			np	50	200	ul		
500				np	180	700	ul	
1100					50	200	700	

ul—Unlimited length.
np—Not permitted.

*Except 6 fixture unit fixtures.

(Amended 12-26-72)

(2) **Connections at Base and Top**

(aa) **Buildings of 3 and 4 Branch Intervals.** In buildings of 3 or 4 branch intervals in height, all main vents or vent stacks shall connect full size at their base to the main soil or waste stack below, through, or not more than 18 inches above the lowest fixture branch.

(bb) **Buildings of 5 or More Branch Intervals.** In buildings of 5 or more branch intervals in height, a main vent or vent stack shall connect full size with the soil or waste stack it serves, with a wye and ⅛ bend below the lowest fixture branch connected to such soil or waste stack, or at a point approved by the Administrative Authority.

Each such soil or waste stack, and vent stack shall be similarly cross-connected with a yoke vent at intervals of not more than 5 branch intervals as described in MHD 132(n).

(3) **Offsets in Buildings of Five or More Branch Intervals.** As provided in MHD 131(a)(7), soil and waste stacks offset at an angle of more than 45 degrees from the vertical, that receive the discharge of fixtures 4 or more stories above the offset, shall have a yoke vent installed (as per MHD 132(n)) at the base of the upper stack section.

(4) **Vent Headers.** Where stack vents and vent stacks are connected into a vent header, such connections shall be made at the tops of the stacks. The vent header shall connect to a vent extension through the roof.

(d) **Vent Terminals**

(1) **Extension Above Roofs.** Extension of vent pipes through a roof shall be terminated not less than 12 inches above it. Where a roof is to be used for any purpose other than weather protection, the vent extensions shall be run at least 7 feet above the roof.

(2) **Waterproof Flashings.** Each vent terminal shall be made watertight with the roof by proper flashing of copper, lead, galvanized iron, or other

approved flashings or flashing materials. Vent pipe terminals shall pass through the roof and shall be at least 2 inches in diameter. When approved by the Administrative Authority, other materials or methods may be used which provide adequate protection.

(3) **Location of Vent Terminal.** No vent terminal shall be located directly beneath any door, window, or other ventilating opening of the building or of an adjacent building nor shall any such vent terminal be within 10 feet horizontally of such an opening unless it is at least 2 feet above the top of such opening.

(4) **Terminals Adjoining High Buildings.** In the event that a new building is built higher than an existing building, the owner of the new building shall not locate openable windows, doors or other ventilating openings within 10 feet of any existing vent stack on the lower building unless the owner of such new building shall defray the expenses or shall himself make such alterations to conform to MHD 132(d)(3).

(e) Vent Grades and Connections

(1) **Vent Grade.** All vent and branch vent pipes shall be so graded and connected as to drain back to a soil or waste pipe by gravity.

(2) **Vertical Rise.** Where vent pipes connect to a horizontal soil or waste pipe, the vent shall be taken off above the center line of the pipe. The vent pipe shall rise vertically, or at an angle not more than 45 degrees from the vertical, to a point at least 6 inches above flood-level rim of the fixture it is venting, before offsetting horizontally or before connecting to the branch vent.

(3) **Height Above Fixtures.** A connection between a vent pipe and a vent stack or stack-vent shall be made at least 6 inches above the flood-level rim of the highest fixture served by the vent. Horizontal vent pipes forming branch vents, relief vents, or loop vents shall be at least 6 inches above the flood-level rim of the highest fixture served.

(f) Wet Venting

(1) **Single Bathroom Groups.** A single bathroom group of fixtures may be installed with the drain from a back-vented lavatory, kitchen sink, or combination fixture serving as a wet vent for a bathtub or shower stall provided that:

(aa) Not more than one fixture unit is drained into a 1½ inch diameter wet vent or not more than 4 fixture units drain into a 2 inch diameter wet vent.

(bb) The horizontal branch drain connects to the stack at or below the same level as the water-closet drain when installed on the top floor.

(2) **Double Bathroom Groups—Back-to-Back.** Bathroom groups back-to-back consisting of two lavatories and two bathtubs or shower stalls may

be installed on the same horizontal branch with a common vent for the lavatories and with no back vent for the bathtubs or shower stalls, provided the wet vent is not less than 2 inches in diameter.

(3) **Basement Shower.** A basement shower may be wet vented through the waste from a laundry tub, lavatory, or sink, provided the wet vent is not less than 2 inches in diameter, and the drain conforms to Table 132(L)(1).

(4) **Basement and Cellar Closet.** A basement or cellar lavatory may be connected to a properly installed vent from a floor set, basement or cellar, water closet, provided the vent is not less than 2 inches in diameter. *(Amended 6-26-72)*

(g) Stack Venting

(1) **One Bathroom Group.** A group of fixtures consisting of one bathroom group and a kitchen sink or combination fixture, may be installed without individual fixture vents in a one-story building or on the top floor of a building, provided each fixture drain connects independently to a stack at least 3 inches in diameter extended full size through the roof, and bathtub or shower stall drain enters the stack at or above the same level as the water closet drain, and in accordance with requirements in Table 132(L)(1) Distance of Fixture Trap From Vent. Where the trap arm distances are exceeded the fixtures shall be revented. *(Amended 6-26-72)*

(h) Individual Fixture Reventing

(1) **Where Required.** When fixtures other than water closets discharge downstream from a water closet, each fixture connecting downstream shall be individually vented, under provisions set down in this Code.

(i) Common Vents

(1) **Individual Vent as Common Vent.** An individual vent, installed vertically, may be used as a common vent for two fixture traps when both fixture drains connect with a vertical drain at the same level.

(2) **Fixtures Connected to Vertical Drain at Different Levels.** Except for water closets or similar fixtures, a common vent may be used for two fixtures set on same floor level but connecting at different levels in the vertical drain, provided the vertical drain is one pipe diameter larger than the upper fixture drain but in no case smaller than the lower fixture drain, whichever is the larger and that both drains conform to Table 132(L)(1).

(j) Circuit and Loop Venting

(1) **Battery Venting.** A branch or waste pipe to which 2, but not more than 8 water closets (except blow-out type) are connected in battery, shall be vented by circuit or loop vent which shall be taken off in front of the last fixture connection of the battery. When the battery consists of not more than 4 closets, the vent shall be 2 inches; when the battery consists of 5 or 6 closets, the vent shall be 2½ inches; and when the battery consists of 7 or 8 closets, the vent shall be 3 inches. In addition, lower floor branches shall be provided with a relief vent which shall be the same size as the branch vent, taken off in front of the first fixture connection of the battery. When lavatories, or similar fixtures discharge into such branches, each vertical branch from such fixtures shall be provided with a continuous vent. When closets are installed back to back, such installation shall be as per MHD 132(j)(2) or (j)(4).

(2) **Dual Branches.** When parallel horizontal branches serve a total of 8 water closets (4 on each branch), each branch shall be provided with a relief vent at a point between the 2 most distant water closets. When fixtures such as lavatories discharge into the horizontal branch drain, each such fixture shall be vented.

(3) **Vent Connections.** When the circuit, loop or relief vent connections are taken off the horizontal branch, the vent branch connection shall be taken off at a vertical angle or from the top of the horizontal branch.

(4) **Fixtures Back-to-Back in Battery.** When fixtures are connected to one horizontal branch through a double wye or a sanitary cross in a vertical position, a common vent for each 2 fixtures back-to-back or double connection shall be provided. The common vent shall be installed in a vertical position as a continuation of the double connection.

(k) **Fixtures Back-to-Back.** Two fixtures set back-to-back, within the distance allowed between a trap and its vent, may be served with one continuous soil or waste-vent pipe, provided that each fixture wastes separately into an approved double fitting, having inlet openings at the same level. (See MHD 132(i)(2))

(l) **Fixture Vents**

(1) **Distance of Trap from Vent.** Each fixture trap shall have a protecting vent so located that the slope and the developed length in the fixture drain from the trap weir to the vent fitting are within the requirements set forth in Table 132(L)(1) Distance of Fixture Trap from Vent.

TABLE 132 (L) (1)
DISTANCE OF FIXTURE TRAP FROM VENT

Size of Fixture Drain, Inches	Distance—Trap to Vent
1¼	2 ft. 6 in.
1½	3 ft. 6 in.
2	5 feet
3	6 feet
4	10 feet

Note—The developed length between the trap of the water closet or similar fixture and its vent shall not exceed four (4) feet.

(2) **Trap Dip.** The vent pipe opening from a soil or waste pipe, except for water closets and similar fixtures, shall not be below the weir of the trap.

(3) **Crown Venting Limitation.** No vent shall be installed within 2 pipe diameters of the trap weir.

(m) **Vents for Fixture Trap Below Trap Dip**

(1) **Hydraulic Gradient.** Fixture drains shall be vented within the hydraulic gradient between the trap outlet and vent connection, but in no case shall the unvented drain exceed the distance provided for in Table 132(L)(1), Distance of Fixture Trap From Vent.

(n) **Yoke Vents for Stacks of More Than 5 Branch Intervals.** Soil and waste stacks in buildings having more than 5 branch intervals shall be provided with a relief vent at each fifth interval installed, beginning with the

top floor. The size of the relief vent shall be equal to the size of the vent stack to which it connects. The lower end of the yoke vent shall connect to the soil or waste stack through a wye and ⅛ bend located below the horizontal branch drain serving fixtures on that floor and the upper end shall connect to the vent stack through a tee or inverted wye not less than 3 feet above the floor level.

(o) **Combination Waste and Vent System**

(1) **Where Permitted.** A combination waste-and-vent system shall be permitted only where structural conditions preclude the installation of a conventional system as otherwise provided in this Code.

(2) **Limits of Use.** A combination waste-and-vent system is limited to floor drains and sinks which will not be used for greasy wastes. It consists of an installation of waste piping in which the trap of the fixture is not individually vented. Every drainage pipe and trap in the waste and vent system shall be at least 2 pipe sizes larger than the size required in MHD 131(a)(2). Vents shall be provided at both ends of the system.

(3) **Island Fixture Venting.** Traps for island sinks and similar equipment may be vented, when structural conditions preclude the use of conventional vents, by extending the vent as high as possible under the sink enclosure and then returning it downward and connecting it to the horizontal drain through a wye branch fitting downstream from the vertical fixture drain. In addition, a horizontal vent shall be taken off the vertical section of the fixture vent by means of a wye branch fitting and extended to the partition where it can be extended vertically to the open air or connected to another vent at least 6 inches above the flood level of the fixture served. Drainage fittings should be used on all sections of the vent below floor level and a minimum slope of ¼ inch per foot to the drainage point shall be provided. Cleanouts shall be provided on the vent piping.

(p) **Venting of Sumps and Sewers.** Drainage piping below sewer level shall be vented in similar manner to that for a gravity system. Building sump vents shall be sized in accordance with Table 132(a)B, Sizes and Lengths of Vents and MHD 131(b)(5)(bb), but in any case not less than 1½ inches. Vents from pneumatic ejectors, flammable waste traps, or similar equipment shall be terminated separately at the open air.

MHD 133—Storm Drains

(a) **Where Required.** All roofs shall be drained into a separate storm-sewer system, or a combined-sewer system where such systems are available, or to a place of disposal satisfactory to the Administrative Authority. In no case shall water from roofs be allowed to flow upon the public sidewalk.

(b) **Storm Water Drain to Sanitary Sewer Prohibited.** Storm water shall not be drained into sewers intended for sanitary sewage only.

(c) **Size of Building Storm Drains and Leaders**

(1) **Size of Building Storm Drain.** The size of the building storm drain or any of its horizontal branches having a slope of ½ inch or less per foot, shall be based upon the maximum projected roof or paved area to be handled according to the following Table 133(c)(1)—Size of Horizontal Drains.

TABLE 133 (c) (1)
SIZE OF HORIZONTAL STORM DRAINS[1]

Diameter of Drain	Maximum projected Roof Area for Drains of Various Slopes		
Inches	⅛ in. Slope	¼ in. Slope	½ in. Slope
	Square Feet	Square Feet	Square Feet
3	822	1,160	1,644
4	1,880	2,650	3,760
5	3,340	4,720	6,680
6	5,350	7,550	10,700
8	11,500	16,300	23,000
10	20,700	29,200	41,400
12	33,300	47,000	66,600
15	59,500	84,000	119,000

[1]Table 133 (c) (1) is based upon a maximum rate of rainfall of 4 inches per hour. If in any locality, the maximum rate of rainfall is more or less than 4 inches per hour, then the figures for the roof area must be adjusted proportionately by multiplying the figure by 4 and dividing by the maximum rate of rainfall in inches per hour.

(2) Size of Vertical Leaders. Vertical leaders shall be sized on the maximum projected roof area, according to Table 133(c)(2)—Size of Vertical Leaders.

TABLE 133 (c) (2)
SIZE OF VERTICAL LEADERS[1]

Size of leader or conductor[2] Inches	Maximum projected roof area Square Feet
2	720
2½	1,300
3	2,200
4	4,600
5	8,650
6	13,500
8	29,000

[1]Table 133 (c) (2) is based upon a maximum rate of rainfall of 4 inches per hour. If in any locality, the maximum rate of rainfall is more or less than 4 inches per hour, then the figures for roof area must be adjusted proportionately by multiplying the figure by 4 and dividing by the maximum rate of rainfall in inches per hour.
[2]The equivalent diameter of square or rectangular leader may be taken as the diameter of that circle which may be inscribed within the cross-sectional area of the leader.

(3) Values for Continuous Flow. Where there is a continuous or semi-continuous discharge into the building storm drain or building storm sewer, as from a pump, ejector, air-conditioning plant, or similar device, each gallon per minute of such discharge shall be computed as being equivalent to 24 square feet of roof area, based upon a 4-inch rainfall.

(d) **Subsoil Drains.** When the subsoil drain for a building is subject to backwater, it shall be protected by an accessibly located backwater valve. Subsoil drains may discharge into a properly trapped area drain or sump. Such sumps do not require vents. (See MHD 131(b)(5))

(e) **Building Subdrains.** Building subdrains, receiving subsoil drainage, located below the public sewer level shall discharge into a sump or receiving tank the contents of which shall be automatically lifted and discharged into the drainage system as required for building sumps. (See MHD 131(b)(5))

(f) **Traps on Storm Drains and Leaders**

(1) **Where Not Required.** No traps shall be required for storm-water drains which are connected to a sewer carrying storm water exclusively.

(2) **Where Required.** Leaders and storm drains that are connected to a combined sewer shall be trapped if:

(aa) The drain is located within 10 feet of any door, window, or other opening into an occupied area.

(bb) An outside leader of sheet metal is connected to the storm drain and the joint of connection is within 10 feet of any door, window, or other opening into an occupied area. Such connection shall be at least 6 inches above grade. The trap shall be located inside the building and be provided with an accessible clean-out.

(g) ***Conductors and Connections***

(1) **Not to be Used Improperly.** Conductor pipes shall not be used as soil, waste, or vent pipes nor shall drainage or vent pipes be used as conductors.

(2) **Separate Storm and Sanitary Drainage.** The sanitary and storm building drains shall be separate and shall be run to a point at least 5 feet outside the building. The sanitary and storm building sewers shall be separate except where a combined sewer is available and where permitted by local authorities they may be joined together preferably in a manhole prior to discharging to a combined sewer. The sizing of the combined building sewer shall conform to good engineering practices and be acceptable to the Administrative Authority.

(h) **Roof and Deck Drains**

(1) **Roof Drain Strainers**

(aa) **General Use.** All roof areas, except those draining to hanging gutters, shall be equipped with roof drains having strainers extending not less than 4 inches above the surface of the roof immediately adjacent to the roof drain. Strainers shall have an available inlet area, above roof level, equal to that of the conductor or leader to which the drain is connected.

(bb) Overflow Drains. For overflow drains refer to Section 3207(c) of the Uniform Building Code.

(2) Flat Deck and Area Drains. Drain strainers for use on sun decks, and similar area, normally serviced and maintained, may be of the flat surface type, level with the deck and shall have an available inlet area of not less than 2 times the area of the conductor or leader to which the drain is connected.

(3) Roof Drain Flashings Required. The connection between roofs and roof drains which pass through the roof and into the interior of the building shall be made watertight by use of proper flashing material.

(i) Provisions for Expansion. Expansion joints, sleeves or suitable offsets shall be provided where warranted by temperature variations or physical conditions.

(j) **Control Flow Storm Water Drainage for Dead Level Roofs.** In lieu of sizing the storm drainage system from conventional methods as previously described in this chapter, the roof drainage may be sized on the controlled flow and storage of the storm water on the roof provided the following conditions are met.

(1) The roof drainage system shall be sized on the basis of a rate of rainfall of 4 inches per hour.

(2) The roof is dead level and 45 degree cants, properly flashed, are installed at any well or parapet.

(3) The roof design is based on a minimum of 40 pounds per square foot live load, with overflow line of roof edge, coping, or relieving scupper in parapet wall at least 4 inches in height above the roof and at no greater height than will provide a safety factor of 2 for the structural design live load.

(4) Roof drainage pipe sizing may be designed on the basis of controlled flow sizing tables provided by manufacturers of roof drains approved by the Administrative Authority or by the following tables.

TABLE 133 (j) (1)
SIZE OF VERTICAL LEADERS

Size of Leader	
Inches	Maximum Projected Roof Area in Square Feet
3	7,500
4	15,000
5	21,000

Roof areas of more than 15,000 square feet shall contain 2 or more roof drains.

TABLE 133 (j) (2)
SIZE OF HORIZONTAL STORM DRAINS

Diameter of Drain	Maximum projected roof area in sq. feet
Inches	¼ in. Slope
3	3,500
4	8,200
5	11,750
6	18,500
8	40,000
10	75,850
12	118,000
15	214,000

(5) The plans or specifications for the storm drainage system shall indicate the method used as the basis for the design.

MHD 134 Inspection, Tests and Maintenance

(a) **Inspections.** New plumbing systems and parts of existing systems which have been altered, extended or repaired shall be inspected and tested by the proper Administrative Authority to insure compliance with all the requirements of this Code and the installation and construction of the system in accordance with the approved plan and the permit, except that testing may be waived for work which does not include addition to, replacement, alteration, or relocation of any water supply, drainage or vent piping.

All the piping shall be tested and after the plumbing fixtures have been set, and before the system is put into use, the system shall be given a final inspection and test by the proper Administrative Authority.

(b) **Notifications**

(1) It shall be the duty of the plumbing contractor to notify the proper Administrative Authority and the Owner, or his authorized agent orally, by telephone, or in writing, not less than eight working hours between the hours of 8 a.m. and 4 p.m. before the work is to be inspected or tested.

(2) It shall be the duty of the plumbing contractor to make sure that the work will stand the test prescribed before giving the above notification.

(3) If the proper Administrative Authority finds that the work will not stand the test, the plumbing contractor shall be required to renotify as above.

(4) If the proper Administrative Authority does not appear for an inspection within 24 hours of the time set, excluding Saturdays, Sundays and Holidays, the inspection or test shall be deemed to have been made, and the plumbing contractor is required to file an affidavit with the proper Administrative Authority that the work was installed in accordance with the Code, the approved plans and permit, and that it was free from defects and that the required tests had been made and the system found free from leaks; also whether the owner or his authorized agent was present when such inspection or test was made.

(c) **Material and Labor for Tests.** The equipment, material, power, and labor necessary for the inspection and test shall be furnished by the plumbing contractor.

(d) **Method of Testing.** The air tests shall be applied to the plumbing drainage system in its entirety or in sections. Sections which are found satisfactory need not be retested after completion of the entire system unless considered necessary by the proper Administrative Authority.

(1) **Rough Plumbing.** Except for outside leaders and perforated or open drain tile, the piping of plumbing drainage and venting systems shall be air tested upon completion of the rough piping.

(aa) The air test shall be made by attaching the air compressor or testing apparatus to any suitable opening and closing all other inlets and outlets to the system by means of proper testing plugs. Plaster paris shall not be used in roof terminals.

(bb) Air shall be forced into the system until there is a uniform pressure of 5 pounds per square inch on the portion of the system being tested. The pressure shall remain constant for 15 minutes without the addition of air.

(2) **Finished Plumbing.** After the plumbing fixtures have been set and their traps filled with water, their connections shall be tested and proven gas and water tight by plugging the stack openings on the roof and the building drain where it leaves the building, and air introduced into the system equal to the pressure of a one inch water column. Such pressure shall remain constant for the period of inspection without the introduction of additional air.

(e) **Covering of Work.** No building drainage or plumbing system or part thereof shall be covered until it has been inspected, tested, and approved as herein prescribed.

(f) **Uncovering of Work.** If any building drainage or plumbing system or part thereof is covered before being regularly inspected, tested, and approved, as herein prescribed, it shall be uncovered upon the direction of the proper Administrative Authority.

(g) **Defective Work.** If the inspection or test shows defects, such defective work or material shall be replaced and the inspection and test repeated.

(h) **Building Sewer.** The building sewer shall be inspected by the proper Administrative Authority to insure compliance with the provisions of the Code.

(i) **Conductor Pipes.** Conductor pipes and their roof connections inside the building shall be tested with air. (See MHD 134(d)(1))

(j) **Test of Water Distribution System.** Upon the completion of a section or of the entire water-distribution system, it shall be tested and proved tight under water not less than the maximum working pressure under which it is to be used. The water used for the test shall be obtained from a potable source of water.

(k) **Certificate of Approval.** Upon the satisfactory completion and final inspection of the plumbing system, a certificate of approval shall be issued by the proper Administrative Authority.

(l) **Air Test of Defective Plumbing.** The air test shall be used in testing the sanitary condition of the drainage or plumbing system of all buildings where there is reason to believe that it has become defective. In buildings condemned by the proper Administrative Authority because of insanitary conditions of the plumbing system, the alterations in such system shall not be considered as repairs, but as new plumbing.

Where buildings are moved from one location to another, or raised for foundations, or where part of the plumbing system has been damaged by fire, storm, or other means, a final air test shall be applied and shall hold tight, if in the opinion of the Administrative Authority it is warranted in order to assure a sanitary plumbing system.

(m) **Disinfection of Water Piping.** (See MHD 130(g))

(n) **Defective Fixtures.** All installed fixtures found defective or in an insanitary condition shall be repaired, replaced, or removed upon written notice from the proper Administrative Authorities.

(o) **Maintenance.** The plumbing system of every building shall be maintained in a sanitary and safe operating condition.

7 MCAR § 1.135 Water conditioning contractors and installers.

A. Scope and applicability. This rule prescribes minimum standards and procedures for all water conditioning installations and servicing in single family dwellings. Any person who installs or services water conditioning equipment, whether or not such person is licensed pursuant to Minn. Stat. § 328.57-66 (1978), must comply with the standards and procedures prescribed in this rule, and with the applicable provisions of the current version of the Minnesota Plumbing Code, 7 MCAR § 1.120-.134 (formerly MHD 120-134).

B. Definitions.

1. "Water conditioning equipment" (equipment) means any appliance, appurtenance or fixture designed to treat water, so as to alter, modify, add or remove any minerals, chemicals or bacteria contained in water;

2. "Installation" as defined in Minn. Stat. § 326.61 Subd. I (1978) includes:

a. the connection of any water conditioning equipment to an existing water distribution system,

b. the connection of the line carrying conditioned water to a water distribution system, or raw water to points not needing conditioned water.

c. the connecting of drain and overflow lines which drain the equipment, and

d. the providing of an air gap between the drain and overflow lines and the receiving building receptor;

3. "Commissioner" means the commissioner of health;

4. "Disinfect" means to destroy pathogenic bacteria and other harmful organisms;

5. "Servicing" means repairs or adjustments to any water conditioning installations;

6. "Water conditioning contractor" means the person in a firm or corporation who has demonstrated skill in planning, superintending, installing and servicing water conditioning installations;

7. "Water conditioning installer" means a person, other than a water conditioning contractor, who has demonstrated practical knowledge of water conditioning installation and servicing;

8. "Receptor" means an open, accessible, individual waste sink, floor drain, or other fixture which is trapped and vented in accordance with the Minnesota Plumbing Code (7 MCAR § 1.120-.134);

9. "Raw water" means water which has not passed through any water conditioning equipment;

10. "Water distribution system" means a water supply system as defined in the Minnesota Plumbing Code (7 MCAR § 1.121).

C. Procedure.

1. Any water conditioning equipment may be installed only in connection with a water distribution system which has already been constructed. Such connection may be made either by cutting into a cold water line or by connecting to a joint specifically installed for the purpose.

2. In connecting the equipment the contractor or installer may use only the type of pipe material which is permitted in the Minnesota Plumbing Code (7 MCAR § 1.120-.134).

3. Every installation shall include the installation of a by-pass valve which would allow the equipment to be serviced or removed without the need for shutting off the water service completely.

4. If the homeowner so requests, the installer or contractor is permitted to install a line which by-passes the water conditioning equipment and to connect this raw water line to any existing service outlet.

5. Equipment drain: The equipment drain line shall drain into the existing receptor such as a floor drain or laundry tub. No drain or overflow line leading from the equipment shall be directly connected to any receptor. Between the delivery end of the drain or overflow line and the receptor, there must be an air gap which is at least two times the diameter of the drain or overflow line, but in no case shall the air gap be less than 1.5 inches. This air gap distance shall apply above the flood level rim of the receiving fixture to provide the required air gap. If flexible drain line is used, it must be secured in some manner to prevent its being accidentally moved.

6. Location: Any water conditioning equipment and the piping necessary to install such equipment shall not be placed in such a location or manner so as to interfere with the normal operation of existing windows, doors or other exits or openings, nor shall it be located in such a place so as to make other existing equipment inaccessible.

7. Regeneration sanitation procedures: All new or used water conditioning equipment shall be disinfected before being installed. All portable exchange water conditioning equipment shall be disinfected during every regeneration. Disinfection shall be achieved by the application of chlorine or a chlorine compound such as sodium or calcium hypochlorite, during the fresh water rinse, to provide an effluent minimum chlorine residual and time combination as given in the following table:

Minimum Time Minutes	Minimum Chlorine Residual—parts per million
4	20
5	15
10	7.5
15	5.0
20	4.0

8. If an installation cannot be made in conformance with the Minnesota Plumbing Code (7 MCAR § 1.120-.134) or with the provisions contained in this rule, the water conditioning contractor or installer shall consult with the appropriate plumbing inspector, and obtain a variance from the state rules before the installation may proceed. Such a variance can be granted only if the nonconforming alternative will not create a risk to health.

D. Equipment and materials used in installations:

1. Where applicable, the following shall conform to the Minnesota Plumbing Code (7 MCAR § 1.120-.134):

a. all materials and connections used in the installation of water conditioning and treatment equipment;

b. all attachments to the building.

2. In accordance with the Minnesota Plumbing Code (7 MCAR § 1.120-.134):

a. the by-pass valve assembly shall be the same size as the line in which it is installed and shall be a full-way valve unless a by-pass valve which complies with section C.3. is supplied as an integral part of the water conditioning equipment;

b. joints and connections which are made in the course of installing water conditioning and treatment equipment shall be tested for water tightness;

c. copper tube joints shall be soldered or brazed;

d. soft copper tubing joints may be flared or soldered;

e. vertical piping shall be secured at sufficiently close intervals to keep the pipe in alignment and carry the weight of the pipe;

f. horizontal piping shall be supported at sufficiently close intervals to keep it in alignment and prevent sagging.

E. Licensing.

1. Examination:

a. A written examination for the licensing of water conditioning equipment contractors and installers shall be given at least once per year. The licensing examination for contractors and installers shall include questions covering one or more of the following subject areas: relevant plumbing and installation provisions, materials and tools of the trade, general principles of water conditioning processes and operation of water conditioning equipment. In addition to the above, the contractor's licensing examination shall include questions covering one or more of the following subjects: calculations to determine appropriate equipment size, and specific functions and processes involved in different types of water conditioning.

b. The examination for the installer's license shall be given only to persons who have had at least 6 months' experience in the field of water conditioning installation and servicing.

c. The examination for the contractor's license shall be given only to persons who have had at least 12 months' experience in planning and supervising the installation and servicing of water conditioning equipment.

d. A person applying to take an examination shall complete an application supplied by the Minnesota Department of Health and return the completed application along with the appropriate examination fee.

e. Only fees from persons who do not qualify for examination will be returned.

f. A grade of 70% shall be considered a passing grade.

g. The applicant shall be notified of the results of the examination.

2. License: A license shall be issued to an applicant who has passed the examination upon receipt of the appropriate license fee.

F. Fees.

1. The fee for application for examination or re-examination shall be $10.00 for a water conditioning installer, and $25.00 for a water conditioning contractor.

2. The fee for a new license or for renewal of an existing license shall be as follows:

Water Conditioning Installer	$10.00
Water Conditioning Contractor	$25.00

G. Renewal. A license shall expire on December 31 of the year for which it was issued. An application for renewal of a license must be received by the Minnesota Department of Health no later than December 31. Any person who submits an application for license renewal after December 31 shall pay a

penalty of $5.00 in addition to the annual license fee. One who does not renew a license issued pursuant to these rules, within two years of the date on which the former license expired, is no longer entitled to a renewal license. Such person must apply for re-examination and a new license.

CHAPTER EIGHT: MHD 136-150

Water Supply Regulations

MHD 136 WATER SUPPLY AND SEWERAGE SYSTEMS. No system of water supply or system for the disposal of sewage, industrial waste, garbage, or refuse, in case any such system is for public use or for the use of any considerable number of persons, or in case any such system affects or tends to affect the public health in any manner, shall be installed by any public agency or by any person or corporation, nor shall any such existing system be materially altered or extended, until complete plans and specifications for the installation, alteration, or extension, together with such information as the State Board of Health may require, have been submitted in duplicate and approved by the Board insofar as any features thereof affect or tend to affect the public health, and no construction shall take place except in accordance with the approved plans.

MHD 137(a) UNSAFE WATER CONNECTIONS. There shall be no physical connection between water supply systems that are safe for domestic use and those that are unsafe for domestic use.

There shall be no provision for such a connection or arrangement by which unsafe water may be discharged or drawn into a safe water supply system.

MHD 138 FLUORIDATION. This regulation shall be applicable to all municipal water supplies, as required by Minnesota Statutes, Chapter 603, Section 1, 144.145.

(1) The fluoride content of the water shall be controlled to maintain an average concentration of 1.2 milligrams per liter; the concentration shall be neither less than 0.9 milligrams per liter nor more than 1.5 milligrams per liter.

(2) The chemical feeder apparatus for introducing fluoride to the water supply shall conform to the standards of the Board.

(3) Equipment for the adequate and reliable testing of the fluoride content shall be furnished for each installation. The method of testing the fluoride content of the water shall be approved by the Board. Approval shall require either a photometric colorimetric procedure, preceded when necessary by distillation or other treatment to remove interfering materials, or a fluoride-specific electrode and an associated potential measuring device. Continuous monitoring systems shall be approved when they can be installed to monitor a representative portion of the entire supply.

(4) Samples shall be collected daily at a point(s) in the distribution system representative of the entire supply. Sampling point(s) shall be located downstream sufficiently distant from the point(s) at which fluoride is fed into the water supply to ensure that the distance traversed and the time elapsed since the introduction of the fluoride concentrate is adequate to allow its complete mixing with the water. At least once each 3 months, at a time designated by the Board, a duplicate of the usual daily sample(s) shall be collected in containers furnished by the Board and sent to the Department of Health for comparative analysis.

(5) Daily records of water fluoridation plant operations shall be maintained by the owners, officials, or their representatives. These records shall show the amount of water pumped, amount of fluoride chemical fed, fluoride test results, and any other pertinent information required by the Board.

(6) A report of the operation of each water fluoridation plant shall be submitted monthly to the Board on forms furnished by them.

7 MCAR § 1.139 Plumbing.

A. Plans and specifications.

1. Prior to the installation by any person, corporation, or public agency, of a system of plumbing that serves the public or that serves any considerable number of persons, or any plumbing system that shall affect the public health in any manner, complete plans and specifications, together with any additional information that the commissioner of health may require, shall be submitted in duplicate and approved by the commissioner. The appraisal of the commissioner shall reflect the degree to which these plans and specifications affect the public health and conform to the provisions of the Minnesota Plumbing Code. No constructions shall proceed except in accordance with approved plans. Any material alteration or extension of the existing system shall be subject to these same requirements. This regulation shall not apply to cities of the first class, except those plumbing installations in hospitals or in buildings in these cities owned by the federal or the state government.

2. There shall be no physical connection between water supply systems that are safe for domestic use and those that are unsafe for domestic use. There shall be no apparatus through which unsafe water may be discharged or drawn into a safe water supply system.

B. Examination and licensing of plumbers.

1. Examinations for journeyman and master plumber licenses shall be held in March and September of each year. Applications for the March examination shall be filed not later than February 15 and for the September examination not later than August 15.

2. In addition to satisfactorily passing an examination given by the plumber's examiners, the applicant for a journeyman plumber's license shall have had not less than 4 years of practical plumbing experience and the applicant for a master plumber's license shall have had not less than 5 years of practical experience.

C. Examination; Initial and Renewal License Fees; License Expiration Dates; Late Fee; Master's Bond and Insurance Fees.

1. Fees for Examination. Applications to take the journeyman or master plumbers examination shall be submitted to the commissioner of health on forms provided together with a fee of $25.00.

2. Fees for License. Any applicant who receives a passing grade on the examination may submit an application for license on forms provided by the commissioner of health. The application shall be accompanied by a fee of $15.00 for a journeyman plumbers license or $40.00 for a master plumbers license.

3. Expiration Date.

a. Initial and renewal journeyman and master plumbers licenses shall be issued for the calendar year for which application is made and shall expire on December 31 of such year. Any journeyman or master plumber who submits his renewal application after December 31 shall not work as a journeyman or master plumber until he has submitted an application, fee, and penalty fee.

b. Any licensee who does not renew his license within two years is no longer eligible for renewal. Such person must retake and pass the examination before a new license will be issued.

4. License renewals. Applications for license renewal shall be submitted to the commissioner of health on forms provided no later than December 31 of the year preceding the year for which application is made. The application shall be accompanied by a fee of $15.00 for a journeyman plumber and $40.00 for a master plumber.

5. Fees for late renewals. Journeyman and master plumbers who submit their license renewal applications after the time specified in subpart 4. above but within two years after expiration of the previously issued license shall pay all past due renewal fees plus an additional $8.00.

6. Fee for filing bond and insurance. Master plumbers who file a bond and evidence of liability insurance with the Secretary of State, pursuant to Laws, 1978, Chap. 604 § 1, shall pay an additional fee of $25.00.

MHD 140 Water supply contracts; municipalities must obtain approval. No governing body of any municipality shall enter into any contract or agreement or renewal thereof for the furnishing and distribution, either or both, of water to be used for domestic purposes within the municipality until the approval of the State Board of Health, insofar as the sanitary features of the water supply system are concerned, has been obtained.

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7 MCAR S 1.141 Public swimming pools.

(a) Scope and purpose. The provisions of this regulation shall apply to all public swimming and wading pools as hereinafter defined, including all facilities incident thereto. The purpose of the regulation shall be to provide a standard for the design, construction, operation, and maintenance of such pools so that health and safety hazards will be minimized.

(b) Definitions. The following definitions shall apply in the interpretation and enforcement of this rule. The word "shall" as used herein indicates a mandatory requirement.

1. Swimming pool. Any structure, basin, chamber, or tank containing an artificial body of water for swimming, diving, relaxation, or recreational bathing, including special purpose pools.

2. Public swimming pool. Any swimming pool, other than a private residential swimming pool, intended to be used collectivey by numbers of persons for swimming or bathing, operated by any person as defined herein, whether he be owner, lessee, operator, licensee, or concessionaire, regardless of whether a fee is charged for such use.

3. Private residential swimming pool. Any swimming pool, located on private property under the control of the homeowner, the use of which is limited to swimming or bathing by members of his family or their invited guests. (The design, construction, and operation of such pools are not subject to the provisions of this regulation.)

4. Person. Any person, firm, partnership, association, corporation, company, governmental agency, club, or organization of any kind.

5. Commissioner means commissioner of health.

6. Wading pool. Any pool used or designed to be used exclusively for wading or bathing and having a maximum depth of 24 inches.

7. Special purpose pool. Treatment pools, therapeutic pools, special pools for water therapy, whirlpools, spas, and cold plunges.

(c) Submission of plans and specifications.

(1) No swimming pool used or intended for use by the public or by any school, club, organization, or institution, shall be constructed, nor shall any such swimming pool, now or hereafter existing, used or intended for such use, be materially altered until complete plans and specifications therefor, together with such further information as the board may require, shall have been submitted in duplicate and approved by the board

so far as sanitary features are concerned. After such plans have been approved by the board, no modification affecting the sanitary or safety features thereof shall be made without approval of the board. No contract for the construction, alteration, or enlargement of any such swimming pool shall be let until the plans and specifications therefor have been approved as provided.

(2) The pool and facilities shall be built in accordance with the plans as approved unless approval of changes has been given in writing by the board. The owner or his agent shall notify the board at the time of completion of the pool to permit adequate inspection of the pool and related equipment. The pool shall not be placed in operation until such inspection shows compliance with the provision of this regulation.

(d) Health and safety.

(1) No person having or suspected of having a communicable disease shall work at or use any public swimming pool.

(2) No person shall operate any public swimming pool unless such swimming pool is under the supervision of a trained operator or person who shall assume the responsibility for compliance with all provisions of this regulation relating to pool operation, maintenance, and safety of bathers.

(3) Access to the pool shall be controlled by fencing or other effective means acceptable to the board. Fencing shall meet the following criteria:

(aa) The fencing shall effectively prevent the entrance of children and be without hand-holds or foot-holds that would enable a child to climb over it.

(bb) The fencing shall be at least four feet high and entrances shall be equipped with a self-closing, latching gate which is capable of being locked.

(4) Instruction regarding emergency calls shall be prominently posted.

(5) Not more than the maximum design bather load as calculated in MHD 115(j) shall be permitted in the swimming pool at any one time. The design bather load shall be posted in a conspicuous location.

(e) Inspection. The board is authorized to conduct such inspections as it deems necessary to insure compliance with all provisions of this regulation and shall have right of entry, at any reasonable hour, to the swimming pool for this purpose.

(f) Operation.

(1) The operator of each pool shall keep a daily record of information regarding operation as specified in MHD 115(t)(2),

together with other data as may be required by the board.

(2) The pumps, filter, disinfectant and chemical feeders, and related appurtenances shall be kept in operation at all times during the swimming season unless approved by the board.

(g) Water supply.

(1) The water supply serving the swimming pool and all plumbing fixtures including drinking fountains, lavatories, and showers shall meet the requirements of the board. Where strict compliance with the requirement that the water supply serving the swimming pool be of potable quality is not possible or reasonable, the board may grant a variance which does not endanger the health and safety of the users of the pool.

(2) All portions of the water distribution system serving the swimming pool and auxiliary facilities shall be protected against backflow. Water introduced into the pool, either directly or to the recirculation system, shall be supplied through an air gap (Minnesota Plumbing Code, June 1969, MHD 130(e)(9)). When such connections are not possible, the supply shall be protected by a suitable backflow preventer (Minnesota Plumbing Code, June 1969, MHD 130(e)(9)) installed on the discharge side of the last control to the fixture, device, or appurtenance.

(h) Sewer system.

(1) The sewer shall be adequate to serve the facility, including bathhouse, locker room, and related accommodations, and shall conform to the standards of the board and the Minnesota Pollution Control Agency.

(2) There shall be no direct physical connection between the sewer system and any drain from the swimming pool or recirculation system. Any swimming pool or gutter drain or overflow from the recirculation system when discharged to the sewer system, storm drain, or other approved natural drainage course shall connect through a suitable air gap or air break so as to preclude the possibility of backup of sewage or waste into the swimming pool or piping system.

(3) The sanitary sewer serving the swimming pool auxiliary facilities shall discharge into the public sewer system. Where no such sewer is available, the connection shall be made to a suitable disposal plant designed, constructed, and operated in accordance with the requirements of the board and the Minnesota Pollution Control Agency.

(i) The pool.

(1) Construction materials.

(aa) Swimming pools and all appurtenances thereto shall be constructed of materials which are inert, non-toxic to man,

impervious, permanent, and enduring; which can withstand the design stresses; which will provide a tight tank with a smooth and easily cleaned surface, or to which a smooth, easily cleaned surface finish can be applied, and which may be finished in white or light color.

(bb) All corners formed by the intersection of walls, and of walls and floors, shall be rounded.

(cc) Swimming pool finish, including bottom and sides, shall be of white or light-colored material, non-toxic to man, with a smooth finished surface, without cracks or joints, bonded to the supporting members, excluding structural expansion joints.

(2) Design, detail, and structural stability.

(aa) All swimming pools shall be designed and constructed to withstand all anticipated loading for both full and empty conditions. A hydrostatic relief valve and/or a suitable underdrain system shall be provided in areas having a high water table. The designing architect or engineer shall be responsible for certifying to the structural stability and safety of the pool.

(bb) No limits are specified for length and width of swimming pools, except that swimming pools used for competition should meet required dimensions, and the requirements for the diving area as shown in Table 115(i)(12)A shall be observed. Consideration shall be given to shape from the standpoint of safety and the need to facilitate supervision of bathers using the pool.

(cc) Provisions shall be made for complete, continuous circulation of water through all parts of the swimming pool. All swimming pools shall have a recirculation system with necessary treatment and filtration equipment as required in this regulation. Nothing in this section shall prohibit the use of so-called flow-through type swimming facilities constructed in accordance with the regulation of the board.

(dd) The shape of any swimming pool shall be such that the circulation of pool water and control of swimmers' safety are not impaired. There shall be no underwater or overhead projections or obstructions which would endanger bather safety or interfere with proper pool operation.

(ee) The minimum depth of water in the swimming pool shall be three feet except for special purpose pools. Wading facilities for children shall be physically separated from the swimming pool and be provided with a separate recirculation system.

(ff) The maximum depth of the shallow end of the swimming pool shall not exceed three feet six inches except for competitive or special purpose pools.

(gg) All new equipment installed after the effective date of this regulation shall comply with the following standards of the National Sanitation Foundation when applicable:

(gg1) Standard No. 9 - Diatomite Type Filters for Swimming Pool Equipment - October 1966

(gg2) Standard No. 10 - Sand Type Filters for Swimming Pool Equipment - October 1966

(gg3) Standard No. 11 - Recessed Automatic Surface Skimmers - October 1965

(gg4) Standard No. 17 - Centrifugal Pumps for Swimming Pools - January 1966

(gg5) Standard No. 19 - Adjustable Output Rate Chemical Feeding Equipment for Swimming Pools - October 1966

(gg6) Standard No. 22 - Swimming Pool Water Treatment Chemicals and/or Processes - May 1968

(gg7) Standard No. 27 - Multiport Valves for Swimming Pools - May 1969

(gg8) Standard No. 38 - Test Kits for Swimming Pools - November 1970

(3) Depth markings and lines.

(aa) Depth of water shall be plainly marked at or above the water surface on the vertical pool wall or on the edge of the deck or walk next to the pool, at maximum and minimum points, at the points of change of slope between the deep and shallow portions and at intermediate increments of depth, spaced at not more than 25 foot intervals.

(bb) Depth markings shall be numerals of four inches minimum height and of a color contrasting with the background. Markings shall be on both sides and ends of the pool.

(cc) Lane lines or other markings on the bottom of the swimming pool shall be a minimum of ten inches in width and of a contrasting color.

(4) Inlets and outlets.

(aa) All swimming pools shall be provided with an outlet at the deepest point to permit the pool to be completely and easily emptied. Openings must be covered by a proper grating which is not readily removable by bathers. Outlet openings of the grating in the floor of the pool shall be at least four times the area of discharge pipe or provide sufficient area so the maximum velocity of the water passing the grate will not exceed 1-1/2 feet per second. The maximum width of grate openings shall be 1/2 inch.

(bb) In swimming pools with deep water at or near one end, multiple outlets shall be provided where the width of the pool is more than 30 feet. In such cases, outlets shall be spaced not more than 30 feet apart, nor more than 15 feet from side walls.

(cc) No direct connections to sewers shall be permitted, and all drains from the swimming pool to sewers shall be broken at a point where any sewage which may back up from the sewer will overflow to waste instead of reaching the pool.

(dd) Valves and/or pumps used for draining swimming pools shall be sized to prevent the surcharging of the sanitary sewer.

(ee) Inlets for fresh and/or repurified water shall be located to produce uniform circulation of water and to facilitate the maintenance of a uniform disinfectant residual throughout the entire swimming pool without existence of dead spots. Inlets from the circulation system shall be flush with the pool wall and submerged at least 12 inches below the water level. No over-the-rim fill spout will be accepted unless located under a diving board or installed in a manner approved by the board so as to remove any hazard. Makeup-water spouts shall terminate at least six inches above the fill rim of the pool or surge tank.

(ff) Adjustable inlets shall be located in conjunction with proposed methods of recirculation to provide effective and uniform circulation of the incoming water throughout the pool and prevent unnecessary dead spots. The maximum spacing of inlets shall be 20 feet based on the pool perimeter. In swimming pools with surface areas greater than 1,600 square feet or length in excess of 60 feet, side inlets shall be placed at 15 foot intervals around the entire perimeter. In any case, an adequate number of inlets shall be provided, properly spaced and located to accomplish complete and uniform recirculation of water and maintenance of a uniform disinfectant residual at all times.

(gg) Each inlet shall be designed as an orifice subject to adjustment or shall be provided with an individual gate or similar valve to permit adjustment of water volume to obtain the best circulation.

(5) Slope of bottom. The slope of the bottom of any portion of the swimming pool having a water depth of less than five feet shall not be more than one foot in ten feet, and said slope shall be uniform. In portions with a depth greater than five feet the slope shall not exceed one foot in three feet.

(6) Side walls. Walls of a swimming pool shall be either (1) vertical for water depths of at least six feet; or (2) vertical for a distance of three feet below the water level, below which the wall may be curved to the bottom with a radius not greater than the difference between the depth at that point

and three feet, provided that vertical is interpreted to permit slopes not greater than one foot, horizontally, for each five feet of depth of sidewall (11 degrees from vertical).

(7) Overflow gutters.

(aa) Overflow gutters shall extend completely around the swimming pool except at steps or recessed ladders. The overflow gutter shall also serve as a handhold. This gutter shall be capable of continuously removing 50 percent or more of the recirculated water and returning it to the filter. All overflow gutters shall be connected to the recirculation system through a properly designed surge tank. The gutter, drains, and return piping to the surge tank shall be designed to rapidly remove overflow water caused by recirculation, displacement, wave action, or other cause produced from maximum pool bathing load. Spacing of drainage outlets shall not be more than 15 feet. The opening into the gutter beneath the coping shall not be less than four inches and the interior of the gutter shall not be less than three inches wide with a depth of at least three inches. Where large gutters are used, they shall be designed to prevent entrances or entrapment of bathers' arms or legs. The overflow edge or lip shall be rounded and not thicker than 2-1/2 inches for the top two inches. The overflow outlets shall be provided with outlet pipes which shall in any case be at least two inches in diameter. The outlet fittings shall have a clear opening in the grating at least equal to 1-1/2 times the cross sectional area of the outlet pipe.

(bb) Nothing in this section shall preclude the use of roll-out or deck-level-type swimming pools. The design of the curb and handhold shall conform to accepted standards, and the approval of the board shall be based on detailed review of this feature of construction and evaluated in the light of proposed use of the pool.

(8) Skimmers.

(aa) Skimmers are permitted on public swimming pools provided approved handholds are installed and sufficient motion to the pool water is induced by the pressure return inlets. At least one skimming device shall be provided for each 400 square feet of water surface area or fraction thereof. Where two or more skimmers are required, they shall be so located as to minimize interference with each other and to insure proper skimming of the entire pool surface. Handholds shall consist of bull-nosed coping not over 2-1/2 inches thick for the outer two inches, or be of an equivalent approved type. The handholds must be no more than nine inches above the normal water line. Skimming devices shall be built into the pool wall, shall develop sufficient velocity on the pool water surface to induce floating oils and wastes into the skimmer from the water surface of the entire pool area, and shall meet the following general specifications:

(aa1) The piping and other pertinent components of

skimmers shall be designed for a total capacity of at least 80 percent of the required filter flow of the recirculation system, and no skimmer shall be designed for a flow-through rate of less than 30 gallons per minute or 3.75 gallons per minute per lineal inch of weir.

(aa2) The skimmer weir shall be automatically adjustable and shall operate freely with continuous action to variations in water level over a range of at least four inches. The weir shall operate at all flow variations as described in this regulation. The weir shall be of such buoyancy and design as to develop an effective velocity.

(aa3) An easily removable and cleanable basket or screen through which all overflow water must pass shall be provided to trap large solids.

(aa4) The skimmer shall be provided with a device to prevent air-lock in the suction line. If an equalizer pipe is used, it shall provide an adequate amount of water for pump suction should the water of the swimming pool drop below the weir level, provided that, if any other device, surge tank, or arrangement is used, a sufficient amount of water for pump suction shall be assured.

(aa5) Where the equalizer pipe is used, it shall be sized to meet the capacity requirements of the filter and pump and shall in no case be less than two inches in diameter. This pipe shall be located at least one foot below the lowest overflow level of the skimmer. It shall be provided with a valve or equivalent device that will remain tightly closed under normal operating conditions, but will automatically open when the water level drops as much as two inches below the lowest weir level.

(aa6) The skimmer shall be of sturdy, corrosion-resistant materials.

(9) Recirculation systems.

(aa) A recirculation system, consisting of pumps, piping, filters, water conditioning and disinfection equipment, and other accessory equipment shall be provided which will clarify and disinfect the swimming pool volume of water in six hours or less, thus providing a minimum turnover of at least four times in 24 hours, except that the recirculation rate shall be increased to provide a two hour turnover for wading and special purpose pools.

(bb) All piping shall be designed to reduce friction losses to a minimum and to carry the required quantity of water at a maximum velocity not to exceed six feet per second. Piping shall be of non-toxic material, resistant to corrosion, and able to withstand operating pressures. Pipes shall be identified by a color code, tags, or other acceptable markings.

(cc) The recirculation system shall include a strainer to prevent hair, lint, etc., from reaching the pump and filters. Strainers shall be corrosion-resistant with openings not more than 1/8 inch in size providing a free flow area at least four times the area of the pump suction line and shall be readily accessible for frequent cleaning.

(dd) A vacuum-cleaning system shall be provided. When that system is an integral part of the recirculation system, sufficient connnections shall be located in the walls of the swimming pool, at least eight inches below the water line.

(ee) A rate-of-flow indicator, reading in gallons per minute, shall be installed and located, preferably on the swimming pool return line, so that the rate of recirculation and backwash rate will be indicated. The indicator shall be capable of flows measuring at least 1-1/2 times the design flow rate, shall be accurate within ten percent of true flow, and shall be easy to read.

(ff) Pumps shall be of adequate capacity to provide the required number of turnovers of swimming pool water as specified in this regulation, and whenever possible shall be so located as to eliminate need for priming. If the pump or suction piping is located above the overflow level of the pool, the pump shall be self-priming. The pump or pumps shall be capable of providing flow adequate for the backwashing of filters. Under normal conditions the pump or pumps shall supply the recirculation rate of flow at a dynamic head of at least 50 feet for pressure sand type filters or at least 80 feet for pressure diatomaceous earth type filters.

(gg) Swimming pools equipped with heaters shall have a fixed thermometer in the recirculation line near the outlet to the pool.

(10) Ladders, recessed treads, and stairs.

(aa) Steps or ladders shall be provided at the shallow end of the swimming pool if the vertical distance from the bottom of the pool to the deck or walk is over two feet. Recessed steps or ladders shall be provided at the deep portion of the swimming pool, and, if the pool is over 30 feet wide, such steps or ladders shall be installed on each side.

(bb) Steps leading into the swimming pool shall be of non-slip design, and have a minimum tread of 12 inches and a maximum rise or height of ten inches. There shall be no abrupt dropoff or submerged projections into the pool, unless guarded by handrails.

(cc) Swimming pool ladders shall be corrosion-resistant and shall be equipped with non-slip treads. All ladders shall be so designed as to provide a hand-hold and shall be rigidly installed. There shall be a clearance of not more than five inches nor less than three inches between any ladder and the

pool wall. If steps are inserted in the walls or if stepholes are provided, they shall be of such design that they may be cleaned readily and shall be arranged to drain into the pool to prevent the accumulation of dirt thereon. Stepholes shall have a minimum tread of five inches and a minimum width of 14 inches.

(dd) Where steps, stepholes, or ladders are provided within the swimming pool, there shall be a handrail at the top of both sides thereof, extending over the coping or edge of the deck.

(ee) Supports, platforms, and steps for diving boards shall be of substantial construction and of sufficient structural strength to carry safely the maximum anticipated loads. Steps shall be of corrosion-resistant material, easily cleanable, and of non-slip design. Handrails shall be provided at all steps and ladders leading to diving boards more than one meter above the water, except those set at 15 or more from the vertical. Platforms and diving boards which are over one meter high shall be protected with guard railings.

(11) Decks and walkways.

(aa) A continuous deck, free from fixed obstructions, at least five feet (and preferably eight or more feet) wide shall extend completely around the swimming pool. The deck shall be sloped away from the pool to drain at a grade of 1/4 inch to 3/8 inch per lineal foot and shall have a non-slip surface. Deck drains connected to the recirculation system or gutters shall be prohibited on outdoor swimming pools.

(bb) In deck areas where carpeting is used, the deck shall be so designed and constructed as to provide adequate drainage and convey all water away from carpeted areas. The carpeting shall not, in any case, be permitted within ten feet of the pool.

(12) Diving areas.

(aa) The dimensions of the swimming pool and appurtenances in the diving area shall conform to Table 115(i)(12)A.

(bb) There shall be a completely unobstructed clear distance of 16 feet above the diving board measured from the center of the front end of the board, and this area shall extend at least eight feet behind, eight feet to each side, and 16 feet ahead of the measuring point. Board approval shall be obtained for a variance of this requirement.

(j) User loading.

(1) For the purposes of computing user loading, those portions of the swimming pool five feet or less in depth shall be designated as "non-swimming" areas.

(2) In order to compute swimmer and bather capacity, swimming pool areas shall be determined as follows:

(aa) Ten square feet of pool water surface area shall be provided for each non-swimmer expected at time of maximum load.

(bb) Twenty-four square feet shall be provided for each swimmer expected at time of maximum load.

(cc) Three hundred square feet of pool water surface area shall be reserved around each diving board or diving platform and this area shall not be included in computing the area of the swimming section.

(3) The board shall make additional allowance for bathers in cases of swimming pools with extensive deck areas used by patrons for lounging or sunbathing.

(k) Filters.

(1) Sand type filters. The following requirements are equally applicable to either gravity or pressure sand type filters.

(aa) Pressure sand type filters shall be designed for a filter rate of three gallons per minute per square foot of bed area at time of maximum head loss, with sufficient area to meet the design rate of flow required by the prescribed turnover. The design filtration rate for high-rate sand filters shall not be in excess of 25 gallons per minute per square foot of bed area. Also, high-rate sand filters shall meet or be equal to the standards of the National Sanitation Foundation as specified in MHD 115(i)(2)(gg).

(bb) Filtering material shall consist of at least 20 inches of screened, sharp filter sand with an effective size between 0.4 and 0.55 mm., and a uniformity coefficient not exceeding 1.75, supported by at least ten inches of graded filter gravel. Anthracite having an effective size between 0.6 and 0.8 mm., with a uniformity coefficient of not greater than 1.8 may be used in lieu of the sand. The gravel shall effectively distribute water uniformly during filtration and backwashing. A reduction in this depth or an elimination of gravel may be permitted where equivalent performance and service are demonstrated.

(cc) The underdrain system shall be of corrosion-resistant and enduring material, and so designed that the orifices or other openings will maintain approximately constant area. It shall be designed to provide even collection or distribution of the flow during filtration and backwashing.

(dd) At least 12 inches of freeboard shall be provided between the upper surface of the filter media and the lowest portion of the pipes or drains which serve as overflows during

backwashing.

(ee) The filter system shall be provided with influent and effluent pressure gauges, backwash sight glass on the waste discharge line, and air-relief valves at or near the high point of the filter.

(ff) The filter system shall be designed with necessary valves and piping to permit:

(ff1) Filtering to swimming pool

(ff2) Individual backwashing of filters to waste at a rate of not less than 15 gallons per minute per square foot of filter area

(ff3) Isolation of individual filters for repairs while other units are in service

(ff4) Complete drainage of all parts of the system

(ff5) Necessary maintenance, operation and inspection in a convenient manner

(gg) Each pressure type filter tank shall be provided with an access opening of not less than a standard 11 inch by 15 inch manhole and cover.

(hh) Devices with reasonably accurate dosage control features shall be provided if coagulants are added ahead of filters.

(ii) On pressure type filters, the tank and its integral parts shall be constructed of substantial material capable of withstanding continuous anticipated usage, and shall be designed for a pressure safety factor of four based on the maximum shutoff head of the pump. The shutoff head for design purposes shall in no case be considered less than 50 pounds per square inch.

(2) Diatomaceous earth type filters.

(aa) Sufficient filtering area shall be provided to meet the design pump capacity as required by this regulation.

(bb) Rate of filtration: The design rate of filtration shall not be greater than two gallons per minute per square foot of the effective filtering area without continuous body feed, and not greater than 2.5 gallons per minute per square foot with continuous body feed.

(cc) If a body feeder is required, the device shall be accurate (ten percent) and dependable, and shall be capable of continually feeding within a calibrated range, adjustable from two to six ppm, at the design capacity of the recirculation pump. The feeding of diatomaceous earth through skimmers is

prohibited.

(dd) Filtering area, where fabric is used, shall be determined on the basis of effective filtering surfaces as created by the septum supports, with no allowances for areas of impaired filtration, such as broad supports, folds or portions which may bridge.

(ee) The filter and all component parts shall be of such materials, design and construction as to withstand normal continuous use without significant deformation, deterioration, corrosion, or wear which could adversely affect filter operation.

(ff) The filter shall be so designed and constructed, or provision made, to preclude the introduction of appreciable quantities of filter-aid into the pool during pre-coating operations.

(gg) The tank containing the filter elements shall be constructed of steel, plastic, or other suitable material, which will satisfactorily provide resistance to corrosion, with or without coating. Pressure type filters shall be designed for a minimum working pressure of 50 pounds per square inch with a four to one safety factor. Vacuum type filters shall be designed to withstand the pressure developed by the weight of the water contained therein, and closed vacuum type filters shall, in addition, be designed to withstand the crushing pressure developed under a vacuum of 25 inches of mercury with a safety factor of 1.5 in both instances. The septa or elements which support the filter-aid shall be of corrosion-resistant material. The septa shall be constructed to be resistant to rupture under conditions of the maximum differential pressure between influent and effluent which can be developed by the circulating pump, and be of adequate strength to resist any additional stresses developed by the cleaning operation.

(hh) Where dissimilar metals, which may set up galvanic electric currents, are used in the filters, provision shall be made to resist electrolytic corrosion. The filters shall be designed in such a manner that they may be easily disassembled, with allowances made for adequate working space above and around the filter to permit the removal and replacement of any part and proper maintenance.

(ii) The filter plant shall be provided with such pressure, vacuum, or compound gauges as are required to indicate the condition of the filter. In vacuum type filter installations where the circulating pump is two horsepower or higher, an adjustable high vacuum automatic shut-off shall be provided to prevent damage to the pump by cavitation.

(jj) All filters shall be equipped for cleaning by one or more of the following methods: back-washing, air-bump-assist back-washing, spray wash (mechanical or manual), or agitation.

(kk) Provision shall be made for completely and rapidly

draining the filter.

(l) Disinfectant and chemical feeders.

(1) The swimming pool shall be equipped with a chlorinator, hypochlorinator, or other disinfectant feeder or feeders which meet the following requirements:

(aa) They shall be of sturdy construction and materials which will withstand wear, corrosion, or attack by disinfectant solutions or vapors and which are not adversely affected by repeated regular adjustments or other conditions anticipated in the use of the device. The feeder shall be capable of being easily disassembled for cleaning and maintenance. The design and construction shall be such as to preclude stoppage from chemicals intended to be used or foreign materials that may be contained therein. The feeder shall incorporate failure-proof features so that the disinfectant cannot feed directly into the swimming pool, the pool piping system, water supply system, or the swimming pool enclosure under any type of failure of the equipment or its maintenance.

(bb) They shall be capable of supplying at least the equivalent of one pound of chlorine per eight hours for each 10,000 gallons of swimming pool capacity under conditions of operation to be anticipated at the proposed installation.

(cc) They shall have a graduated and clearly marked dosage adjustment to provide flows from full capacity to 25 percent of such capacity. The device shall be capable of continuous delivery within ten percent of the dosage at any setting.

(2) When the disinfectant is introduced at the suction side of the pump, a device or method shall be provided to prevent air lock of the pump or recirculation system.

(3) When compressed chlorine gas is used, the following additional features shall be provided:

(aa) The chlorine and chlorinating equipment shall be in a separate mechanically ventilated room. Such rooms shall not be below ground level and shall be provided with vents near the floor which terminate out-of-doors. The door of the room shall not open to the swimming pool, and shall open to the outside. The door shall be labeled "DANGER - GAS CHLORINE" in letters at least four inches in height and of an orange color on a green background. Board approval shall be obtained for a variance of this requirement.

(bb) The chlorinator equipment shall be of rugged design, capable of withstanding wear without developing leaks.

(cc) All chlorine cylinders shall be anchored to prevent their falling over. A valve stem wrench shall be maintained on the chlorine cylinder so that the supply can be

shut off quickly in the case of an emergency. The valve protection hood shall be kept in place except when the cylinder is connected.

(dd) The chlorine-feeding device shall be designed so that during accidents or interruptions of the water supply leaking chlorine gas will be conducted to the out-of-doors.

(ee) The chlorinator shall be a solution-feed type, capable of delivering chlorine at its maximum rate without releasing chlorine gas to the atmosphere.

(ff) The chlorinators shall be designed to prevent the backflow of water into the chlorine solution container.

(gg) A gas mask designed for use in a chlorine atmosphere and of a type approved by the U. S. Bureau of Mines shall be provided. In addition, replacement canisters shall be provided and a record shall be kept of gas mask usage to insure that the mask will be serviceable when needed.

(hh) The gas mask shall be kept in a closed cabinet, accessible without a key, located outside of the room in which the chlorinator is maintained.

(ii) Installation of chlorinator equipment, and operation thereof, shall be carried on by and under the supervision of personnel experienced with installation and operation of such equipment.

(4) When a hypochlorite solution is used to be fed through hypochlorinator equipment:

(aa) Feed shall be continuous under all conditions of pressure in the circulating system, and without artificial constriction of the pump suction line, whether this line is under vacuum or pressure head.

(bb) Regulation shall be provided to insure constant feed with varying supply or back pressure.

(cc) Positive features shall be provided for preventing back-flow from the recirculation system to the solution container and for reducing to a minimum the entry into the swimming pool of free calcium released from calcium hypochlorite.

(dd) Means shall be provided to prevent siphoning of hypochlorite solution when the recirculation pump and hypochlorinator are both turned off. (This applies to above-swimming-pool-level installations only.)

(5) Equipment and piping used to apply chemicals to the water shall be of such size, design, and material as to be non-clogging and easily cleanable; equipment of the positive displacement type is preferred. All material used for such equipment and piping shall be resistant to action of chemicals

to be used therein.

(m) Lighting, ventilation, and electrical requirements.

(1) Where underwater lighting is used, not less than 0.5 watts shall be employed per square foot of swimming pool water surface areas. Such lights shall be spaced to provide illumination so that all portions of the pool, including the bottom, may be readily seen without glare.

(2) Area lighting shall provide at least 0.6 watts per square foot of deck area. If such lighting is used for night swimming, area and swimming pool lighting combined shall provide at least two watts per square foot of pool and deck area.

(3) All electrical wiring shall conform with the applicable provisions of the latest edition of the National Electrical Code (Article 680), as provided for in Minnesota Statutes, section 326.243 (1969) and the code of the State Board of Electricity.

(4) All indoor swimming pools, bathhouses, dressing rooms, shower rooms, and toilet spaces shall be adequately ventilated by mechanical means.

(n) Maintenance requirements. The swimming pool, swimming pool equipment, and appurtenances shall be maintained in a satisfactory operating condition.

(o) Dressing rooms.

(1) Bathhouses to be used simultaneously by both sexes shall be divided into two parts separated by a tight partition, each designated for men or women. The entrances and exits shall be screened to break line of sight.

(2) Bathhouse floors shall be smooth finished material with nonslip surface, impervious to moisture, and sloped to a drain. Junctions between walls and floors shall be coved.

(3) Walls and partitions shall be of smooth, impervious material, free from cracks or open joints. Partitions between dressing rooms shall terminate at least ten inches above the floor or shall be placed on continuous raised masonry or concrete bases at least four inches high. Lockers shall be set either on solid masonry bases four inches high or on legs, with the bottom of the locker at least ten inches above the floor. Lockers shall be properly vented.

(4) The requirements relating to bathhouses, dressing rooms, toilet facilities and showers may be waived when such facilities are conveniently available to swimming pool patrons.

(p) Toilets and showers.

(1) Toilet and shower facilities shall be provided on the

basis of the following fixture schedule*:

	Males	Females
Water Closets	1/75	1/50
Urinals	1/75	----
Lavatories	1/100	1/100
Showers**	1/50	1/50

Drinking fountain - minimum of one to be located in swimming pool area.

(2) The layout of the bathhouse shall be such that the bathers on leaving the dressing room pass the toilets and showers en route to the swimming pool.

(3) Showers shall be supplied with water at a temperature of at least 90 degrees F. at a rate of at least three gallons per minute. Thermostatic, tempering, or mixing valves shall be installed, if necessary, to prevent scalding of the bathers.

(q) Safety requirement; lifesaving equipment.

(1) Swimming pools operated primarily for unorganized use and having an area of more than 2,250 square feet of water surface area shall be provided with an elevated lifeguard platform or chair. In pools with 4,000 square feet or more of water surface area, additional elevated chairs or stations shall be provided, located so as to provide a clear unobstructed view of the pool bottom in the area under surveillance.

(2) One unit of lifesaving equipment shall consist of the following: A ring buoy not more than 15 inches in diameter and equivalent in weight to a cork buoy, to which shall be attached a 60 foot length of 3/16 inch manila rope or equivalent; a life pole or shepherd's crook type of pole having blunted ends and a minimum length of 12 feet; and a separate throwing line of 1/4 inch rope with a length not less than 1-1/2 times the maximum width of the pool. Not less than one unit of equipment, as enumerated above, shall be provided at every public swimming pool. One unit shall be presumed to be adequate for 2,000 square feet of water surface area, and one additional unit shall be provided for each additional 2,000 square feet, or major fraction thereof, of water.

(3) Every pool, where a lifeguard is provided, shall be equipped with a standard 16 unit first aid kit which shall be kept filled and ready for use.

*Fixture schedules should be increased for swimming pools at schools or similar locations where bather loads may reach peaks due to schedules of use.

**Minimum of two.

(4) Lifesaving equipment shall be mounted in conspicuous places, distributed around the swimming pool deck, at lifeguard chairs, or elsewhere, readily accessible, its function plainly marked, and kept in repair and ready condition. Bathers or others shall not be permitted to tamper with, use for any purpose other than its intended use, or remove such equipment from its established location.

(5) Where no lifeguard service is provided, a warning sign shall be placed in plain view and shall state "Warning - No Lifeguard On Duty" with clearly legible letters at least four inches high. In addition, the sign shall state "Children Shall Not Use Pool Without An Adult In Attendance."

(r) Disinfection and quality of water.

(1) Swimming pools, when in use, shall be continuously disinfected with a chemical which imparts an easily measured, free available residual effect. When chlorine is used, a free chlorine residual of at least 0.5 ppm shall be maintained throughout the pool whenever it is open or in use. If other halogens are used, residuals of equivalent disinfecting strength shall be maintained. A testing kit for measuring the concentration of the disinfectant, accurate within 0.1 ppm, shall be provided at each swimming pool.

(2) The board may accept other disinfecting materials or methods when they have been adequately demonstrated to provide a satisfactory residual effect which is easily measured, and to be otherwise equally as effective under conditions of use as the chlorine concentration required herein, and not be dangerous to public health, create objectionable physiological effects, or impart toxic properties to the water.

(3) The swimming pool water shall be maintained in alkaline condition as indicated by a pH of not less than 7.2 and not over 8.2. A pH testing kit accurate to the nearest 0.2 pH unit shall be provided at each swimming pool. The alkalinity of the water shall be at least 50 ppm as measured by the methylorange test.

(4) The water shall have sufficient clarity at all times so that a black disc, six inches in diameter, is readily visible when placed on a white field at the deepest point of the swimming pool. Failure to meet this requirement shall constitute grounds for immediate closing of the pool.

(5) Not more than 15 percent of the samples collected over any considerable period of time shall either (1) contain more than 200 bacteria per ml, as determined by the standard (35 C) agar plate count, or (2) show positive test (confirmed test) for coliform organisms in any of the five 10 ml portions of a sample or more than 1.0 coliform organisms per 50 ml when the membrane filter test is used. All samples shall be collected, dechlorinated, and examined in accordance with the procedures outlined in the 13th edition (1971) of "Standard Methods for the

Examination of Water and Wastewater" (APHA). The board may collect and examine samples on a routine basis when the swimming pool is in active use.

(6) Chemicals used in controlling the quality of water shall be demonstrated as imparting no toxic properties to the water. Such chemicals as may be used for algae control shall be approved for use by the board.

(s) Cleaning swimming pools.

(1) Visible dirt on the bottom of the swimming pool shall be removed every 24 hours or more frequently as required.

(2) Visible scum or floating matter on the swimming pool surface shall be removed every 24 hours or more frequently as required by flushing or other effective means.

(t) Supervision of swimming pools.

(1) Every swimming pool shall be operated under the close supervision of a designated operator. The board may require a certificate of competency obtained through attendance at and successful completion of a swimming pool operator's training course.

(2) Proper operating records, which may include the following as required by the board, shall be kept daily showing:

(aa) Bather loads - total

(bb) Peak bather load

(cc) Volume fresh water added

(dd) Operating periods of recirculation pumps and filters and corresponding rate-of-flow meter readings

(ee) Amounts of chemical used

(ff) Disinfectant residuals

(gg) pH readings

(hh) Maintenance (and malfunctioning) of equipment

(u) Supervision of bathers.

(1) A qualified attendant, trained in first aid and resuscitation, shall be on duty at all times the swimming pool is open to use by bathers except as provided in Regulation MHD 115(q)(5). Such attendant should be in full charge of bathing and have authority to enforce all rules of safety and sanitation.

(2) The following personal regulations shall be enforced:

(aa) All persons using the swimming pool shall take a cleansing shower bath in the nude, using warm water and soap and thoroughly rinsing off all soap suds, before entering the swimming pool room or enclosure. A bather leaving the pool to use the toilet shall take a second cleansing bath before returning to the swimming pool room or enclosure.

(bb) Any person having an infectious or communicable disease shall be excluded from a public swimming pool. Persons having any considerable area of exposed subepidermal tissue, open blisters, cuts, etc., shall be warned that these are likely to become infected and advised not to use the pool.

(cc) Spitting, spouting of water, blowing the nose, etc., in the swimming pool shall be strictly prohibited.

(dd) No running and boisterous or rough play, except supervised water sports, shall be permitted in the pool, on the runways, diving boards, floats or platforms, or in dressing rooms, shower rooms, etc.

(ee) Glassware or similar materials having a tendency to shatter upon impact shall not be allowed within the swimming pool enclosure area.

(ff) Suitable placards embodying the above personal regulations and instructions and those relating to suits and towels shall be conspicuously posted in the swimming pool room or enclosure and in the dressing rooms and offices at all swimming pools.

(v) Closure of pools. When any of the following conditions are found, any public swimming pool shall be immediately closed to use when so ordered by any authorized representative of the board, and may be placarded with the appropriate wording to indicate that it has been closed:

(1) The proper number of units of safety equipment are not provided.

(2) The clarity is such that a black disc, six inches in diameter, is not readily visible when placed on a white field at the deepest point of the pool.

(3) The disinfectant residual is found to be below the acceptable levels established in MHD 115(r).

(4) Any other condition which endangers the health, safety, or welfare of the public.

The pool shall remain closed until the conditions are corrected and followup observations made by an authorized representative of the board.

Regulation 10874 of the State Board of Health is hereby repealed.

4396A-4400

MHD 142 On land disposal facilities for sewage and other wastes from marine toilets equipped with retention devices.

(a) Pump. A self-priming pump, suitable for pumping raw sewage or other wastes, and easily serviceable in the event of clogging shall be provided for the on land disposition of sewage or other wastes from watercraft or other marine conveyance equipped with a marine toilet and retention device. Head characteristics and capacity shall be based on installation needs for the site; however, as a minimum the pump shall be capable of lifting sewage or other wastes 12 feet. The pump may be either fixed in position or portable mounted.

(b) Suction hose. The suction hose shall be pliable, noncollapsible, nonkinking, and a minimum of 15 feet in length. It shall have a smooth interior. A quick-connect drip-proof connector shall be fitted to the end of the hose that is attached to the boat piping outlet. Such connector should be capable of a friction fit in the inside diameter of a 1-1/2 inch Schedule 40 pipe.

(c) Discharge hose. Flexible hose, compatible with the pump characteristics, shall be used. The discharge hose and suction hose of paragraph (b) shall be labeled and color coded brown. All permanent piping shall conform to the Minnesota State Plumbing Code, MHD 120-135.

(d) Sewage or other waste disposal requirements.

(1) Public disposal systems. When connection to a public sanitary sewer is available, the disposal piping shall be designed to discharge thereto.

(2) Private disposal systems. When a public sewer is not available, a private sewage disposal system installed in compliance with applicable state standards shall be provided unless adequate private treatment and disposal systems are already available. The sewage disposal system may be either a septic tank-soil absorption system for a holding tank.

(e) Water supply requirements. The on land disposal facility shall be served by a water supply piping system to permit flushing of the facilities serviced. If a potable water supply is the source of flushing, the distribution piping shall be protected from backsiphonage and backpressure, labeled, and color coded brown from the backsiphonage, backpressure device to the end of the hose. A separate hose shall be provided for filling the drinking water system of the watercraft or other marine conveyance. That hose shall be labeled and color coded blue.

(f) Plan approval.

(1) Two sets of plans and specifications for the proposed construction of new, or modification of existing on land

disposal facilities for the receipt of sewage or other wastes from watercraft or other marine conveyances equipped with marine toilets and retention devices shall be submitted to the Minnesota Health Department. The proposed modification or construction of the on land disposal facilities shall not commence until the plans and specifications are approved, in writing, by the Department of Health. If the disposal system is designed to discharge an effluent to the waters of the state, or involves a sewer extension from a municipal sewer system, plan approval and a permit shall also be obtained from the Minnesota Pollution Control Agency.

(2) At a minimum plans and specifications shall cover in detail the materials to be used, the pump characteristics, and the water supply system. Where applicable, the connection to the public sewer or the private disposal system, the size and construction details of the septic or holding tank, results of soil percolation tests and soil borings and the construction details of the soil absorption system shall be included. Location of all wells within 100 feet of the absorption system, the surface water high water level and the general topography of the area shall be shown on the plans.

(3) Plans and specifications will not be reviewed for approval until they are submitted in sufficient detail to permit proper evaluation for compliance with Minnesota Statutes, section 361.29 and these and all other applicable regulations.

(4) The plan approval required by this section shall be in addition to any other permit, approval or license required by federal, state or local law.

4386A-4400

MHD 143 Approval of laboratories performing bacteriological examinations of water.

(a) Scope and purpose. In order to better protect the health of the public, the Minnesota State Board of Health hereby establishes a system of approval for laboratories that perform bacteriological examinations of water. This regulation lists those examinations necessary for adequate public protection and specifies the criteria to be used in the approval of laboratories. Any laboratory performing bacteriological examinations of water may apply for a certificate of approval. The board shall issue a certificate of approval and place the laboratory on the approved list upon proper application therefor and upon determination by survey that all standards as specified in this regulation are being met. Only results of examinations performed by laboratories on the approved list will be accepted by the board for official use in evaluation of water quality.

(b) Definitions. For the purposes of this regulation the following terms are defined:

(1) "Applicant" shall mean a laboratory which has applied for a certificate of approval and placement on the approved list.

(2) "Approved list" shall mean a list of those laboratories which have a valid certificate of approval.

(3) "Board" shall mean the Minnesota Board of Health or its authorized agent or representative.

(4) "Certificate of approval" shall mean the document issued by the board to any laboratory which submits an application therefor and complies with the standards and criteria specified in this regulation.

(5) "Laboratory" shall mean any facility at which bacteriological examinations of water are conducted.

(6) "Official use" shall mean the use of the laboratory results by the board in the evaluation of the bacteriological quality of water.

(7) "Personnel" shall mean those individuals performing the tests for which a certificate of approval may be sought.

(8) "Approved personnel" shall mean those individuals who have been surveyed and approved to perform those tests for which a certificate of approval may be or has been issued.

(9) "Survey" shall mean an on site study of a laboratory and its operations.

(10) "Test" shall mean the examinations of water for a specific organism or group of organisms by a specific method.

(c) Bacteriological tests for which a certificate of approval will be issued.

(1) A certificate of approval may be issued for any one test or combination of the following tests as defined in Standard Methods for the Examination of Water and Wastewater, 13th Edition:

(aa) Standard Plate Count;

(bb) Total Coliform estimation by the Multiple Tube method and by the Membrane Filter method;

(cc) Fecal Coliform estimation by the Multiple Tube method and the Membrane Filter method;

(dd) Fecal Streptococcus estimation by the Multiple Tube method and the Membrane Filter method.

(2) Results from any of the tests listed under MHD 143(c)(1) will be accepted for official use only from those laboratories approved for that test.

(3) A certificate of approval will not be issued for any test not listed in (c)(1).

(d) Those personnel upon whose performance a certificate of approval may be issued.

(1) Any laboratory personnel may be approved to perform a test or combination of tests specified in (c)(1).

(2) Approved personnel shall hold such status only for that laboratory which lists the individual in the application for certificate of approval.

(e) Application for certificate of approval.

(1) Any laboratory may apply for a certificate of approval.

(2) The application for the initial issuance of a certificate of approval shall be submitted by the laboratory to the board on forms provided by the board. The application form shall request information from the applicant that includes but is not limited to the following:

(aa) Name and address of laboratory. If one company operates several laboratories, separate applications for each location are required.

(bb) Name of person making application for the laboratory and his position therewith.

(cc) Tests for whom approval is sought.

(dd) Personnel for whom approval is sought.

(3) The application for subsequent issuances of a certificate of approval shall be submitted by the laboratory to the board on forms provided by the board. The application form shall request information from the applicant that includes but is not limited to the following:

(aa) That information listed in (e)(2).

(bb) Dates of any previous certificate of approval.

(f) Procedure and performance standards required for issuance of a certificate of approval.

(1) To qualify for issuance of a certificate of approval for a test or tests an applicant shall:

(aa) Submit a fully completed application for a certificate of approval.

(bb) Demonstrate through a survey that bacteriological examinations of water performed by the applicant laboratory are conducted in accordance with the criteria specified in Standard Methods for the Examination of Water and Wastewater, 13th Edition, published jointly by the American Public Health Association and the Water Pollution Control Federation. Compliance with later editions shall be considered compliance with the 13th Edition. The burden of proof shall be upon the applicant for a certificate of approval that compliance has been made.

(cc) Demonstrate through a survey that personnel for whom approval is sought are capable of performing water examinations in accordance with the criteria specified in (f)(1)(bb).

(dd) Demonstrate through a survey that personnel for whom approval is sought are performing these tests in (c)(1) in a competent, fit, safe, and acceptable manner.

(2) Upon meeting the above requirements, a certificate of approval may be issued for those tests surveyed.

(g) Specifications concerning the issuing of a certificate of approval.

(1) Any laboratory issued a certificate of approval shall be placed on an approved list. This list shall be updated quarterly and available to the public.

(2) Any laboratory issued a certificate of approval shall participate in proficiency programs as required by the board with the production of results that are satisfactory to the board.

(3) This certificate of approval will be valid for two years from date of issuance or until the laboratory changes or

modifies tests, fails to comply with standards referenced in MHD 143(f)(1)(bb), or permits personnel not approved by the board to perform tests for which the certificate of approval was issued, whichever occurs first.

(4) The certificate of approval shall be displayed in the laboratory in a conspicuous place observable to the public. The certificate of approval will contain the following information:

(aa) Date of expiration;

(bb) Names of approved personnel;

(cc) Test or tests to which it applies;

(dd) Laboratory name and address at which the tests are to be performed.

(h) Renewal of certificate of approval.

(1) Within the 60 days prior to the expiration of the certificate of approval, a laboratory shall apply for a certificate of approval renewal pursuant to MHD 143(e)(3).

(2) Should a laboratory no longer employ approved personnel or employ additional personnel to perform the tests listed in (c)(1) within 60 days of such event it shall apply for a certificate of approval renewal pursuant to MHD 143(e)(3).

(3) Failure to apply for a renewal of certificate of approval as required in (h)(1) or (2) shall result in the automatic removal of a laboratory from the approved list.

4386A-4400

MHD 144 Water purification and filtration plants grants program.

(a) Scope, purpose and authority. This rule shall apply to the distribution of funds appropriated to the State Board of Health to be awarded as grants to municipalities using Lake Superior as their drinking water source for the construction of water filtration and purification systems which are determined to be necessary for the elimination of polluting or potentially injurious substances from the water. The purpose of the rule is to provide a means of equitably distributing the funds appropriated to the State Board of Health in accordance with law. The rule is promulgated pursuant to the grant of authority contained in the enabling legislation.

(b) Definitions. For the purpose of this rule, the following terms shall have the meanings given them:

(1) The terms "agency," "municipality," "eligible cost," and "municipal water purification system" shall have the meanings assigned them by Minnesota Laws 1975, chapter 437, article XI, section 2, subdivision 2(a).

(2) "Application" means the form prescribed by the agency with attachments specified by this rule which is submitted by a municipality for a grant.

(3) "Commissioner" means the secretary and executive officer of the State Board of Health.

(4) "Discharges" means the person, corporation, or any other association issued a permit by the state of Minnesota or any of its departments or agencies for the addition or discharge of any substance or pollutant, including taconite tailings, to the waters of Lake Superior.

(5) "Enabling legislation" means Minnesota Laws 1975, chapter 437, article XI, section 2, subdivision 2.

(6) "Grant" means the award of monies by the agency under the authority of the enabling legislation and this rule.

(c) Requirements. To be eligible for a grant:

(1) The application shall be submitted to the agency on forms prescribed by it, not later than July 31, 1976. The agency shall have the right to request additional information to assure a complete and accurate review of each application in keeping with the purposes of the enabling legislation and this rule, such information may be related but not limited to the accuracy of eligible cost estimates and to the amount of the grant requested to assure that it applies to eligible costs only. Failure to supply the requested information shall result in denial of the grant.

(2) Executed contracts shall require construction on the

project to commence not later than July 1, 1977, with completion scheduled for not later than July 1, 1979.

(3) Costs for which a grant may be requested shall not include landscaping, furnishings, office equipment, and other personal property which is not directly related to the construction and establishment of a permanent municipal water filtration or purification system.

(4) An application, when submitted to the agency, shall have attached to it:

(aa) A statement detailing the major eligible cost items for which a grant is requested such as site acquisition, site preparation, building, equipment, engineering fees, contingencies and administrative costs.

(bb) A description of the proposed water treatment process (i.e., the municipal water purification system) including the major treatment units which are determined by the applicant municipality to be necessary for the satisfactory removal of polluting or potentially injurious substances from the water. The statement shall also list the polluting or potentially injurious substances intended to be removed from the water by the proposed water treatment process.

(cc) A proposed contract whereby the applicant municipality covenants that it will either:

(i) Pursue its remedies, specifying how it will do so and how it will reimburse the state with any recovery under the permits granted to the discharges, or

(ii) Subrogate to the state those remedies for purposes of obtaining reimbursement of the state funds expended under the grants program established by the enabling legislation and this rule.

Award of any grant is dependent upon the agency and the municipality reaching agreement as to how the state will be reimbursed. (See MHD 144(d)(2)(bb))

(d) Approval of grant.

(1) The application shall be conditionally approved upon a finding by the agency that:

(aa) The municipal water purification system is necessary for the elimination of polluting or potentially injurious substances from water used for municipal water supply purposes, and

(bb) The costs[1] for which the grant is requested qualify as eligible costs as limited by Minnesota Rule MHD 144(d)(3)-(5).

(2) The agency shall not give final approval of the grant nor pay any monies to a municipal grant recipient until all of the following conditions are met:

(aa) Submission of plans for the municipal water purification system to the State Department of Health for review and approval pursuant to Minnesota Rule MHD 136.[2]

(bb) Execution of a contract between the agency and the municipal grant recipient specifying the terms by which the state will be reimbursed either after the municipality has sucessfully pursued its remedies under the permits granted to the discharges or by subrogation of those remedies to the agency on behalf of the state of Minnesota.

(3) No municipality shall receive a grant for more than 33 percent of the actual eligible cost of its project.

(4) No municipality shall receive a grant of more than $2,000,000.

(5) Since the application will contain and be based upon estimated eligible costs, approval of the grant means that the municipality is eligible for grant funds. The actual amount paid under the grant will be determined by actual eligible costs for construction of the municipal water purification system subject to the payment limitations specified in Minnesota Rule MHD 144(d)(3), (4) and 144(e).

(e) Payment of grant.

(1) All approved grants shall be funded so that each municipal grantee will receive funds for the same percentage of their total actual eligible costs, except:

(aa) As specified in Minnesota Rule MHD 144(d)(3) and (4).

(bb) That any grant limited by MHD 144(d)(4) shall not act as a percentage limitation on the funding of the remaining grants.

[1]It is recognized that the costs quoted in the application will be estimates.

[2]This rule relates to the approval by the department of final and complete plans and specifications for the installation, alteration, or extension of water supply systems.

(2) When a grant has been approved by the agency and all conditions for payment of the grant met by the grantee, payment of the grant may be made in the following manner, except as limited by Minnesota Rule MHD 144(e)(4):

(aa) Monthly installment payments for up to seventy-five (75) percent of the eligible construction or other items as measured by its actual cost, such payments to be made only for completed eligible construction or other items for which:

(i) Payment by the municipality to the contractor or other person has been made or is due and owing; and

(ii) No previous payment by the agency has been made.

(bb) Any other method of payment requested by the municipal grantee which is agreeable to the commissioner in his sole discretion.

(3) After the commissioner has authorized the method of payment pursuant to Minnesota Rule MHD 144(e)(2) or (4), the commissioner shall authorize disbursement of monies under such method upon reviewing expenditures for eligible costs. The eligible cost expenditures shall be certified to by the grantee and the project engineer.

(4) The final twenty-five (25) percent payment will be made in increments of ten, ten and five percent when:

(aa) In the opinion of the commissioner work has proceeded on all projects for which grants were approved to the point where it can be determined that payments will comply with Minnesota Rule MHD 144(e)(1);

(bb) Payment by the municipality to the contractor or other person has been made or is due and owing; and

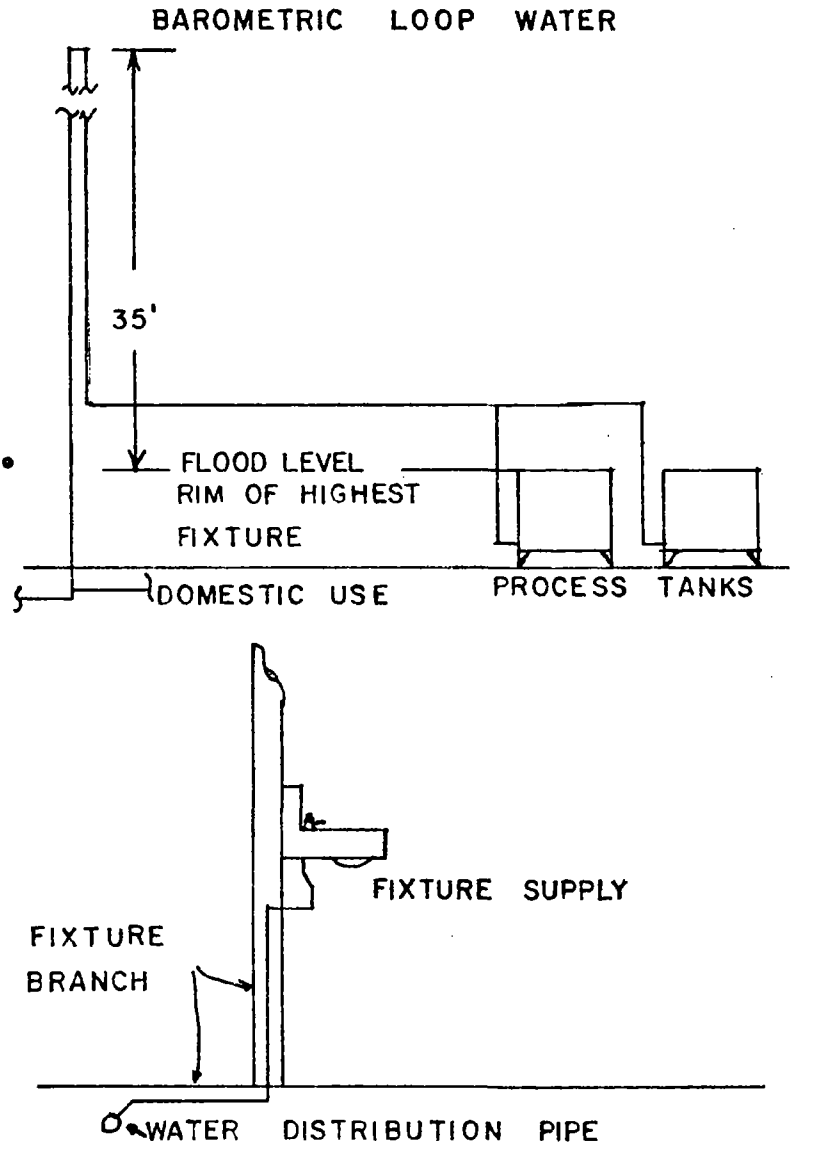
(cc) No previous payment for the construction in question has been made by the agency.

(f) Waiver of rule. The agency may waive any provision of these rules with respect to any municipality when necessary to accomplish the purposes and intent of the enabling legislation. A waiver shall not be granted if it will violate any specific provision of the enabling legislation. A waiver shall only be granted when the agency has made a documented finding that the granting of the waiver is necessary to meet the intent and purpose of the enabling legislation. Governed by this standard, a waiver shall be granted at the reasonable discretion of the agency. The agency shall specify in writing the exact rule that is waived and the detailed reasons for granting the waiver.

APPENDIX B

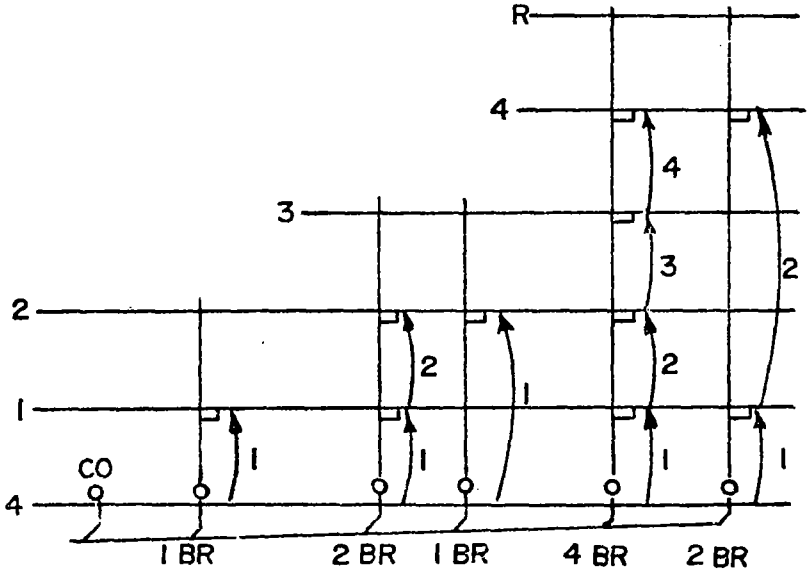
ILLUSTRATIONS

MHD 121 DEFINITIONS

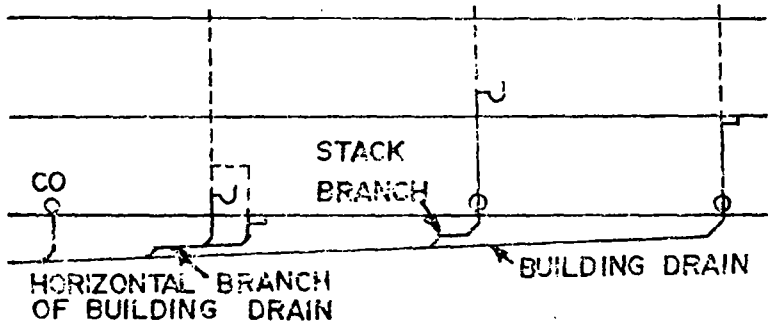


MHD 121 DEFINITIONS

BRANCH INTERVALS

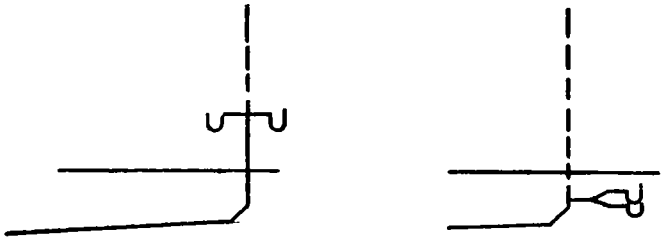


BUILDING DRAIN AND BRANCHES



MHD 121 DEFINITIONS

COMMON VENTS



CONTINUOUS VENTS

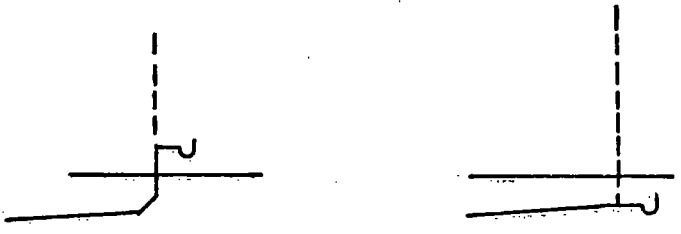
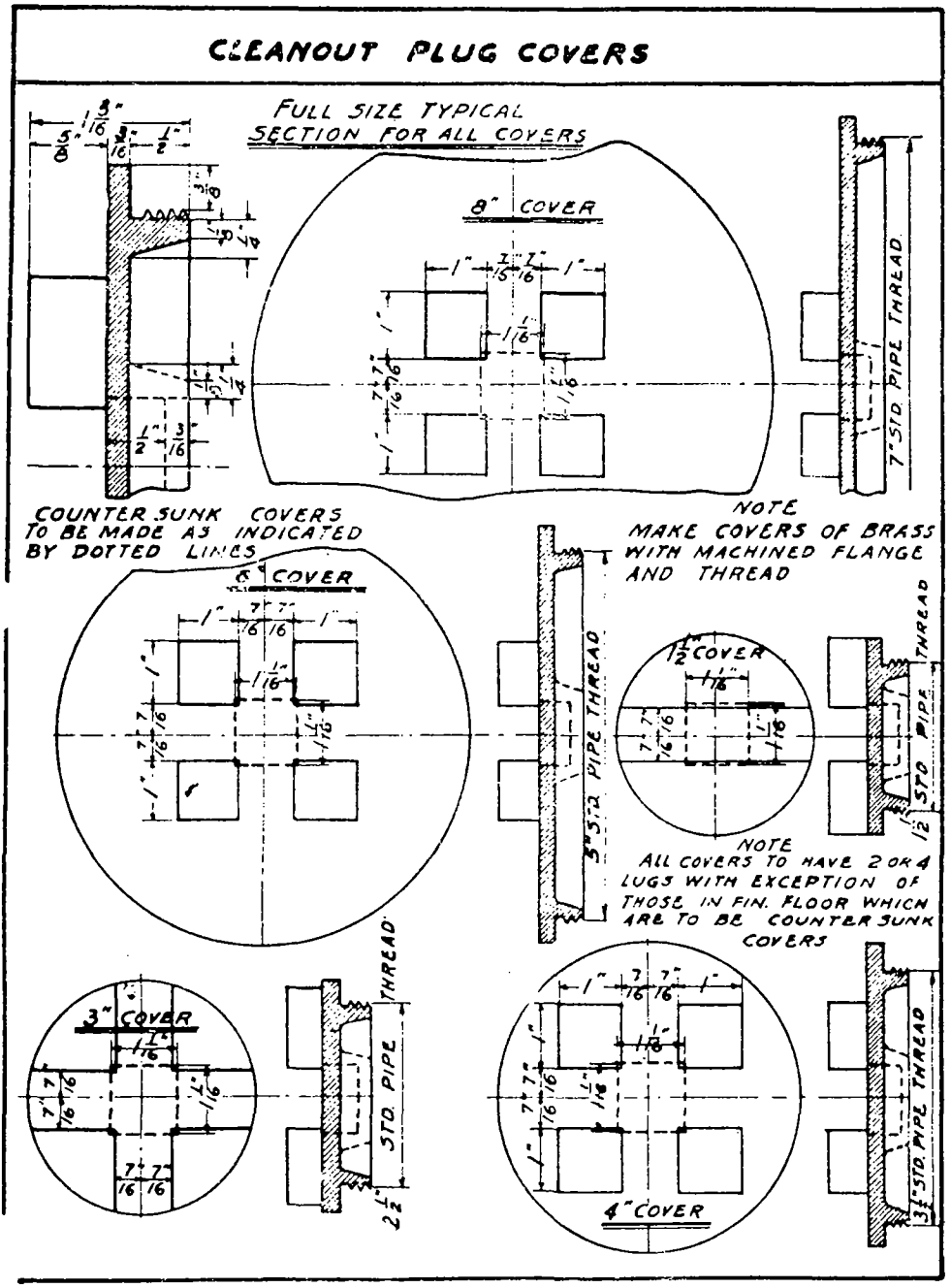
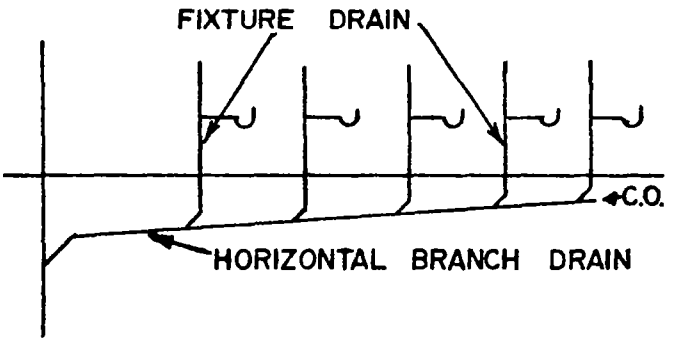


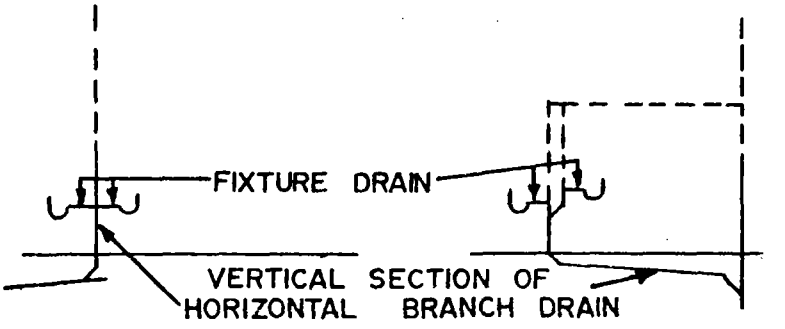
FIGURE 125(b)(3)

Brass Cleanout Covers for Cast Iron Soil Fittings

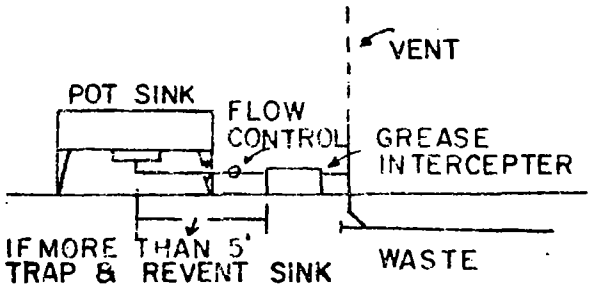


MHD 121 DEFINITIONS

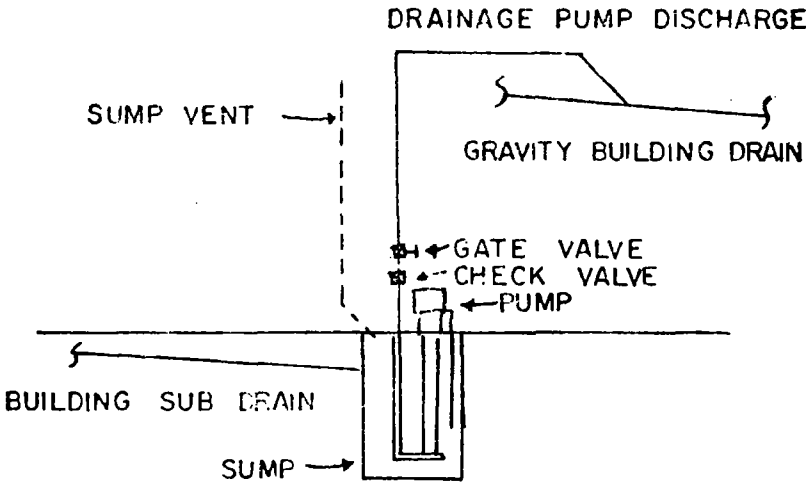




MHD 126(a)(3)

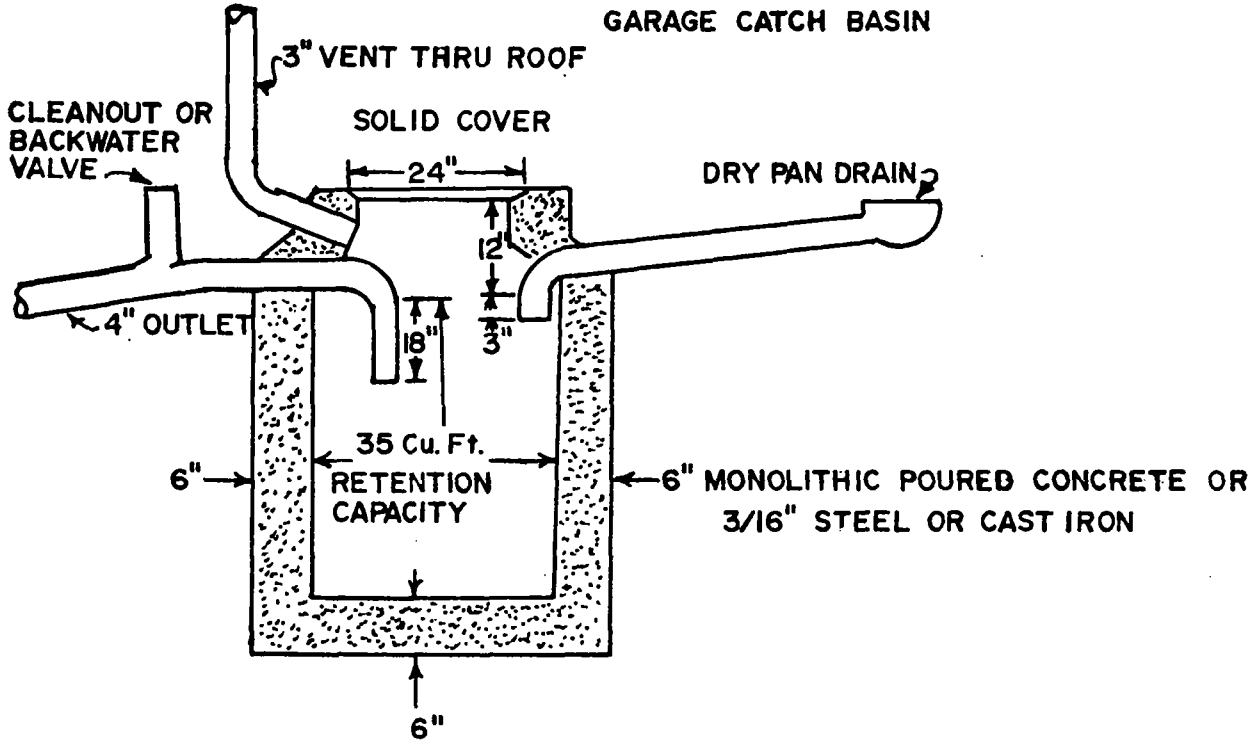


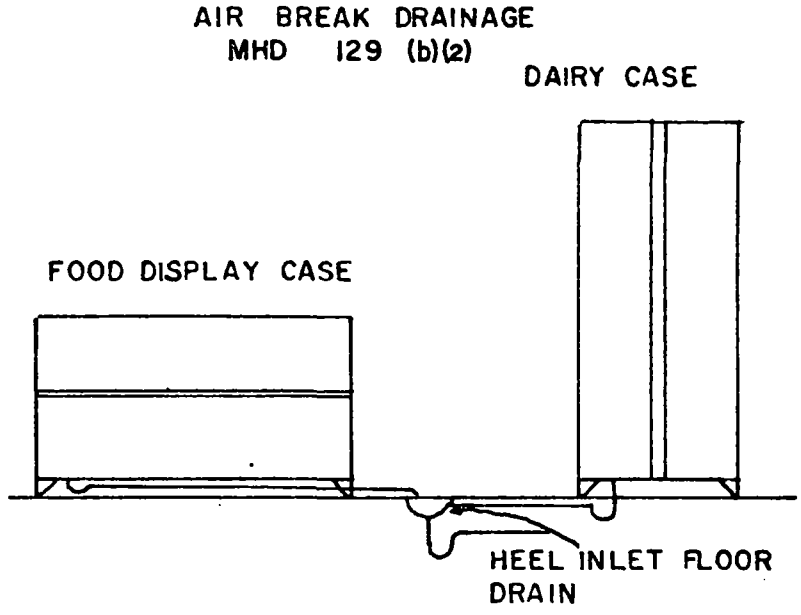
MHD 131(b)(5)(aa)

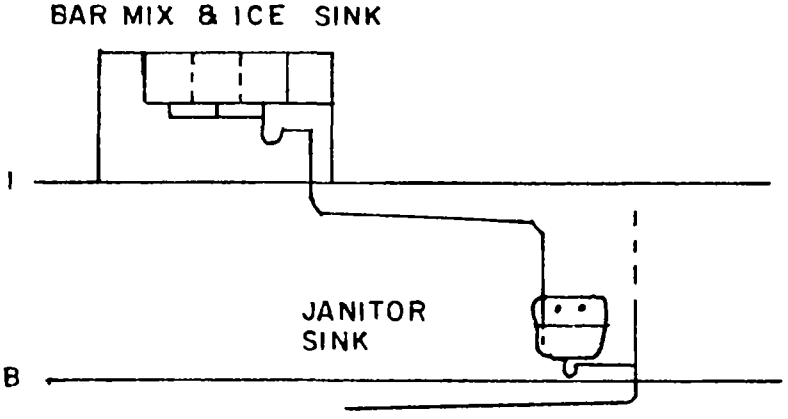


MHD 126(a)(4)(bb)

INFLAMMABLE WASTE TRAP
GARAGE CATCH BASIN

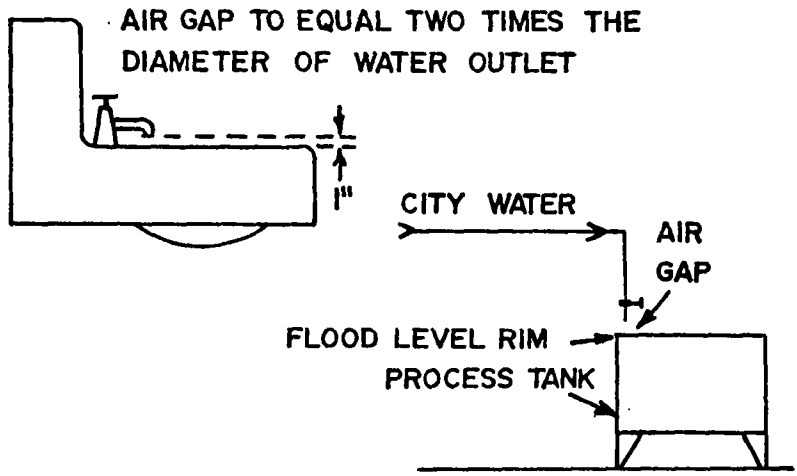






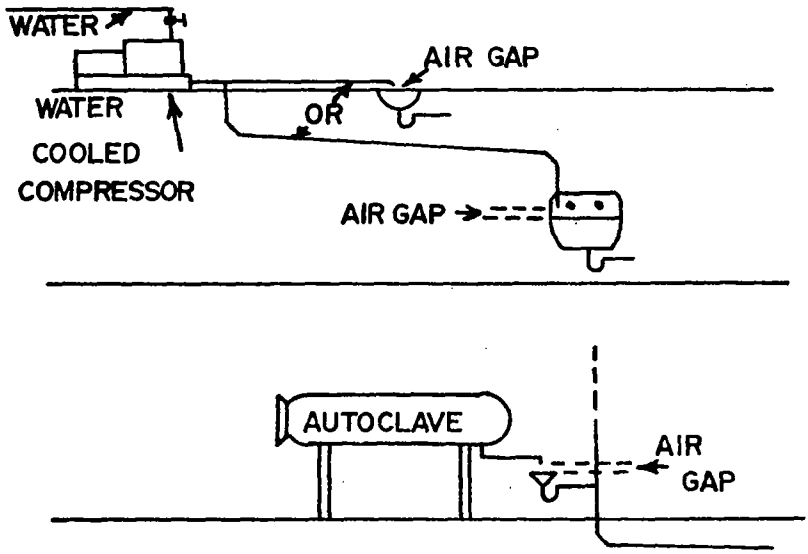
MHD 130(e)(9)(bb)

AIR GAP WATER DISTRIBUTION SYSTEM

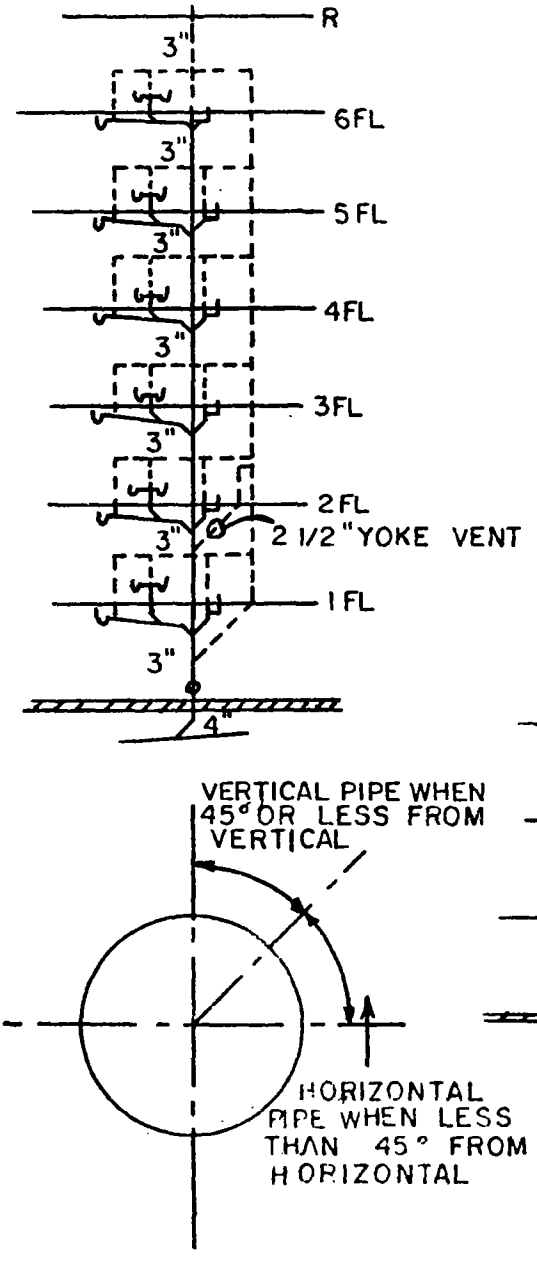


MHD 129 (b)(1)

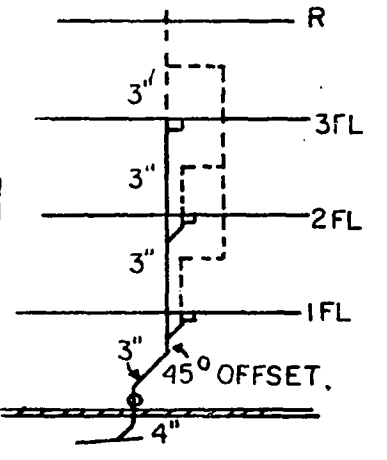
AIR GAP DRAINAGE



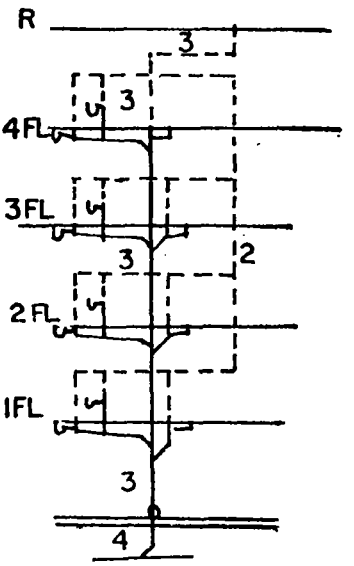
MHD 131(a)(2)B and MHD 132(n)



MHD 131 (a)(7)

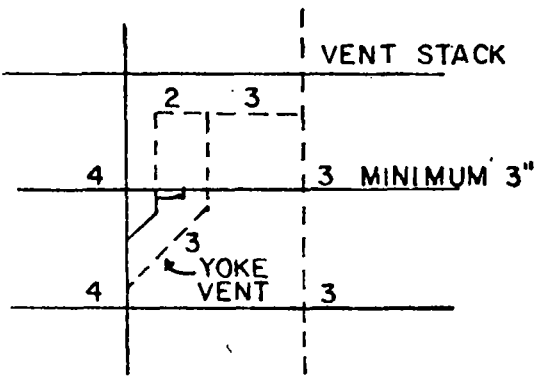


MHD 131 (7) (cc)
OFFSET ABOVE HIGHEST BRANCH



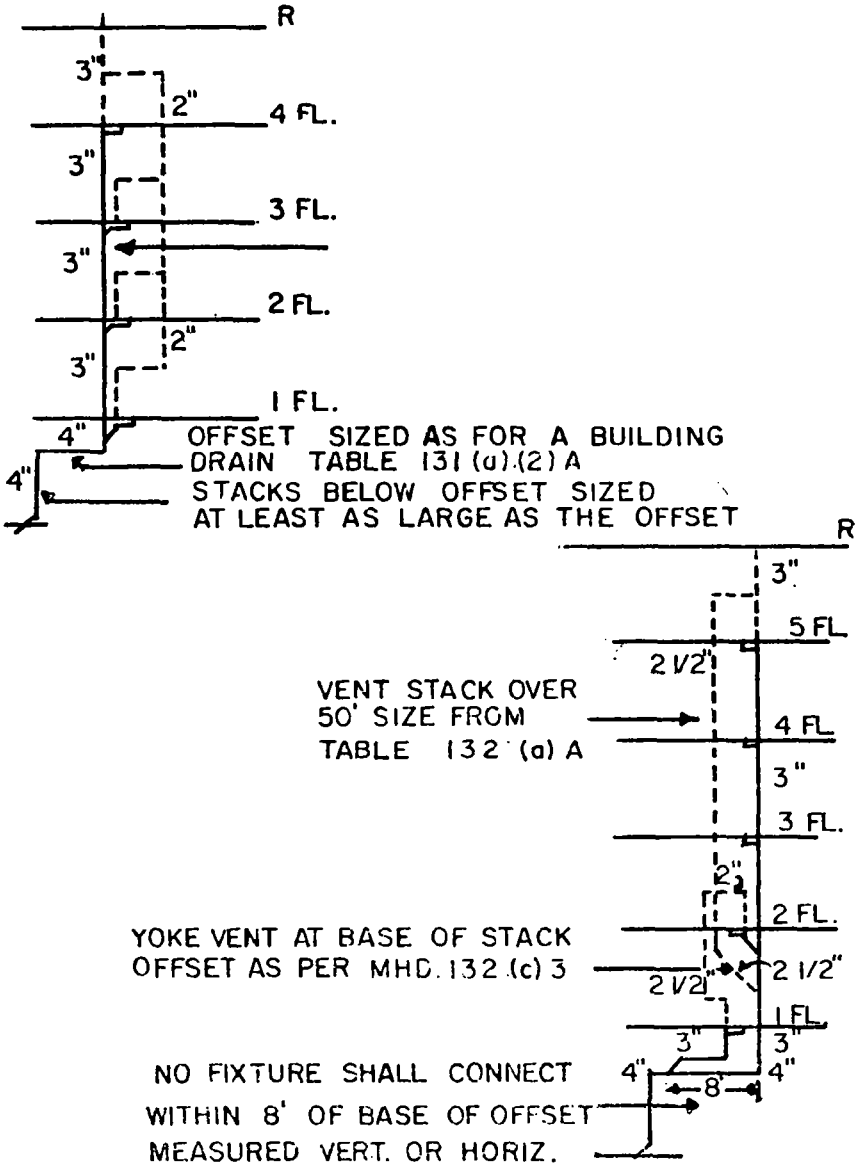
OFFSET IN STACK VENT REQUIRES NO INCREASE IN SIZE, EXCEPT AS IT AFFECTS THE DEVELOPED LENGTH OF THE VENT

MHD 132 (n) YOKE VENT



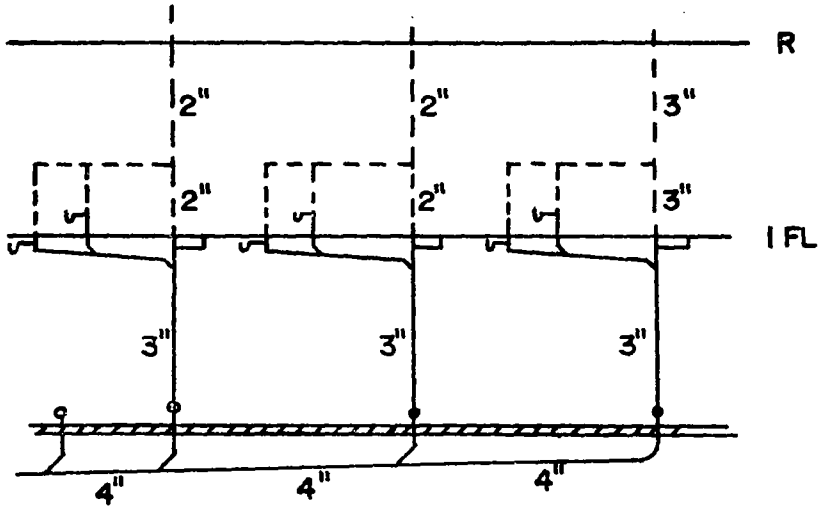
YOKE VENT EVERY 5 BRANCH INTERVAL PER MHD 132.(n)

MHD 131 (7) (aa)
STACKS OFFSET MORE THAN 45°

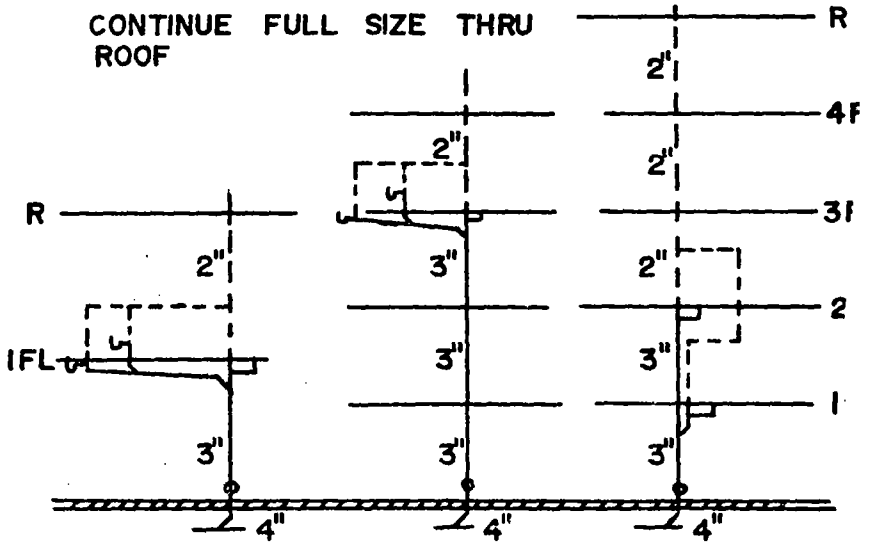


MHD 131 (a)(4)

ONE FULL SIZE VENT, MINIMUM 3" SIZE IN EVERY BUILDING



STACKS NOT REQUIRED TO CONTINUE FULL SIZE THRU ROOF



NONE ARE MOST REMOTE STACKS

TABLE 132 (a) A

STACKS OF 3 OR 4 STORY
BRANCH INTERVALS

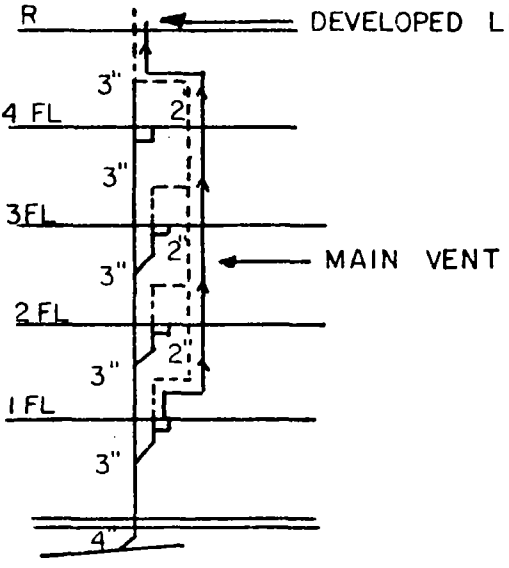
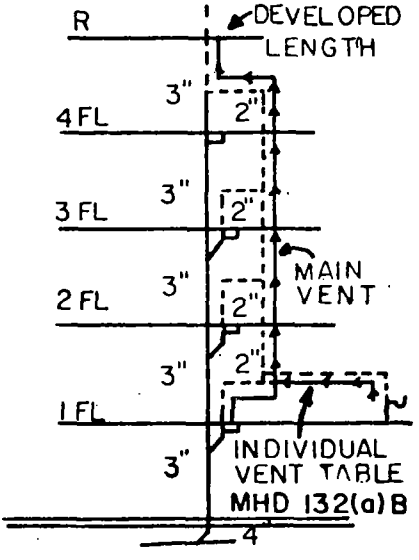
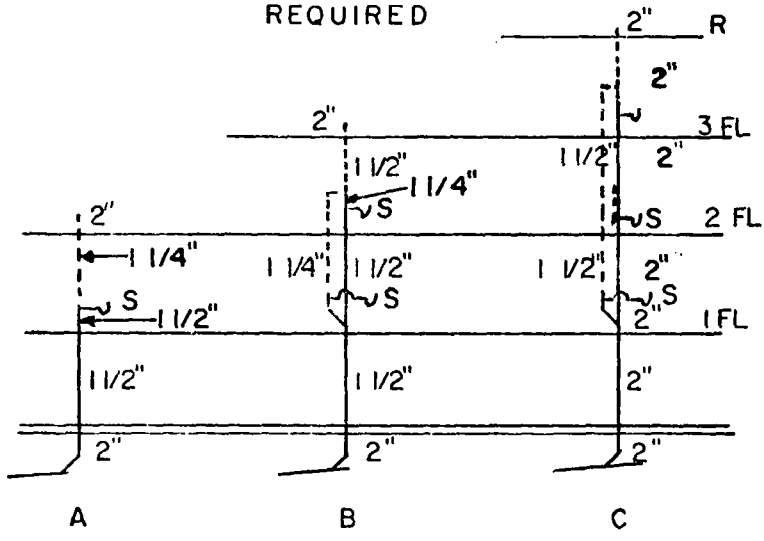


TABLE 132 (a) A

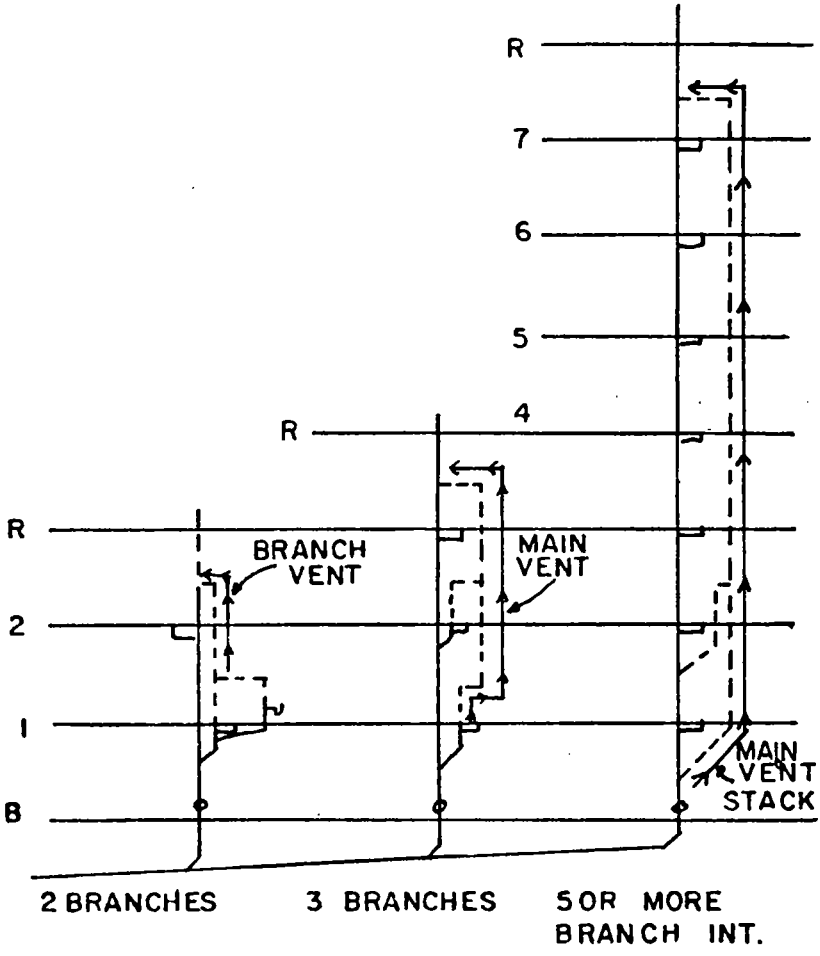


MHD 132 (c)(1) VENT STACKS REQUIRED



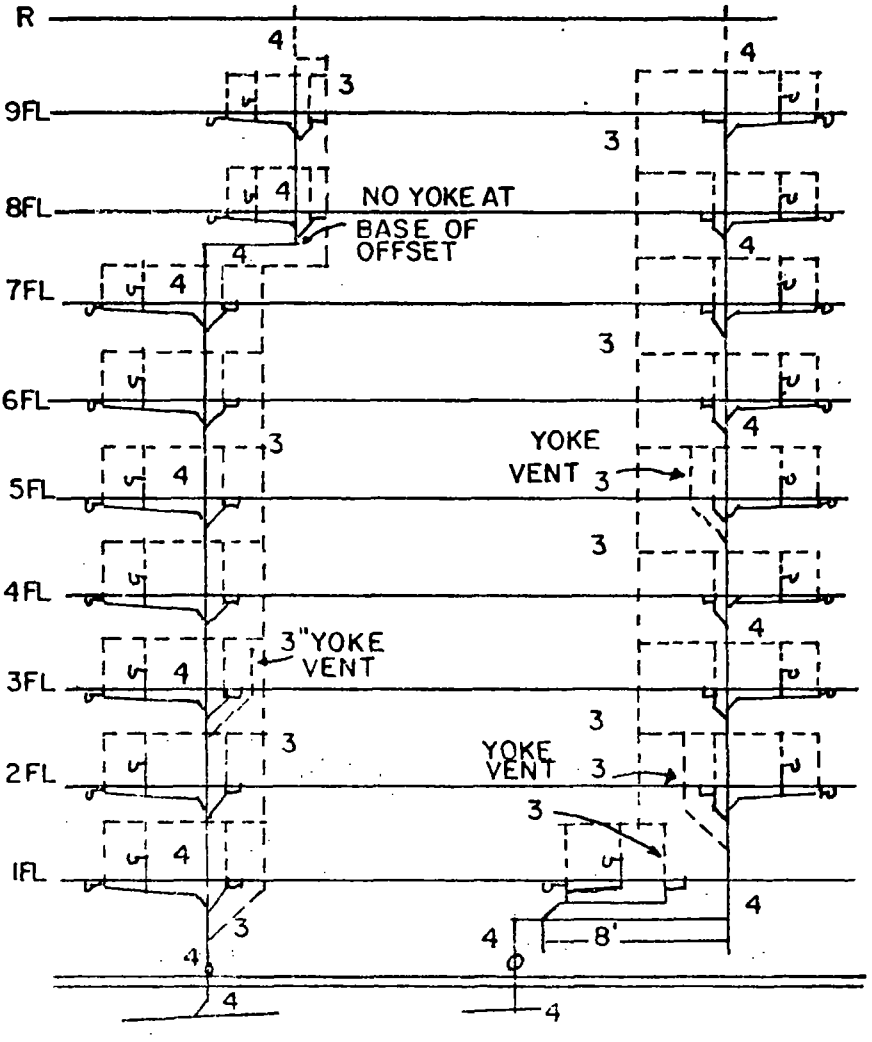
STACKS "A" & "B" DO NOT REQUIRE MAIN VENTS.
STACK "C" REQUIRES MAIN VENT FROM TABLE 132(a)A

MHD 132(c) (2)

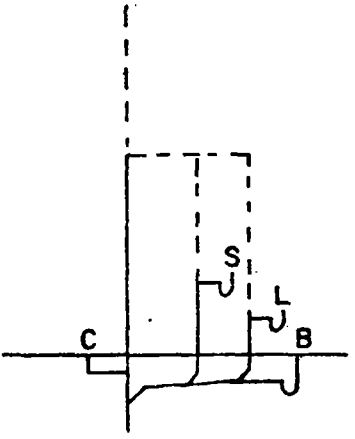


MHD 132 (c) (3

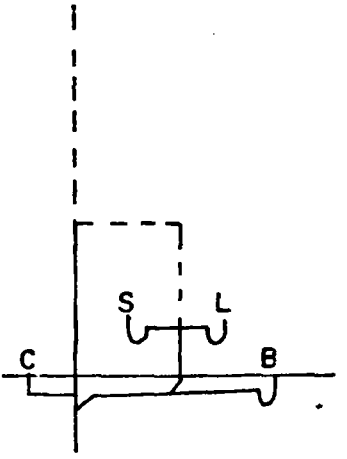
OFFSETS IN STACKS OF 5 OR MORE BRANCH INTERVALS



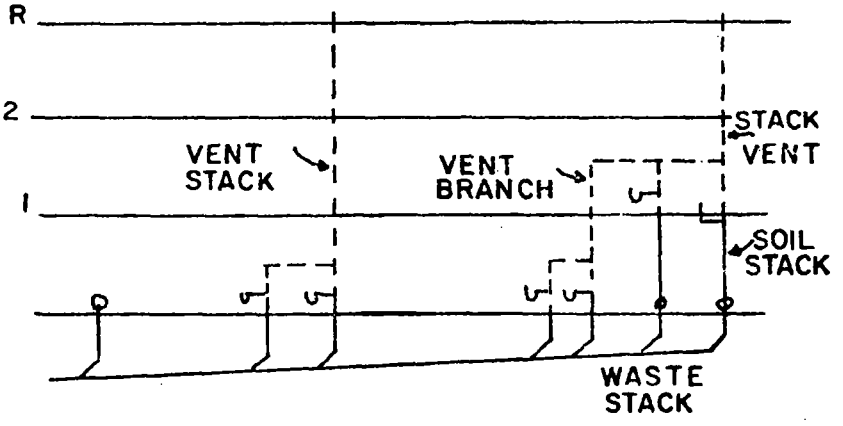
MHD 132 (F) (1)



MHD 132 (F) (1)

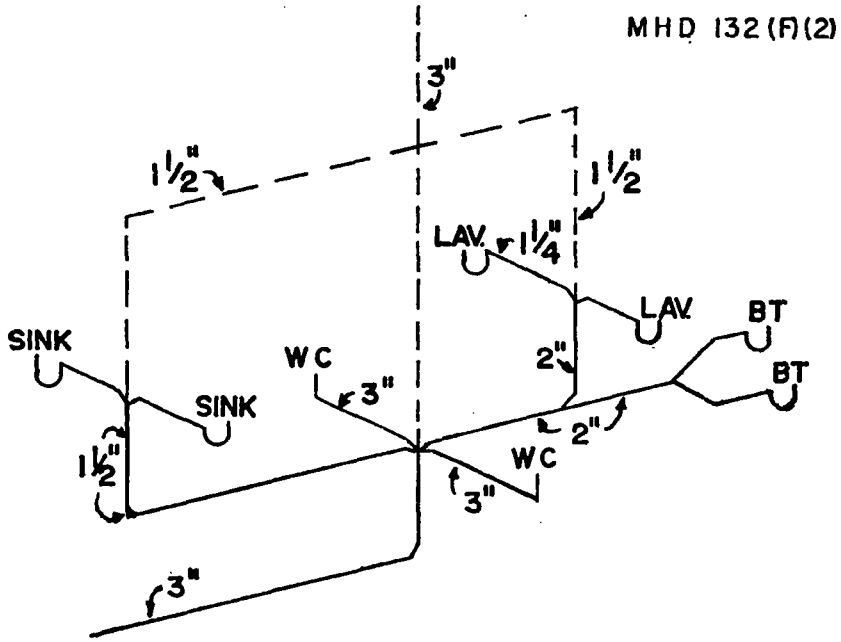


MHD 121 DEFINITIONS



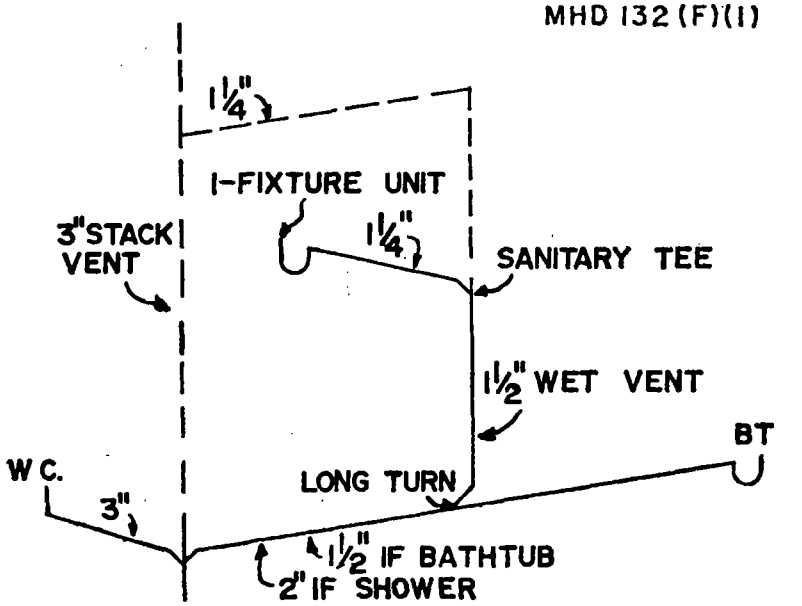
WET VENTING–BACK TO BACK INSTALLATION

MHD 132(F)(2)

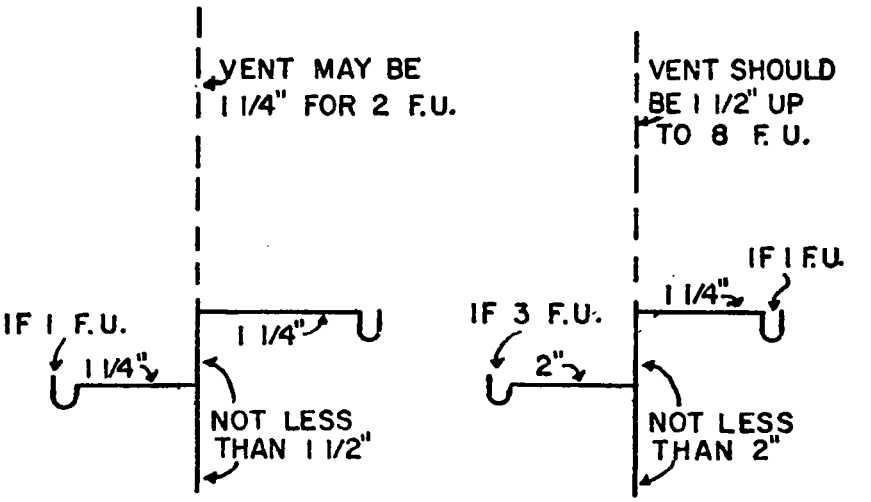


WET VENTING–BATHROOM GROUP

MHD 132(F)(1)

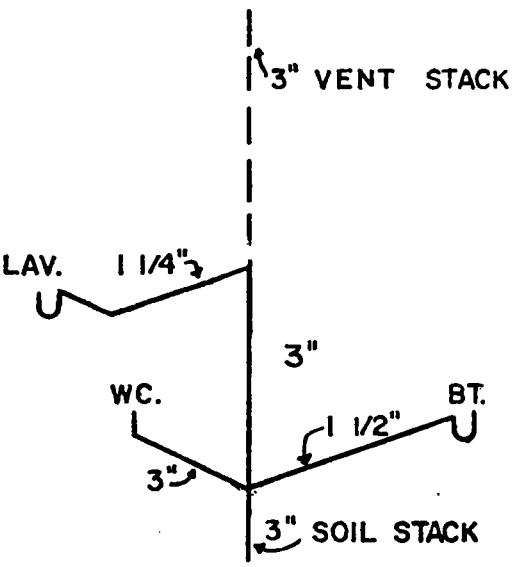


MHD 132 (i)(2)
COMMON VENT—FIXTURES AT DIFFERENT LEVELS

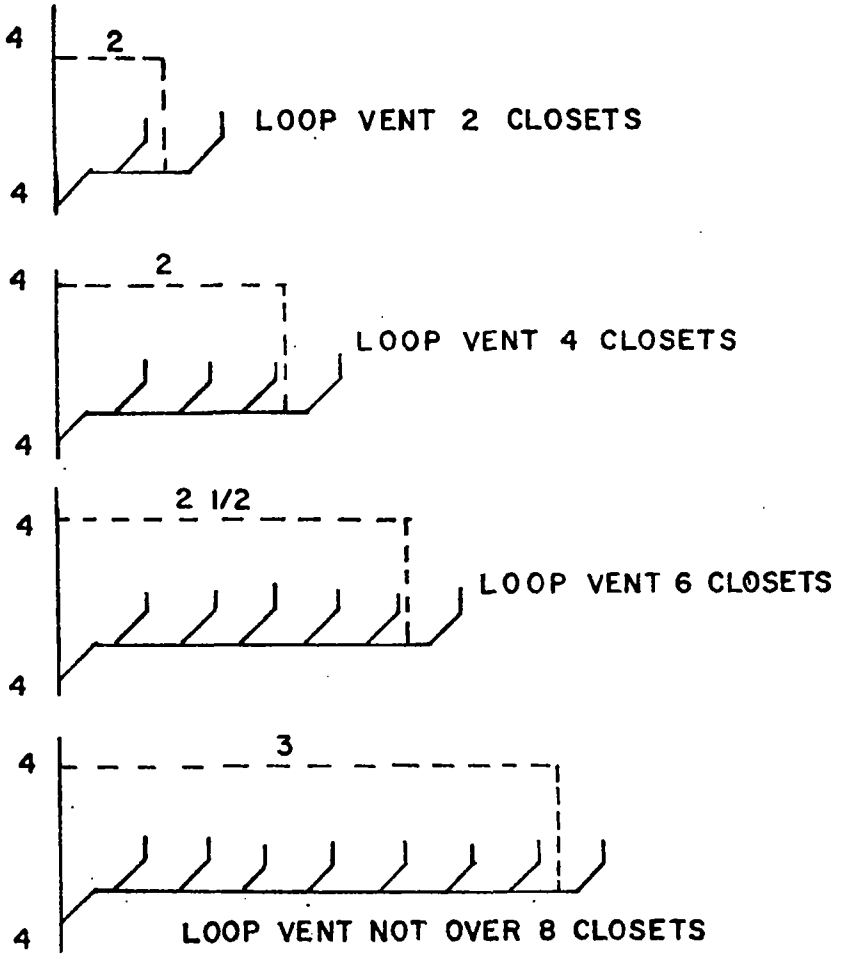


STACK VENTING

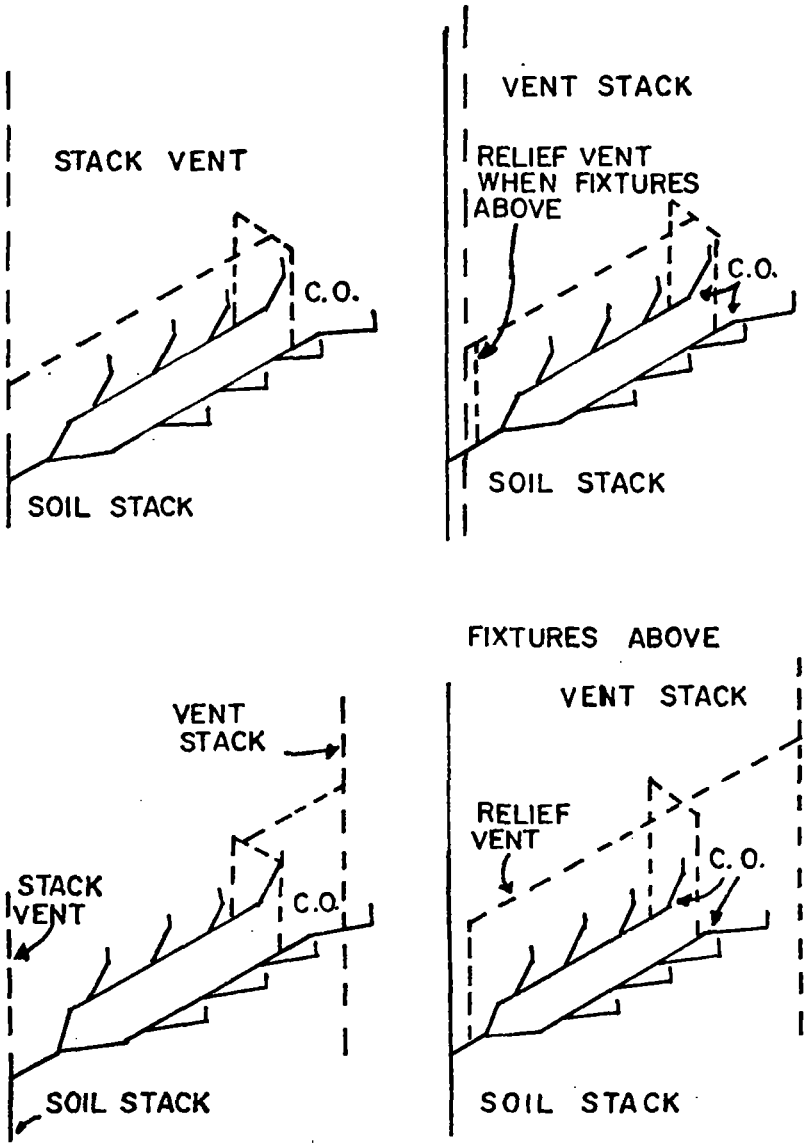
MHD 132(g)(1)



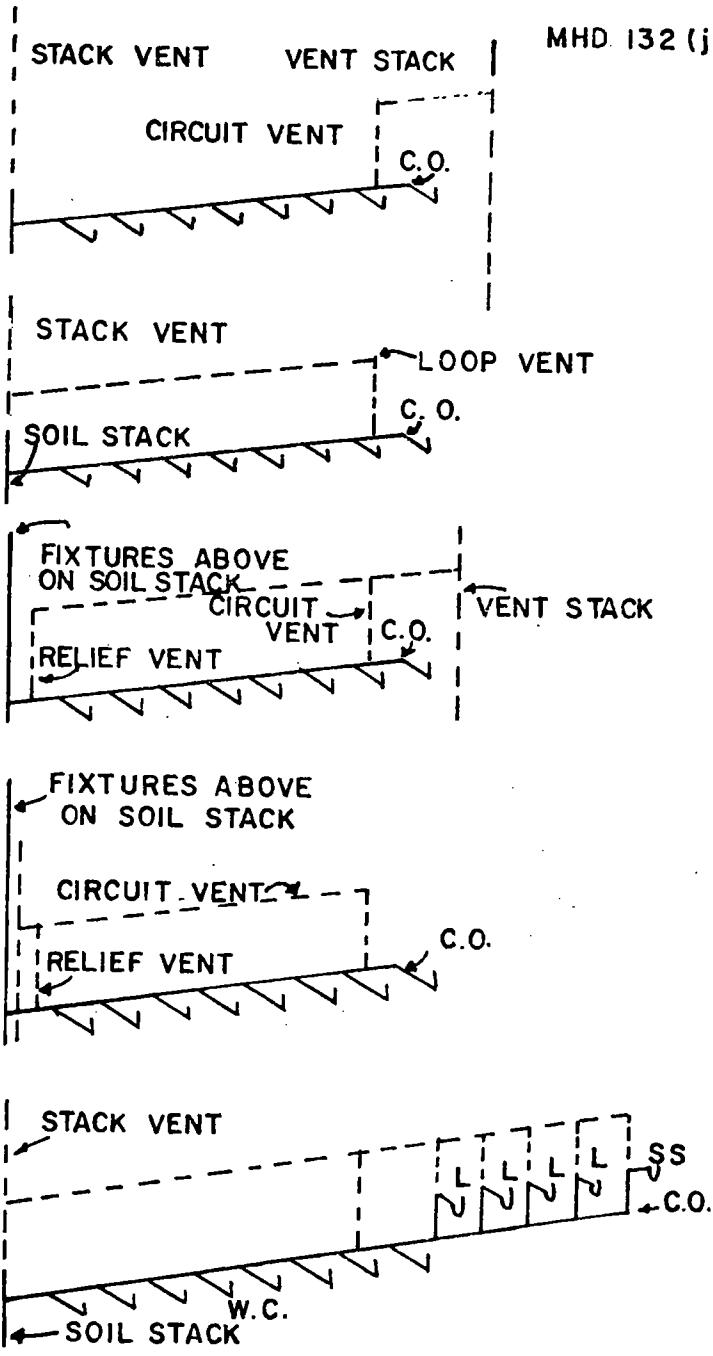
MHD 132(j)(1)



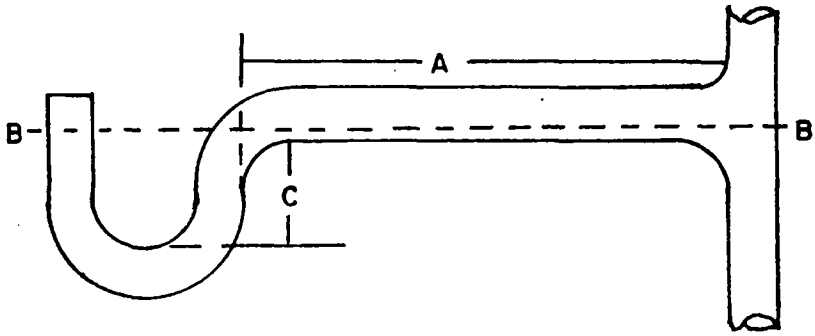
MHD 132 (j)(2)



MHD 132 (j)(1)

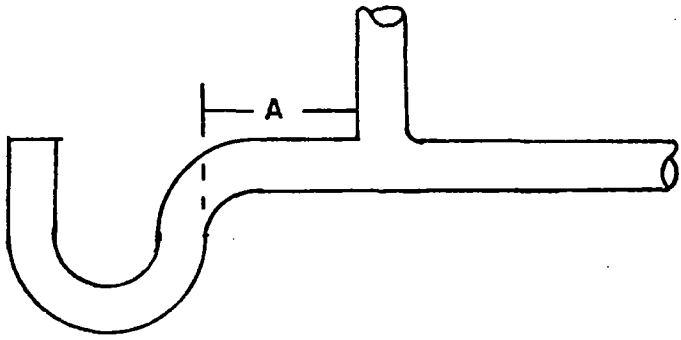


MHD 132 (1)(1) DISTANCE TRAP TO VENT



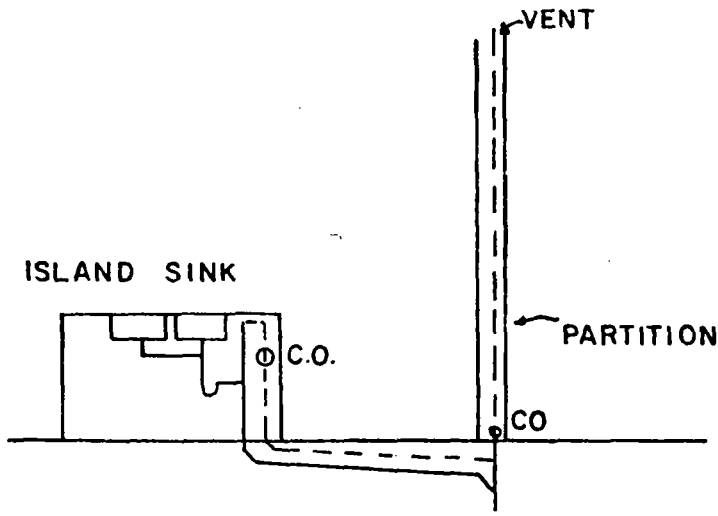
A = DISTANCE — TABLE 132 (1)(1)
B = HYDRAULIC GRADIENT
C = TRAP SEAL

MHD 132 (1)(3) CROWN VENT LIMITATION

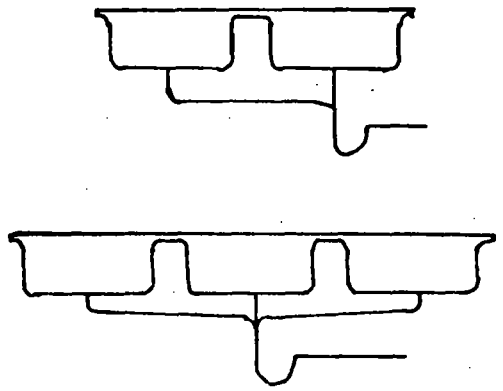


A = 2 X THE DIAMETER MINIMUM

MHD 132 (0)(3)
ISLAND FIXTURE VENTING



MHD 121 DEFINITIONS
CONTINUOUS WASTE



USEFUL INFORMATION

Commercial Weights

16 drams or 437.5 grains = 1 ounce
16 ounces or 7000 grains = 1 pound
16 ounces = 1 pound
2000 pounds = 1 ton

Square Measure

144 square inches = 1 sq. foot
9 square feet = 1 sq. yard
30¼ square yards = 1 sq. rod
272¼ square feet = 1 sq. rod
43,560 square feet = 1 acre

Cubic Measure

231 cubic inches = 1 gallon
1728 cubic inches = 1 cu. ft.
27 cubic feet = 1 cu. yd.

Long Measure

12 inches = 1 foot
3 feet = 1 yard
16½ feet = 1 rod
320 rods = 1 mile
5280 feet = 1 mile

Liquid Measure

4 gills = 1 pint
2 pints = 1 quart
4 quarts = 1 gallon
31½ gallons = 1 U. S. barrel

Water Pressure

To find the pressure in **pounds per square inch** corresponding to any **head in feet**, multiply the head by 0.434.

To find the **head in feet** when the pressure in **pounds per square inch** is known, multiply the pressure by 2.3.

One pound pressure per square inch is caused by 2.3 feet head of water.

TABLE I

PRESSURE AND HEAD EQUIVALENTS
(Table based on water at 62.5 pound per cubic foot)

Head (feet)	Pressure (pounds per square inch)	Head (feet)	Pressure (pounds per square inch)
2.304	1	1	0.434
4.608	2	2	0.868
6.912	3	3	1.302
9.216	4	4	1.736
11.520	5	5	2.170
13.824	6	6	2.604
16.128	7	7	3.038
18.432	8	8	3.472
20.736	9	9	3.906
23.040	10	10	4.340

WATER PRESSURE

(1) Example: What pressure in pounds per square inch corresponds to a head of 123'-6"?

123'-6" = 123.5' (See table III)

From table I (right half)

120' = 12x10 = 12x4.34 = 52.08
3' = 1x 3 = 1x1.302 = 1.302
.5' = .5x 1 = .5x .434 = .217

53.599 lbs./sq. in. (Ans.)

(2) Example: How many feet of head is equivalent to a pressure of 28 pounds per square inch?

From table I (left half)

20 = 10x2 = 10x 4.608 = 46.08
8 = 1x8 = 1x18.432 = 18.432

64.512' or 64'-6" (Ans.)

Effect of Variations of Temperatures on Water

Water freezes at 32° Fahrenheit.

Water boils at 212° Fahrenheit.

Water expands when freezing to about one and one-twelfth of its bulk. Fifteen hundred and ninety-five cubic inches of water will expand in freezing to one cubic foot of ice, which weighs approximately 57.5 pounds.

Water freezing in a pipe or closed vessel exerts a pressure of approximately 2000 pounds per square inch which is the force that causes pipes to burst.

Changing Common Fractions into Decimals

In several computations used in plumbing work it is desirable to convert fractions into decimals and decimals into fractions in order to facilitate computations and measurements.

(1) Example: Change ⅛" to decimals of an inch.
⅛ = 8)1.000 = .125 (Ans.)

(2) Example: Change .3125 to closest 1/16 of an inch
1/16 = .0625
.0625).3125 = 5 hence 5/16 (Ans.)

(3) Example: Change 2" into decimals of a foot.
2" = 2/12 = 2x1/12 = 2x.08333 = .16667 (Ans.)

TABLE II

DECIMAL EQUIVALENTS OF COMMON FRACTIONS
(In inches)

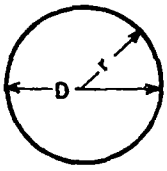
Fraction	Decimal	Fraction	Decimal
1/32...	0.03125	17/32...	0.53125
1/16...	.0625	9/16...	.5625
3/32...	.09375	19/32...	.59375
1/8...	.125	5/8...	.625
5/32...	.15625	21/32...	.65625
3/16...	.1875	11/16...	.6875
7/32...	.21875	23/32...	.71875
1/4...	.25	3/4...	.75
9/32...	.28125	25/32...	.78125
5/16...	.3125	13/16...	.8125
11/32...	.34375	27/32...	.84375
3/8...	.375	7/8...	.875
13/32...	.40625	29/32...	.90625
7/16...	.4375	15/16...	.9375
15/32...	.46875	31/32...	.96875
1/2...	.5	1...	1.0

TABLE III

DECIMAL EQUIVALENTS OF INCHES
(in feet)

Inches	Decimal
1	0.08333
2	0.16667
3	0.25000
4	0.33333
5	0.41667
6	0.5000
7	0.58331
8	0.66667
9	0.75
10	0.83333
11	0.91666
12	1.00

Fig. IV



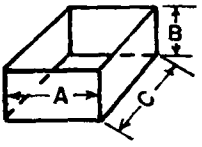
CIRCLE

D= Diameter r= Radius
C= Circumference
Area= 3.1416 x r^2
Area= 0.7854 x D^2
C= 3.1416 x D
D= 0.31831 x C

SPHERE

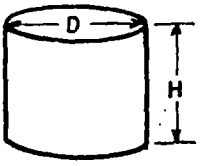
Area= 3.1416 x D^2
Volume = 0.5236 x D^3

SQUARE OR OBLONG TANK



Volume= A x B x C

CYLINDRICAL TANK



Volume = 0.7854 x D^2 x H

TABLE IV

Diameter (inches)	Area (sq. inch)	Circumference (inches)	Volume (gal. per ft.)
½	0.19635	1.5708	0.010
⅝	0.30680	1.9635	.016
¾	0.44179	2.3562	.023
1	0.7854	3.1416	.041
1¼	1.22719	3.9270	.064
1½	1.76715	4.71240	.092
2	3.1416	6.2832	.163
2½	4.90875	7.8540	.255
3	7.0686	9.4248	.367
4	12.5664	12.5664	.652
5	19.6350	15.7080	1.020
6	28.2744	18.8496	1.470
8	50.2656	25.1328	2.610
10	78.5400	31.4160	4.080
12	113.0976	37.6992	5.870

(1) Example: What is the area of a pipe in square inches having a diameter of 6 inches?

($A = \pi/4 \times D^2$) $A = 0.7854xD^2$
$A = 0.7854x6x6 = \underline{28.27}$ sq. in. (Ans.)

(2) Example: What is the diameter in inches of a pipe having a circumference of approximately 15¾ inches?

($D = C \times 1/\pi$) $D = Cx0.31831$
$D = 15.75x0.31831 = 5$ inches (Ans.)

(3) Example: What is the volume of a tank in cubic feet and gallons having a length of 8 feet, a width of 4 feet, and a depth of 6 feet?

$V = 8'x4'x6' = \underline{192}$ cubic feet (Ans.)

1 cu. ft. = 7½ gallons
$V = 192x7.5 = \underline{1440}$ gallons (Ans.)

(4) Example: What is the volume of a tank in cubic feet and gallons having a diameter of 18 inches and a height of 4 feet.?

$V = 0.7854xD^2xH$
$= 0.7854x1.5'x1.5'x4' = \underline{7.0686}$ cubic feet (Ans.)

$V = 7.0686 = \underline{53.01}$ gallons (Ans.)

Doubling the diameter of a pipe increases its area four times.

Doubling the diameter of a pipe increases its volume four times per unit of length.

The side of a square equal in area to a given circle equals diameter x 0.8862.

A gallon of water (U. S. standard) weighs 8 1/3 lbs.

A cubic foot of water contains 7½ gallons, 1728 cubic inches and weighs 62½ pounds.

Fig. I

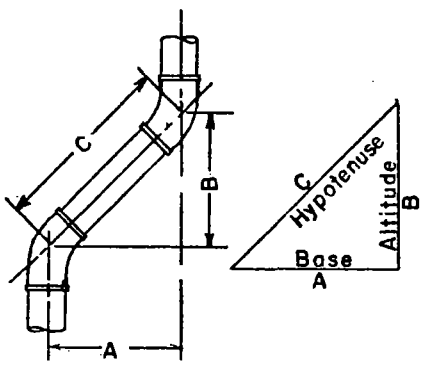
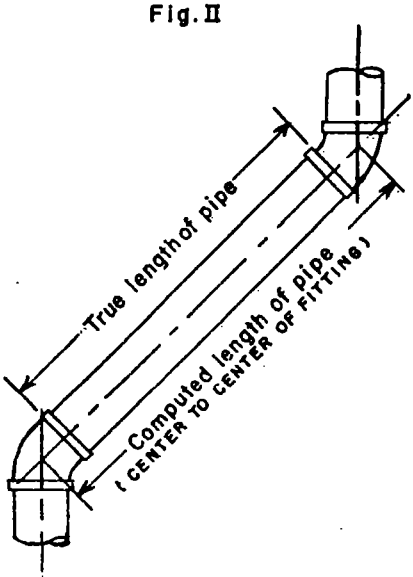


Fig. II



When pipes are offset, the length of the connecting pipe may be figured, when the angle of the fittings is known and one of the the dimensions A, B, or C is known.

Fig. III

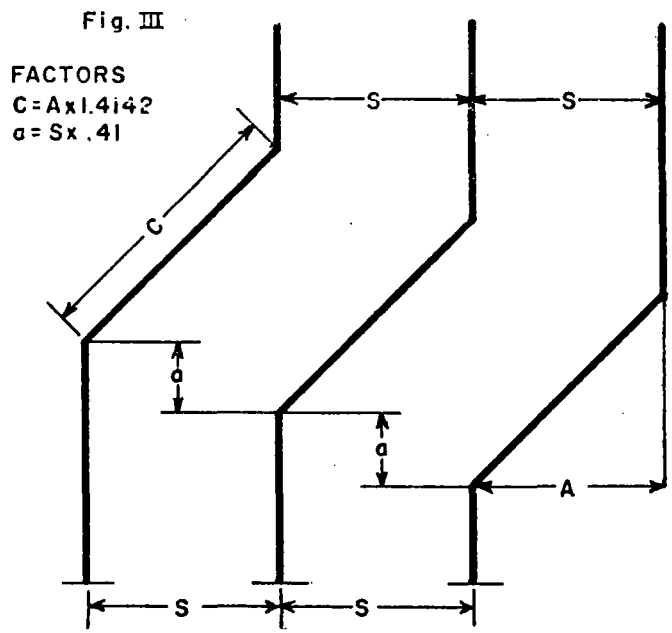


TABLE V

Fittings		A	B	C
1/64 bend	5⅝ degrees	A = C x .098 A = B x .0985	B = C x .9952 B = A x 10.1532	C = B x 1.005 C = A x 10.204
1/32 bend	11¼ degrees	A = C x .195 A = B x .1989	B = C x .981 B = A x 5.0273	C = B x 1.019 C = A x 5.1258
1/16 bend	22½ degrees	A = C x .3827 A = B x .4142	B = C x .9239 B = A x 2.4142	C = B x 1.0823 C = A x 2.6131
1/12 bend	30 degrees	A = C x .5 A = B x .5774	B = C x .866 B = A x 1.7321	C = B x 1.1547 C = A x 2.00
1/8 bend	45 degrees	A = C x .7071 A = B	B = C x .7071 B = A	C = B x 1.4142 C = A x 1.4142
1/6 bend	60 degrees	A = C x .866 A = B x 1.732	B = C x .5 B = A x .5774	C = B x 2.0 C = A x 1.1547
3/16 bend	67½ degrees	A = C x .9239 A = B x 2.4142	B = C x .3827 B = A x .4142	C = B x 2.6131 C = A x 1.0923
1/5 bend	72 degrees	A = C x .951 A = B x 3.0777	B = C x .309 B = A x .325	C = B x .324 C = A x 1.0514

When the figures from this table are used, it will be necessary to allow for the distance taken up by the fittings. (See Fig. II.).

Examples:

(1) What is the length of pipe center to center of 45 degree elbows, with an offset of 22 inches?

From table V under 45 degree fittings
C = Ax1.4142
C = 22x1.4142 = 31.1124 inches
31.1124″ = 2′-7 1/8″ (Ans.)

(2) What is the length of pipe center to center of 60 degree fittings, with an offset of 2′-8″?

From table V under 60 degree fittings
C = Ax1.1547
C = 32x1.1547 = 36.9504 inches
36.9504″ = 3′ 15/16″ (Ans.)

APPENDIX C

RECOMMENDED GUIDE FOR SIZING THE WATER SUPPLY SYSTEM

(a) On any proposed water piping installation sized pursuant to Table 2, the following conditions shall be determined:

(1) Total number of fixture units as determined from the table of Equivalent Fixture Units (Table 1) for the fixtures to be installed.

(2) Developed length of supply pipe from meter to most remote outlet, or if the pressure at the meter is unknown, use the developed length from the street main to most remote outlet.

(3) Difference in elevation between the meter or other source of supply and the highest fixture or outlet.

(4) Pressure in the street main or other source of supply at the locality where the installation is to be made. Calculations shall be based on not to exceed one hundred (100) P.S.I. pressure in the system.

(5) In localities where there is a wide fluctuation of pressure in the main throughout the day, the water piping systems shall be designed on the basis of the minimum pressure available.

(b) Size of Street Service, Meter and Building Supply Pipe Using Table 2. Knowing the available pressure at the water meter, water main, or other source of supply, and after subtracting one half (½) pound per square inch pressure for each foot of difference in elevation between such source of supply and the highest water supply outlet in the building or on the premises, use the "Pressure Range" group within which this pressure will fall. Select the "length" column which is equal to or longer than the required length. Follow down the column to a fixture unit value equal to or greater than the total number of fixture units required by the installation. Having located the proper fixture unit value for the required length, sizes of meter and building supply pipe will be found in the two left-hand columns.

(c) Size of Branches. The size of each branch shall be determined by the number of fixture units to be served by that branch, following the methods outlined in subsection (b) of this section.

(d) Sizing for Flushometer Valves. Branches and mains serving water closet or similar flushometer valves may be sized from Table 2 when the following values are assigned to each flushometer valve beginning with the most remote valve on each branch.

For the first flushometer valve.....40 fixture units
For the second flushometer valve.....30 fixture units
For the third flushometer valve.....20 fixture units
For the fourth flushometer valve.....15 fixture units
For the fifth flushometer valve.....10 fixture units

After the fifth valve on any branch, subsequent loadings may be computed using the values given in Table 1 of this chapter. Piping supplying a flushometer valve shall not be less in size than the valve inlet.

(e) Hot Water Sizing. In sizing the hot water piping of water supply systems from Table 2, the greatest developed length of the cold water supply piping may be used and the length of the hot water piping ignored when the hot water piping friction loss is compensated for by the following method:

(1) Compute the total hot water fixture unit demand, using those values given in Table 1 for the combined hot and cold water use.

(2) Assign the total demand computed as required in (1) above, as the fixture unit demand at the hot water heater supply branch and inlet.

(f) Cold Water Piping. Starting at the most remote outlet on the cold water piping and working back toward the water meter, compute the pipe sizing for the system from the column originally selected in Table 2, using the fixture unit values given in Table 1, and adding in the fixture unit demand of the hot water heater supply inlet as computed in (e) above, at the point where it occurs. The final size of the cold water main need not be larger than the originally established size required by Table 2 for the total building supply.

(g) Hot Water Piping. Starting at the most remote outlets on the hot water piping and working back toward the water heater, compute the pipe sizing for the system from the column originally selected in Table 2, using the fixture unit values given in Table 1.

TABLE 1

EQUIVALENT FIXTURE UNITS
(Includes Combined Hot and Cold Water Demand)

Fixture	Number of Private Use	Fixture Unit Public Use
Bar sink	1	2
Bathtub (with or without shower over)	2	4
Dental unit or cuspidor	—	1
Drinking Fountain (each head)	—	1
Hose Bibb or sill cock (standard type)	3	5
House trailer (each)	6	6
Laundry tub or clotheswasher (each pair of faucets)	2	4
Service sink	—	4
Lavatory	1	2
Lavatory (dental)	1	1
Lawn sprinklers (standard type, each head)	1	1
Shower (each head)	2	4
Sink (bar)	1	2
Sink or dishwasher	2	4
Sink (flushing rim, clinic)	—	10
Sink (washup, each set of faucets)	—	2
Sink (washup, circular spray)	—	4
Urinal (pedestal or similar type)	—	10
Urinal (stall)	—	5
Urinal (wall)	—	5
Urinal (flush tank)	—	3
Water Closet (flush tank)	3	5
*Water Closet (flushometer valve)	—	10
Water supply outlets for items not listed above shall be computed at their maximum demand, but in no case less than:		
⅜ inch	1	2
½ inch	2	4
¾ inch	3	6
1 inch	6	10

***See subsection (d) of Section 1 for method of sizing flushometer valve installations using Table 2.**

TABLE 2

FIXTURE UNIT TABLE FOR DETERMINING WATER PIPE AND METER SIZES FOR WATER SUPPLY SYSTEMS

Pressure Range—80 to 45 psi

Meter & Street Service	Building Supply & Branches	Maximum Allowable Length in Feet									
		40	60	80	100	150	200	250	300	400	500
¾"	½"	6	5	4	4	3	2	—	—	—	—
¾"	¾"	18	16	14	12	9	6	—	—	—	—
¾"	1"	29	25	23	21	17	15	13	12	10	9
1"	1"	36	31	27	25	20	17	15	13	12	10
1"	1¼"	54	47	42	38	32	28	25	23	19	17
1¼"	1¼"	90	68	67	48	38	32	28	25	21	19
1½"	1½"	151	124	105	91	70	57	49	45	36	31
2"	1½"	210	162	132	110	80	64	53	46	38	32
1½"	2"	220	205	190	176	155	138	127	120	105	96
2"	2"	372	329	292	265	217	185	164	147	124	107
2"	2½"	445	418	390	370	330	300	280	265	240	220

Pressure Range—46 to 60 psi

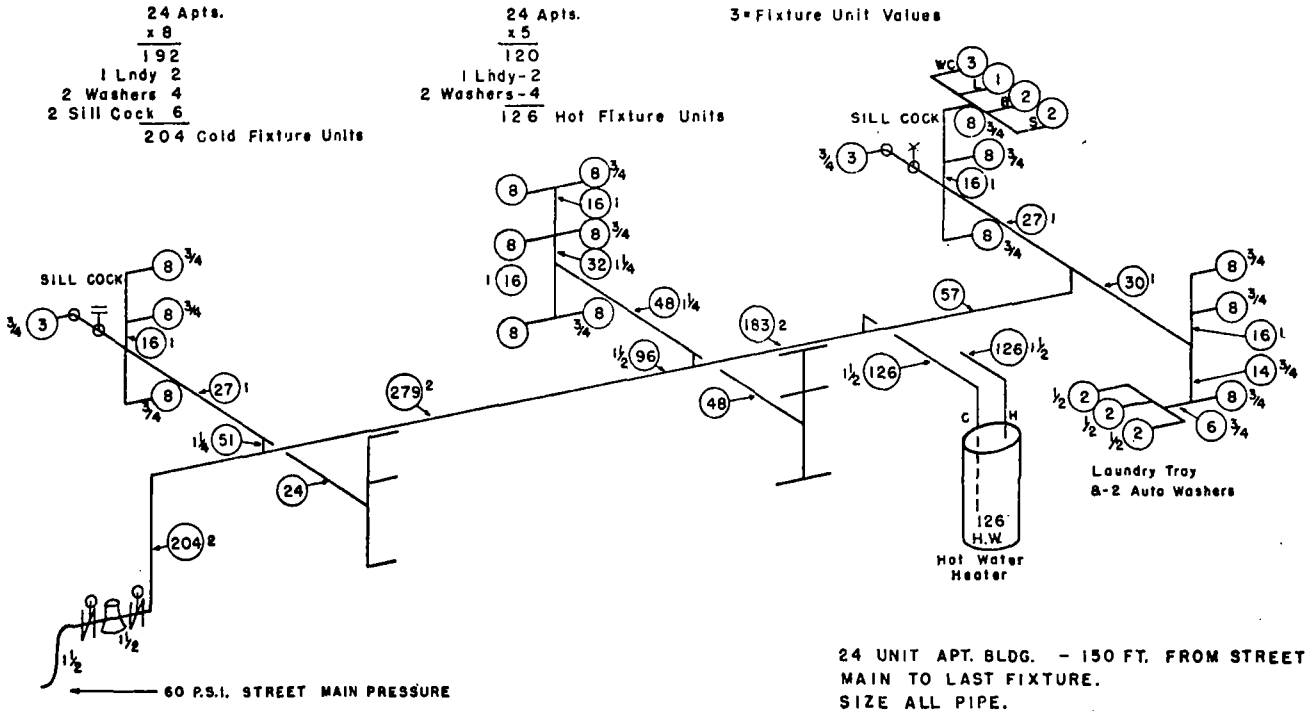
¾"	½"	9	8	7	6	5	4	3	2	—	—
¾"	¾"	27	23	19	17	14	11	9	8	6	5
¾"	1"	44	40	36	33	28	23	21	19	17	14
1"	1"	60	47	41	36	30	25	23	20	18	15
1"	1¼"	102	87	76	67	52	44	39	36	30	27
1¼"	1¼"	168	130	106	89	66	52	44	39	33	29
1½"	1½"	270	225	193	167	128	105	90	68	62	52
2"	1½"	360	290	242	204	150	117	98	84	67	55
1½"	2"	380	360	340	318	272	240	220	198	170	146
2"	2"	570	510	470	430	368	318	280	250	205	173
2"	2½"	680	640	610	580	535	500	470	440	400	365

Pressure Range—Over 60 psi

¾"	½"	11	9	8	7	6	5	4	3	2	—
¾"	¾"	34	28	24	22	17	13	11	10	8	—
¾"	1"	63	53	47	42	35	30	27	24	21	18
1"	1"	87	66	55	48	38	32	29	26	22	19
1"	1¼"	140	126	108	96	74	62	53	47	39	34
1¼"	1¼"	237	183	150	127	93	74	62	54	43	37
1½"	1½"	366	311	273	240	186	154	130	113	88	78
2"	1½"	490	395	333	275	220	170	142	122	98	82
1½"	2"	*380	*380	*380	*380	370	335	305	282	244	212
2"	2"	*690	670	610	560	478	420	375	340	288	245
2"	2½"	*690	*690	*690	*690	*690	650	610	570	510	460

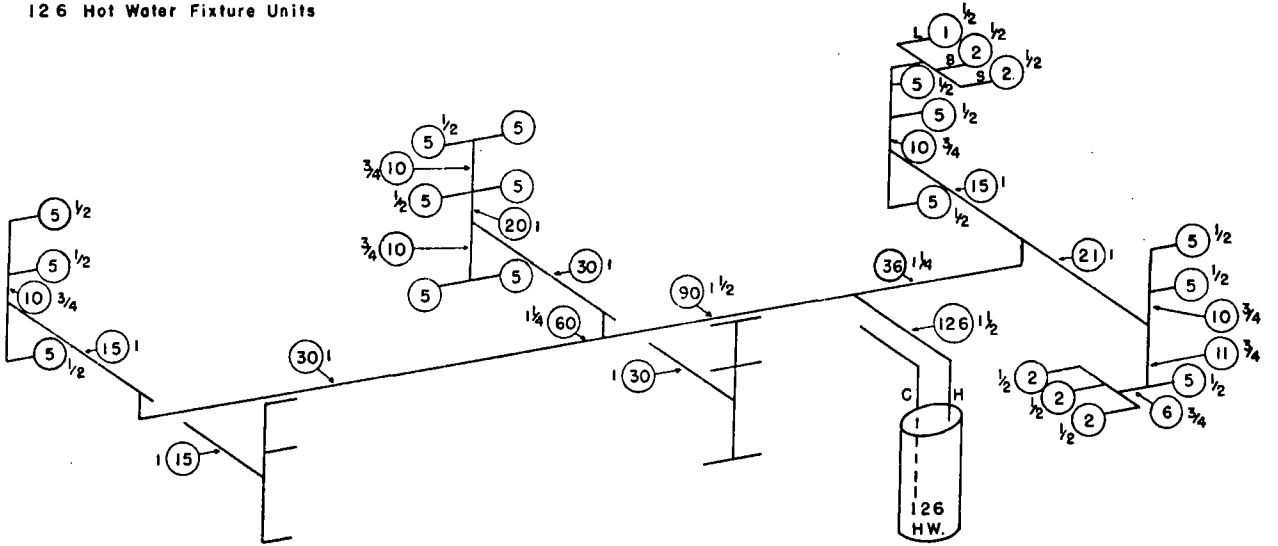
*Maximum Allowable Load on Meter.

EXAMPLE OF COLD WATER SIZING USING TABLE 2



EXAMPLE OF HOT WATER SIZING
USING TABLE 2

24 Apts.
x 5
120
1 Lndy. - 2
2 Washers - 4
126 Hot Water Fixture Units



24 UNIT APT. BLDG. — 150 FT. FROM STREET MAIN TO LAST COLD WATER OUTLET SIZE ALL HOT WATER PIPE.

APPENDIX D

Sizing the Building Water Supply Distribution System

D.1 GENERAL

The following sections outline a procedure for the sizing of the water supply piping. The design procedure is based on the minimum pressure available from the street main or individual source of supply, the head changes in the system due to friction and elevation, the volume rates of flow required for satisfactory operation of the fixtures, and the probability of simultaneous use.

D.2 TOTAL DAILY WATER REQUIREMENTS

D.2.1 Basic Needs

The calculation of total daily requirements for water may be based on the unit quantities shown in Tables D.2.1, Design Criteria for Daily Water Requirements Based on Building Occupancy, and D.2.1A, Daily Water Requirements for Common Farm Animals. The total daily water requirement does not constitute the *peak or simultaneous* water requirement of the supply and shall not be used in sizing water distribution systems. The total of the daily water requirement shall be used only to determine whether the source of the water supply is sufficient to provide the water requirements of people, animals, irrigation, and other water using facilities served. The rate of flow and pressures at which the total daily water requirements shall be delivered shall be determined as prescribed hereinafter.

TABLE D.2.1.—*Design criteria for daily water requirements based on building occupancy*

Type of occupancy	*Minimum quantity of water per person per day in gallons (or as indicated)*
Small dwellings and cottages with seasonal occupancy	50
Single family dwellings	75
Multiple family dwellings (apartments)	60
Rooming houses	40
Boarding houses	50
Additional kitchen usage for nonresident boarders	10
Hotels without private baths	50
Hotels with private baths (2 persons per room)	60
Restaurants (toilet and kitchen usage per patron)	7 to 10
Restaurants (kitchen usage per meal served)	2½ to 3
Additional for bars and cocktail lounges	2
Tourist camps or trailer parks with central bathhouse	35
Tourist camps or mobile home parks with individual bath units	50
Resort camps (night and day) with limited plumbing	50
Luxury camps	100 to 150
Work or construction camps (semipermanent)	50
Camp (with complete plumbing)	45 (Ind.w.s.)
Camp (with flush toilets—no showers)	25 (Ind.w.s.)
Day Camps (no meals served)	15
Day Schools, without cafeterias, gymnasiums, or showers	15
Day Schools with cafeterias, but no gymnasiums or showers	20
Day Schools with cafeterias, gymnasiums and showers	25
Boarding Schools	75 to 100

TABLE D.2.1.—*Design criteria for daily water requirements based on building occupancy*—Continued

Type of occupancy	*Minimum quantity of water per person per day in gallons (or as indicated)*
Day workers at schools and offices (per shift)	15
Hospitals (per bed)	150 to 250
Institutions other than hospitals (per bed)	75 to 125
Factories (gallons per person per shift, exclusive of industrial wastes)	15 to 35
Picnic parts (toilet usage only) (gallons per picnicker)	5
Picnic parks with bathhouses, showers and flush toilets	10
Swimming pools and bathhouses	10
Luxury residences and estates	100 to 150
Country clubs (per resident member)	100
Country clubs (per nonresident member)	25
Motels (per bed space)	40
Motels with bath, toilet, and kitchen range	50
Drive-in theaters (per car space)	5
Movie theaters (per auditorium seat)	5
Airports (per passenger)	3 to 5
Self-service laundries (gallons per wash, i.e., per customer)	50
Stores (per toilet room)	400
Service stations (per vehicle serviced)	10

TABLE D.2.1A.—*Daily water requirements for common farm animals*

Animal	*Minimum daily water requirements in gallons*
Horse, mule, or steer	12
Dairy cow (drinking only)	15
Dairy cow (drinking and dairy servicing)	35
Sheep	2
Hog	4
Chickens (100)	4
Turkeys (100)	7

D.2.2 *Calculating Total Daily Requirement*

Total daily water requirements should be calculated by multiplying the unit daily requirement by the total number of persons in the occupancy involved. See Example (1). To this figure must be added any special use quantity, such as lawn watering, industrial requirement, etc.

D.2.3 *Special Requirements*

The total daily amount of any special requirement shall be added to the figure as obtained under section D.2.2. Table 130(c)(7), Rate of Flow and Required Pressure During Flow for the Following Plumbing Fixtures, gives special use quantities for some conditions. While the quantity of special use water shall be computed on the rates given in Table 130(c)(7), the total amount shall be figured for appropriate periods and conditions of use. See Example (2).

(1) Example: Assume there is a hospital outside the limits of a community. The hospital has 300 beds. In addition, the hospital supplies its own dairy products and has a farm with 40 head of cattle. In Table D.2.1, the daily water requirement per hospital bed is taken as 250 gallons per bed. From Table D.2.1A, the water requirement per head of cattle is taken as 35 gallons per animal. Therefore the total daily water requirement is 300×250 plus 40×35 or 76,400 gallons.

(2) Example: It is assumed that at the hospital cited in Example (1) there is a lawn sprinkling system operating from 12 sillcocks 3 hours each day. From Table 130(c)(7) it is seen that each sillcock requires 300 gallons per hour. Therefore, the total special use water will equal $12 \times 300 \times 3$ or 10,800 gallons. This amount is added to that obtained in Example (1). The total quantity required is, therefore, 76,400 plus 10,800 or 87,200 gallons per day.

D.3 DETERMINATION OF PEAK DEMAND

D.3.1 *Estimating Water Supply Demand*

In determining the size of water supply distribution piping, the maximum momentary volume rate of flow of water shall first be determined. This is the supply demand which is based on the numbers and kinds of fixtures installed, on the rates of flow required by the different kinds of fixtures, and on the probable simultaneous operation of the various fixtures. The total daily requirements do not enter into this determination.

In computing supply demand, use shall be made of Table D.3.1, Supply Fixture Unit Values for Various Plumbing Fixtures.

TABLE D.3.1.—*Supply fixture unit values for various plumbing fixtures*

Fixture or group [1]	Type of supply control	Supply fixture unit values		
		Hot	Cold	Total [2]
Bathroom group	Flush valve	3	6	8
Bathroom group	Flush tank	3	4.5	6
Bathtub	Faucet	1.5	1.5	2
Combination fixture	Faucet	2	2	3
Kitchen sink	Faucet	1.5	1.5	2
Laundry tray	Faucet	2	2	3
Lavatory	Faucet	1.5	1.5	2
Pedestal urinal	Flush valve		10	10
Restaurant sink	Faucet	3	3	4
Service sink	Faucet	1.5	1.5	2
Shower head	Mixing valve	3	3	4
Stall or wall urinal	Flush valve		5	5
Stall or wall urinal	Flush tank		3	3
Water closet	Flush valve		10	10
Water closet	Flush tank		5	5

[1] For fixtures not listed, factors may be assumed by comparing the fixture to a listed one using water in similar quantities and at similar rates.

[2] For fixtures with both hot and cold water supplies, the weights for maximum separate demands may be taken as ¾ of the total supply fixture unit value.

D.3.2 *Calculation of Demand*

When the water supply fixture units are used to estimate the supply demand, the supply fixture unit values as given in Table D.3.1 shall be used in conjunction with Table D.3.2B*, Supply Demand for Various Loads in Supply Fixture Units.

*NOTE: Figure D.3.2 is a graphical representative of Table D.3.2.

TABLE D.3.2.—*Supply demand for various loads in supply fixture units*

Load	Supply demand		Load	Supply demand	
	Flush valve water closets predominate (curve 1)	Tank water closets predominate (curve 2)		Flush valve water closets predominate (curve 1)	Tank water closets predominate (curve 2)
Supply fixture units:	*gpm*	*gpm*	Supply fixture units:	*gpm*	*gpm*
5	22	4	500	143	124
10	27	8	600	157	143
20	35	14	660	162	152
30	42	20	700	170	161
40	46	24	800	183	178
50	51	28	850	189	185
60	54	32	900	197	195
88	64	40	1,000	208	208
124	74	48	1,060	216	216
160	81	56	1,280	243	243
236	98	72	1,510	270	270
300	108	85	1,930	324	324
400	127	106	2,480	378	378
470	135	118	2,990	432	432

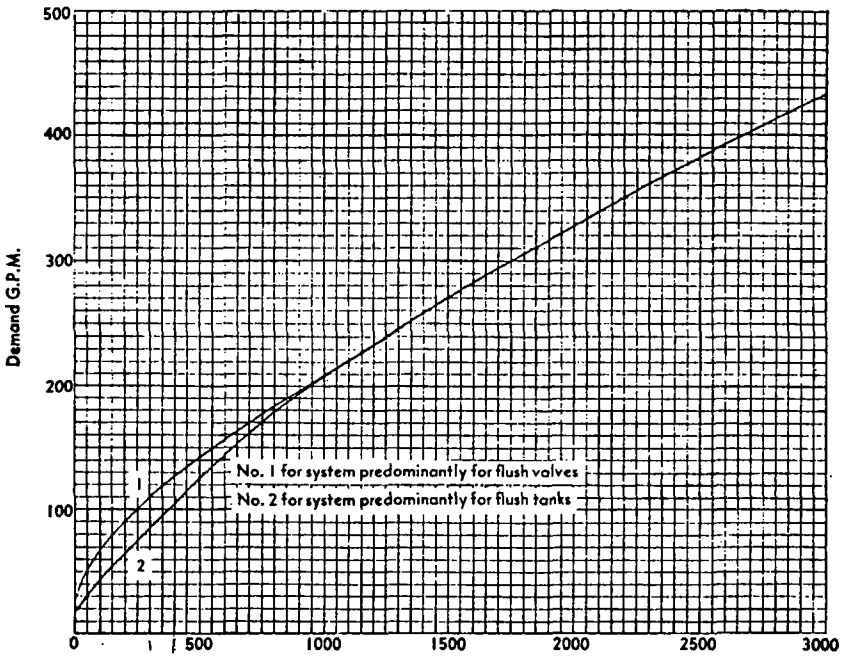
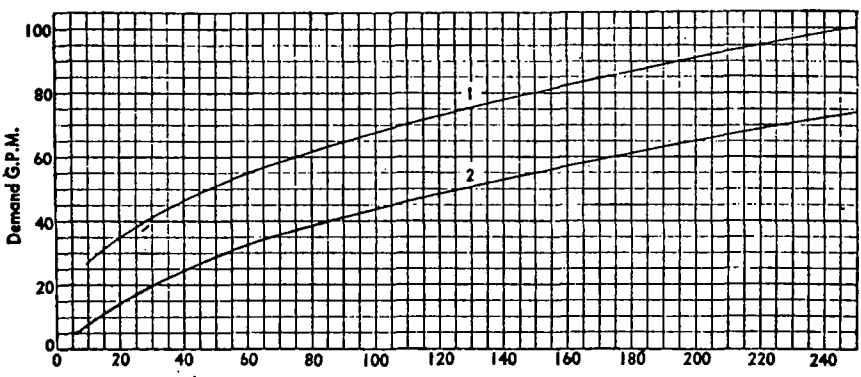


Figure D.3.2.B–Supply Fixture Units



Supply Fixture Units–Section of Figure D.3.2.B Enlarged

The estimated demand load in gallons per minute for fixtures used intermittently on any water supply pipe shall be obtained by multiplying the total number of each kind of fixture, supplied through that pipe by its Supply Fixture Unit Value from Table D.3.1, adding the products, and then, referring to the appropriate columns of Table D.3.2, or using the Figure, select the Demand in GPM. Examples are given below.

The additional load of any continuously flowing outlets such as hose outlets shall be computed separately and added to the total demand of intermittently used fixtures. See Example (2) below.

(1) Assume a water line serving a public washroom in which are three flushometer pedestal urinals, six flushometer closets and six lavatories with hot and cold water. First prepare a tabulation as shown.

Name of plumbing fixture	Number on system (or section) [1]	Supply fixture unit value per fixture (Table D.3.1)			Total supply fixture units		
		Hot	Cold	Total	Hot	Cold	Total
Pedestal Urinal, Flush Valve	3	-------	10	10	-------	30	30
Flushometer Closet	6	-------	10	10	-------	60	60
Lavatory	6	1.5	1.5	2	9	9	12
Total	-------	-------	-------	-------	9	99	102
Supply demand in GPM	-------	-------	-------	-------	7	67	68

[1] See paragraph D.3.3.

Referring to Table D.3.1 for these fixtures, it is found that the total demand in supply fixture units for hot was 9 s.f.u., for cold was 99 s.f.u., and for a total demand of 102 s.f.u. By using Figure D.3.2 curve number 2 it is determined that the supply demand in GPM for hot water is 7 and by using the same figure but curve 1 it is determined that the demand for cold water in GPM is 67 and the total demand in GPM is 68. This breakdown is used in order to size the hot water supply branch, the cold water supply branch and the building service line.

(2) Assume an apartment building (private type occupancy) having 200 bathroom groups with flushometer closets and 200 kitchen sinks. The apartment lawn has installed in it a sprinkler system operating from (7) sillcocks. What is the demand flow for which the water service to the apartment must be designed? The intermittent use fixtures are figured as in Example (1) to have a demand of 326 GPM.

Name of fixture	Number on system	Supply fixture unit value per fixture (Table D.3.1)			Total supply fixture units		
		Hot	Cold	Total	Hot	Cold	Total
Bathroom group	200	3	6	8	600	1,260	1,600
Kitchen sink	200	1.5	1.5	2	300	300	400
Total	-------	-------	-------	-------	900	1,500	2,000
Demand in GPM (Figure D.3.2)	-------	-------	-------	-------	208	270	326

The lawn sprinkler system outlets have a demand of 5 GPM each (Table 130(c)(7)). The total sprinkler system demand is, therefore, 35 GPM. This is added to the total demand (326) of the intermittently used fixtures making a total water demand of 361 GPM. This total figure would then be used to determine the size of the building service pipe. The 35 GPM demand figure would also be added to the cold water demand figure of 270 giving total cold water demand of 305 GPM and this figure would be used in sizing the cold water distribution piping.

D.3.3 ***Selection of Pipe Size***

Pipe sizes may be selected according to the following water pipe sizing procedure except that in no case shall a pipe size be less than shown in Table 130(c)(1), nor in the case of water service lines, less than specified in MHD 130(b)(1).

a. The water pipe sizing procedure is based on a system of pressure requirements and losses, the sum of which *must not exceed* the minimum pressure available at the street main or other source of supply.

These pressures are expressed as follows:

(1) *Pressure required at fixture to produce adequate flow*—See Table 130(c)(7).

(2) *Static Pressure loss*—This is computed at 0.43 p.s.i. per ft. of pipe rise or drop and is added or subtracted respectively.

(3) *Loss through water meter*—Pressure or friction losses for various size meters are shown in Table or Figure D.3.3A.

(4) *Loss through taps in water main*—Losses for various size taps are shown in Table D.3.3C.

(5) *Losses through special devices such as filters, water softeners, backflow preventers, etc.*—These must be obtained from the manufacturer, or estimated and added to the total.

(6) *Loss through fittings and valves*—Losses for these devices are computed by converting the fittings or valves to equivalent straight sections of pipe and adding this length to the total for the pipe section being considered. Table D.3.3B shows equivalent lengths of pipe for fittings and valves.

(7) *Loss due to pipe friction*—This loss may be readily computed when (A) the pipe size, (B) its length and (C) the flow through the pipe are known. When these three factors are known the friction loss can be determined from either Table D.3.3 D, G or the figures D.3.3 D, E, F, G. The table and the figure used depends on the type of pipe used. An example of this sizing procedure is given in the following section.

TABLE D.3.3A.—*Loss of pressure through disk-type meters in pounds per square inch (p.s.i.)*

Gallons per minute	Size of meter							
	⅝ in.	¾ in.	1 in.	1½ in.	2 in.	3 in.	4 in.	6 in.
4	1.0							
5	1.6							
6	2.2							
7	3.0	1.1						
8	4.0	1.4						
9	5.0	1.7						
10	6.1	2.1						
15	14	5.0	2.0					
20		8.8	3.5	1.0				
30		19	8.0	2.3				
40			14	4.0	1.6			
50			22	6.2	2.4			
60				9.0	3.6			
70				12	4.9	1.3		
80				16	6.2	1.7		
90				20	8.0	2.0		
100					10	2.5	1.0	
120					14	3.7	1.3	
140					20	5.1	2.0	
160						6.2	2.4	
180						8.1	3.3	
200						10	4.0	1.0
250						16	6.1	1.7
300						23	9.0	2.3
350							13.0	3.0
400							16.0	4.0
500							25.0	6.1
600								9.0
700								13
800								16
900								20

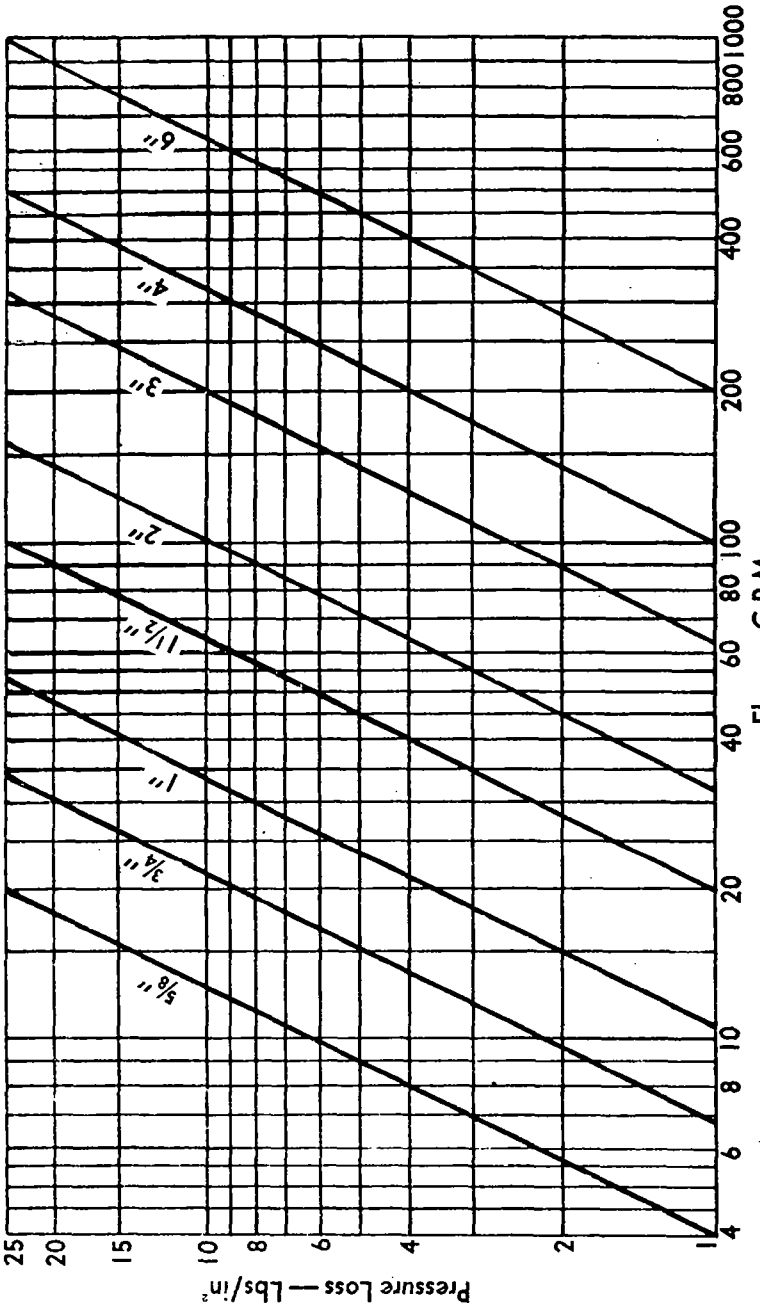


Figure D.3.3.A–Loss of Pressure Through Disk Type Meters in Pounds Per Square Inch (psi)

TABLE D.3.3B.—*Allowance in equivalent length of pipe for friction loss in valves and threaded fittings*

Diameter of fitting, inches	90° std. ell, feet	45° std. ell, feet	90° side tee, feet	Coupling or straight run of tee, feet	Gate valve, feet	Globe valve, feet	Angle valve, feet
¾	1	0.6	1.5	0.3	0.2	8	4
½	2	1.2	3	0.6	0.4	15	8
¾	2.5	1.5	4	0.8	0.5	20	12
1	3	1.8	5	0.9	0.6	25	15
1¼	4	2.4	6	1.2	0.8	35	18
1½	5	3	7	1.5	1.0	45	22
2	7	4	10	2	1.3	55	28
2½	8	5	12	2.5	1.6	65	34
3	10	6	15	3	2	80	40
3½	12	7	18	3.6	2.4	100	50
4	14	8	21	4.0	2.7	125	55
5	17	10	25	5	3.3	140	70
6	20	12	30	6	4	165	80

TABLE D.3.3C.—*Loss of pressure through taps and tees in pounds per square inch (p.s.i.)*

Gallons per minute	Size of tap or tee						
	¾ in.	¾ in.	1 in.	1¼ in.	1 in.	2 in.	3 in.
10	1.35	0.64	0.18	0.08			
20	5.38	2.54	0.77	0.31	0.14		
30	12.1	5.72	1.62	0.69	0.33	0.10	
40		10.2	3.07	1.23	0.58	0.18	
50		15.9	4.49	1.92	0.91	0.28	
60			6.46	2.76	1.31	0.40	
70			8.79	3.76	1.78	0.55	0.10
80			11.5	4.90	2.32	0.72	0.13
90			14.5	6.21	2.94	0.91	0.16
100			17.94	7.67	3.63	1.12	0.21
120			25.8	11.0	5.23	1.61	0.30
140			35.2	15.0	7.12	2.20	0.41
150				17.2	8.16	2.52	0.47
160				19.6	9.30	2.92	0.54
180				24.8	11.8	3.62	0.68
200				30.7	14.5	4.48	0.84
225				38.8	18.4	5.67	1.06
250				47.9	22.7	7.00	1.31
275					27.4	7.70	1.59
300					32.6	10.1	1.88

TABLE D.3.3D.—*Pressure loss of water in pounds per square inch per 100 feet of fairly smooth pipe*

Gallons per minute	¾"	1"	1¼"	1½"	2"	2½"	3"	4"	5"	6"	8"	10"	12"
1	0.16												
2	0.57	0.17											
3	1.2	0.37	0.1										
4	2.0	0.61	0.17										
5	3.0	0.95	0.25	0.12									
10	11	3.5	0.9	0.43	0.13								
15	22	7.1	1.8	0.9	0.26	0.11							
20	[1]39	13	3.0	1.5	0.45	0.18							
25	[2]58	18	4.7	2.3	0.68	0.28	0.10						
30		[1]25	6.6	3.2	0.93	0.4	0.13						
35		[1]35	8.5	4.3	1.2	0.53	0.18						
40		[2]43	11	5.5	1.6	0.63	0.22						
45			14	6.7	2.0	0.8	0.3						
50			[1]17	8.1	2.4	1.0	0.35	0.1					
60			[1]23	12	3.3	1.3	0.5	0.13					
70			[2]32	[1]15	4.4	1.8	0.63	0.17					
80				[1]19	5.7	2.3	0.83	0.23					
90				[1]24	7.0	2.9	1.1	0.27					
100				[2]30	8.5	3.7	1.3	0.35	0.12				
150					[1]17	[1]7.8	2.6	0.7	0.23				
200					[2]30	[1]13	[1]4.5	1.2	0.4	0.16			
250						[2]18	6.3	1.8	0.59	0.23			
300							[1]9.0	2.4	0.8	0.34			
350							[2]13	3.3	1.1	0.45	0.12		
400								[1]4.2	1.3	0.59	0.15		
450								[1]5.1	1.7	0.7	0.19		
500								[1]6.2	2.1	0.85	0.23		
600								[2]9.0	2.9	1.2	0.32	0.11	
700									[1]3.9	1.6	0.43	0.14	
800									[1]4.9	2.0	0.56	0.18	
900										[1]2.5	0.69	0.23	
1,000										[1]3.0	0.81	0.28	0.12
1,500										[2]6.5	[1]1.8	0.59	0.24
2,000											[1]3.0	0.98	0.4
2,500											[2]4.5	[1]1.5	0.61
3,000												[1]3.0	0.89

[1] Velocity at or exceeding 10 fps.
[2] Velocity exceeds 15 fps.

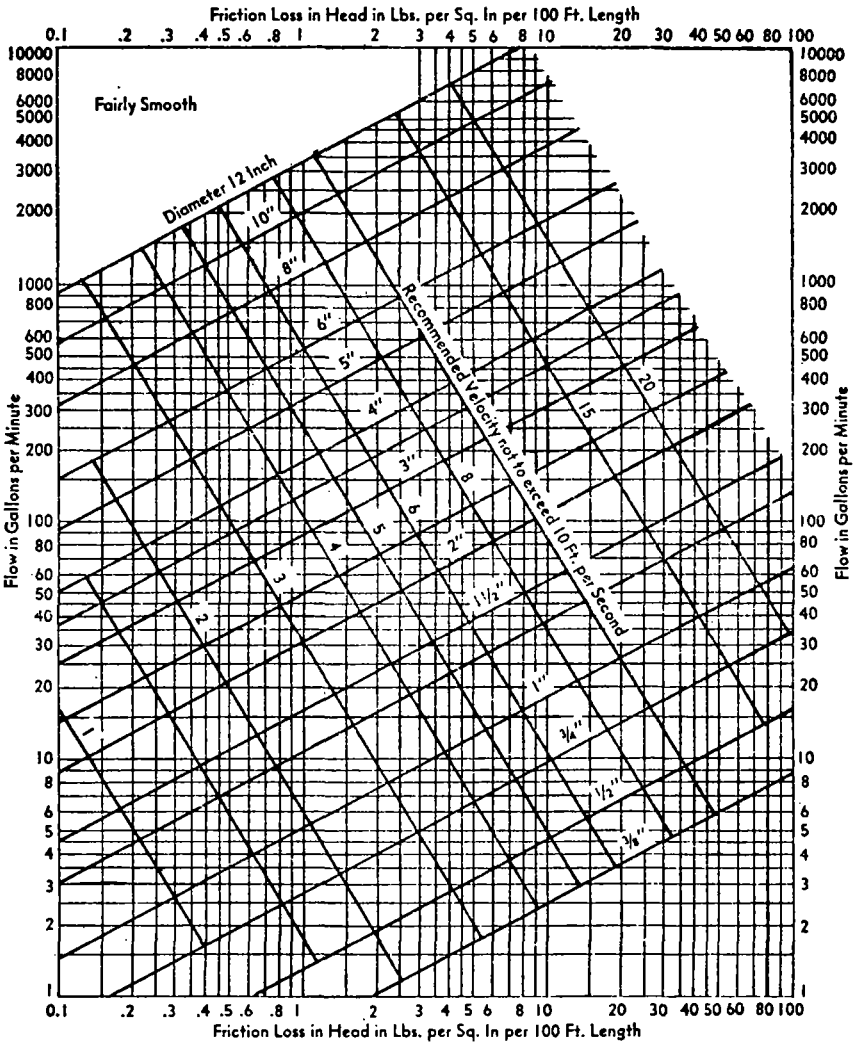


Figure D.3.3.D–Pressure Loss of Water in Pounds Per Square Inch Per 100 Feet of Fairly Smooth Pipe

TABLE D.3.3E.—*Pressure loss of water in pounds per square inch per 100 feet of fairly rough pipe*

Gallons per minute	¾"	1"	1¼"	1½"	2"	2½"	3"	4"	5"	6"	8"	10"	12"
1	0.26												
2	0.91	0.22											
3	2.0	0.47	0.17										
4	3.3	0.82	0.30	0.12									
5	5.2	1.3	0.45	0.18									
10	20	4.9	1.7	0.67	0.17								
15	[1]43	12	3.7	1.4	0.36	0.12							
20	[2]80	18	6.2	2.5	0.62	0.20							
25		[1]29	9.9	3.9	0.97	0.31	0.13						
30		[1]42	14	5.6	1.3	0.45	0.18						
35		[1]55	18	7.3	1.8	0.60	0.25						
40		[2]70	[1]24	9.3	2.3	0.75	0.32						
45			[1]30	12	3.0	0.96	0.42						
50			[1]37	15	3.7	1.2	0.51	0.12					
60			[2]52	[1]21	5.2	1.7	0.70	0.17					
70				[1]28	7.0	2.2	0.92	0.22					
80				[1]37	9.0	2.9	1.3	0.29	0.10				
90				[2]45	12	3.7	1.5	0.36	0.12				
100					[1]14	4.6	1.8	0.44	0.16				
150					[2]30	10	4.2	1.0	0.34	0.13			
200						[1]17	7.0	1.7	0.59	0.23			
250						[2]26	[1]11	2.6	0.90	0.35			
300							[1]15	3.6	1.3	0.50	0.12		
350							[2]21	4.9	1.7	0.69	0.17		
400								[1]6.1	2.2	0.88	0.22		
450								[1]7.6	2.7	1.1	0.27		
500								[1]9.4	3.3	1.3	0.33	0.11	
600								[2]13	[1]4.9	1.8	0.46	0.15	
700									[1]6.2	2.5	0.61	0.20	
800									[1]8.1	3.3	0.80	0.26	0.11
900									[1]11	[1]4.1	1.0	0.33	0.13
1,000									[2]13	[1]5.0	1.25	0.40	0.17
1,500										[2]12	2.8	0.90	0.37
2,000											[1]4.7	1.6	0.63
2,500											[2]7.2	[1]2.4	1.0
3,000												[1]3.4	1.3

[1] Velocity at or exceeding 10 fps.
[2] Velocity exceeds 15 fps.

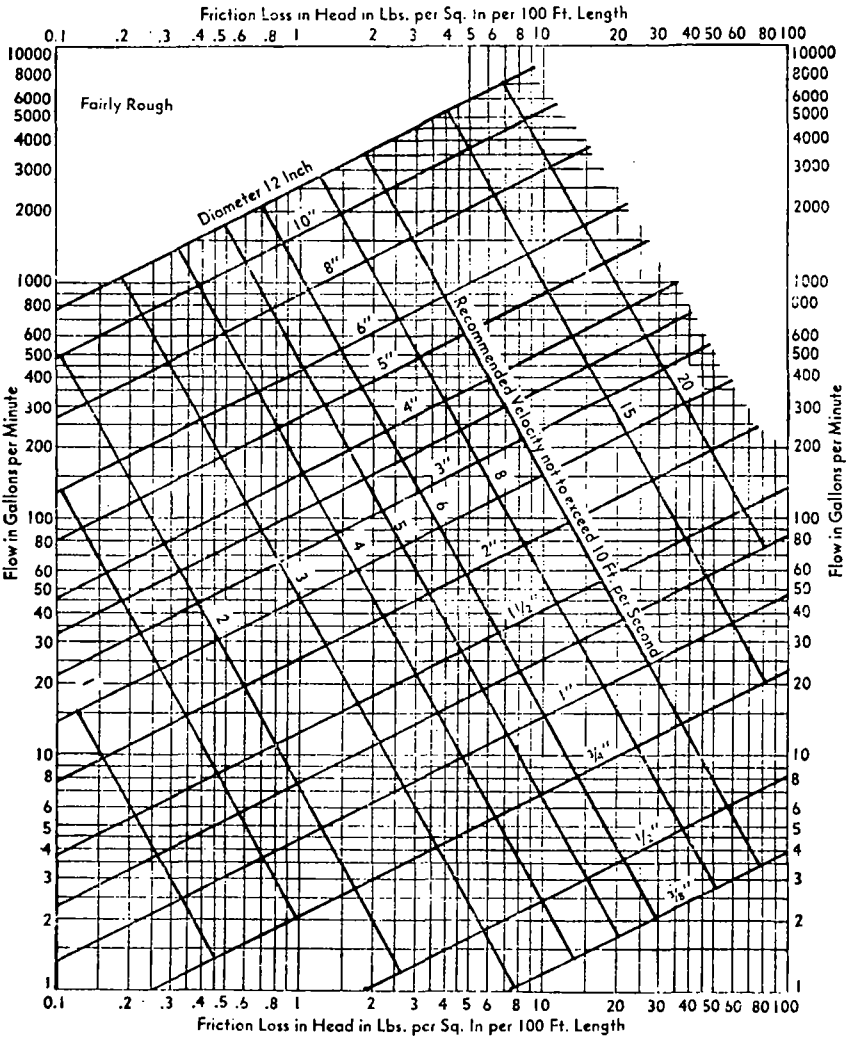


Figure D.3.3.E–Pressure Loss of Water in Pounds Per Square Inch Per 100 Feet of Fairly Rough Pipe

TABLE D.3.3F.—*Pressure loss of water in pounds per square inch per 100 feet of rough pipe*

Gallons per minute	¾″	1″	1¼″	1½″	2″	2½″	3″	4″	5″	6″	8″	10″	12″
1	0.31												
2	1.20	0.27											
3	2.7	0.62	0.20										
4	4.7	1.2	0.36	0.15									
5	6.0	1.4	0.46	0.18									
10	30	7.0	2.3	0.94	0.22								
15	[1]67	16.0	6.2	2.1	0.49	0.17							
20		27	9.1	3.7	0.89	0.29	0.12						
25		[1]43	14	5.8	1.3	0.45	0.18						
30		[1]62	21	8.5	2.0	0.63	0.27						
35		[1]85	28	12	2.7	0.90	0.36						
40			[1]37	14	3.5	1.20	0.47	0.12					
45			[1]47	19	4.5	1.45	0.60	0.14					
50			[1]58	23	5.5	1.8	0.74	0.18					
60			[2]83	[1]33	7.9	2.6	1.10	0.25					
70				[1]46	12	3.5	1.40	0.35	0.12				
80				[1]60	14	4.7	1.85	0.45	0.15				
90				[2]76	18	5.9	2.3	0.58	0.19				
100					[1]23	7.2	3.0	0.71	0.23				
150					[2]50	17	6.6	1.7	0.53	0.21			
200						[1]29	12	2.9	0.95	0.37			
250						[2]45	[1]18	4.5	1.49	0.58	0.13		
300							[1]26	6.4	2.20	0.80	0.19		
350							[2]36	8.9	2.9	1.20	0.27		
400								[1]12	3.8	1.45	0.35	0.12	
450								[1]15	4.7	1.8	0.44	0.14	
500								[1]18	6.0	2.3	0.55	0.18	
600								[2]25	8.3	3.2	0.78	0.26	0.11
700									[1]12	4.5	1.20	0.36	0.14
800									[1]16	6.0	1.4	0.47	0.19
900									[2]20	[1]7.7	1.8	0.60	0.24
1,000										[1]9.4	2.3	0.75	0.31
1,500										[2]22	5.1	1.7	0.70
2,000											[1]9.0	3.0	1.25
2,500											[2]14	[1]4.7	2.0
3,000												[1]6.8	2.7

[1] Velocity at or exceeding 10 fps.
[2] Velocity exceeds 15 fps.

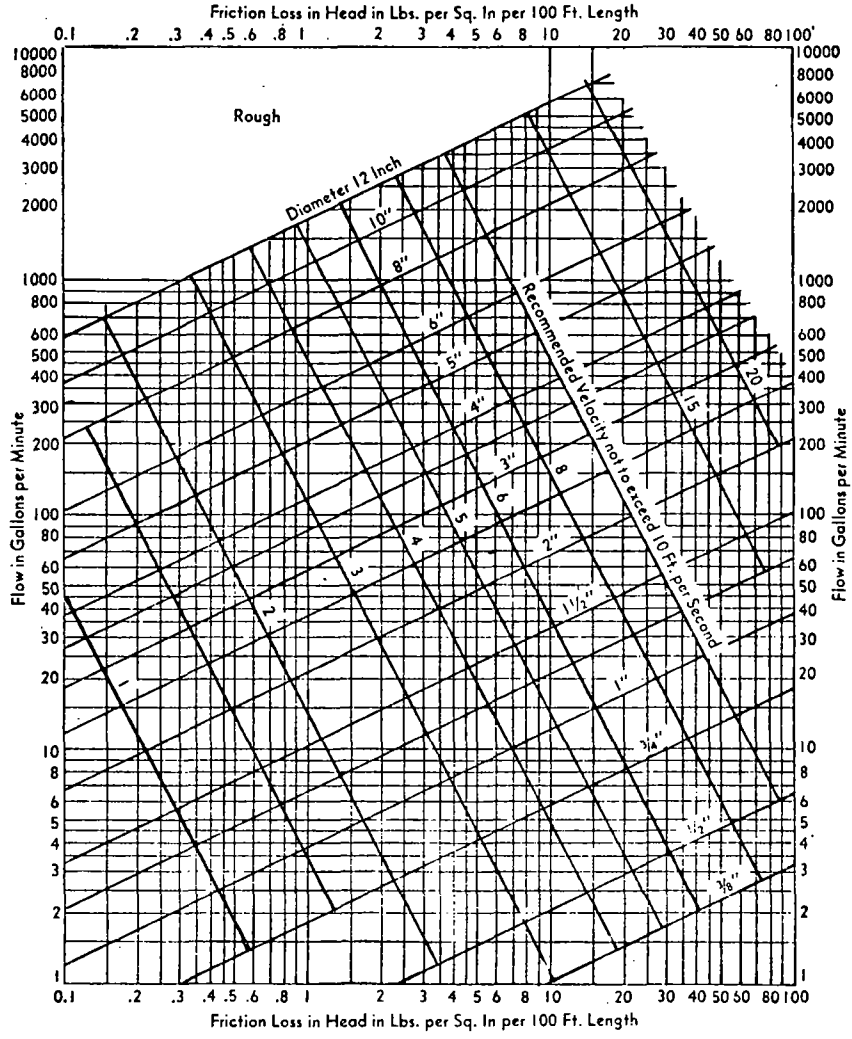


Figure D.3.3.F–Pressure Loss of Water in Pounds Per Square Inch Per 100 Feet of Rough Pipe

TABLE D.3.3G.—*Pressure loss of water in pounds per square inch per 100 feet of copper pipe*

Gallons per minute	¾" [1]	1" [1]	1¼"	1½"	2"	2½"	3"	4"	5"	6"	8"	10"	12"
	0.17												
	0.21												
1	0.27												
	0.56	0.16											
	0.66	0.18											
2	0.84	0.21											
	1.15	0.31											
	1.30	0.37											
3	1.70	0.42	0.13										
	1.8	0.51											
	2.2	0.61											
4	2.8	0.69	0.22	0.10									
	2.7	0.76											
	3.3	0.90											
5	4.2	1.05	0.34	0.15									
	3.8	1.1											
	4.5	1.25											
6	5.7	1.4	0.47	0.21									
	5.0	1.4											
	6.0	1.7											
7	7.5	1.8	0.61	0.27									
	6.1	1.7											
	7.2	2.1											
8	9.6	2.4	0.68	0.33									
	7.6	2.2											
	8.9	2.5											
9	12	2.8	0.93	0.42	0.12								
	9.1	2.6											
	11.5	3.0											
10	14.5	3.5	1.2	0.50	0.14								
	18.5	5.2											
	[2]23	6.1											
15	[2]28	7.1	2.4	1.10	0.27								
	[2]32	8.9											
	[2]37	9.9											
20	[2]45	12	3.8	1.70	0.44	0.16							
	[2]46	13											
	[2]53	15											
25	[2]67	[2]17	5.8	2.5	0.68	0.23							
		[2]18											
		[2]21											
30		[2]24	8.0	3.5	0.91	0.32	0.13						
		[2]24											
		[1]27											
35		[2]32	11	4.6	1.25	0.42	0.17						
		[2]30											
		[2]33											
40		[2]38	[2]13	5.8	1.50	0.52	0.22						
		[2]37											
		[2]43											
45		[2]48	[2]17	7.1	1.85	0.66	0.28						
50			[2]19	8.7	2.3	0.79	0.33						
60			[2]27	12	3.1	1.2	0.46	0.12					
70				[2]16	4.2	1.4	0.62	0.16					
80				[2]19	5.2	1.8	0.79	0.20					
90				[2]24	6.2	2.25	0.96	0.24					
100					[2]7.6	2.75	1.2	0.30	0.11				
150					[2]17	[2]5.8	2.5	0.62	0.22				
200						[2]9.3	4.1	1.10	0.36	0.15			
250						[2]14	[2]6.1	1.60	0.52	0.22			
300							[2]8.4	2.1	0.72	0.31			
350							[2]12	2.8	0.98	0.41			
400								3.5	1.25	0.52			
450								[2]4.3	1.6	0.63			
500								[2]5.2	1.8	0.76			
600								[2]7.2	[2]2.7	1.15			
700									[2]3.4	1.4			
800									[2]4.4	1.8			
900									[2]5.2	[2]2.2			
1,000										[2]2.7			

[1] For the ¾" and 1" pipe sizes the three values shown opposite each flow figure are, reading from the top, for Types M, L and K copper tubing respectively.
[2] Velocity at or exceeding 10 fps.
[3] Velocity exceeds 15 fps.

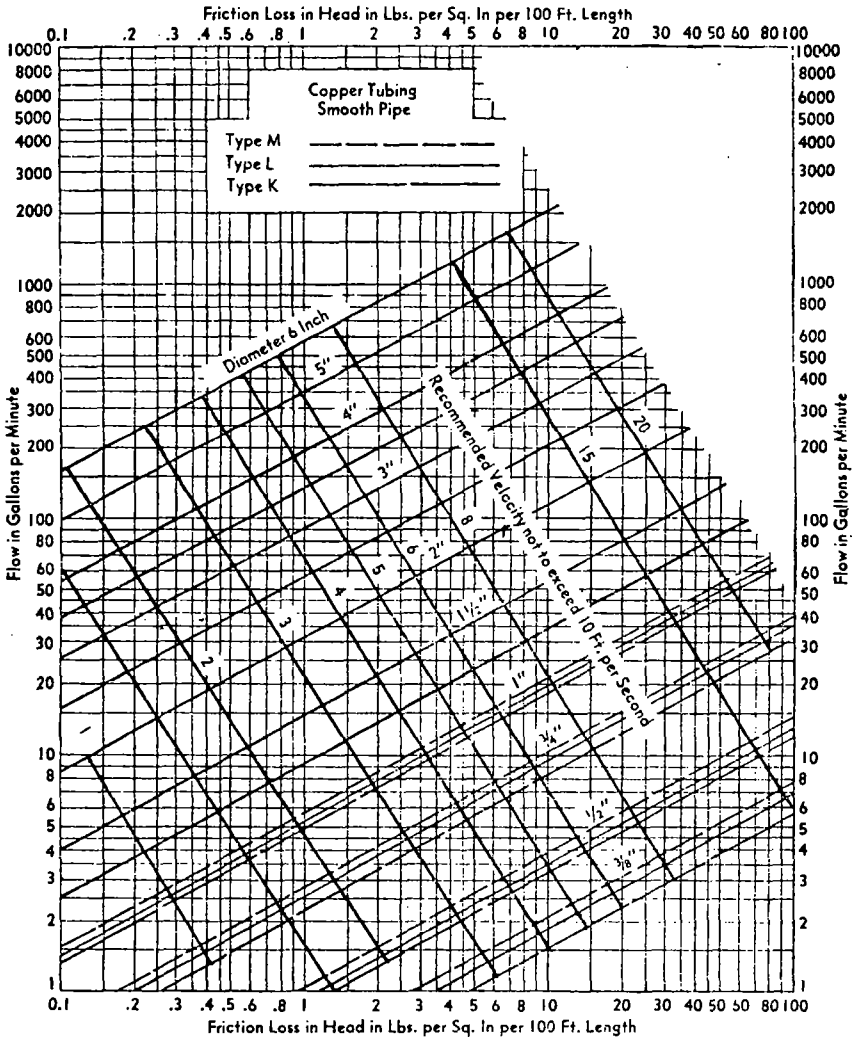
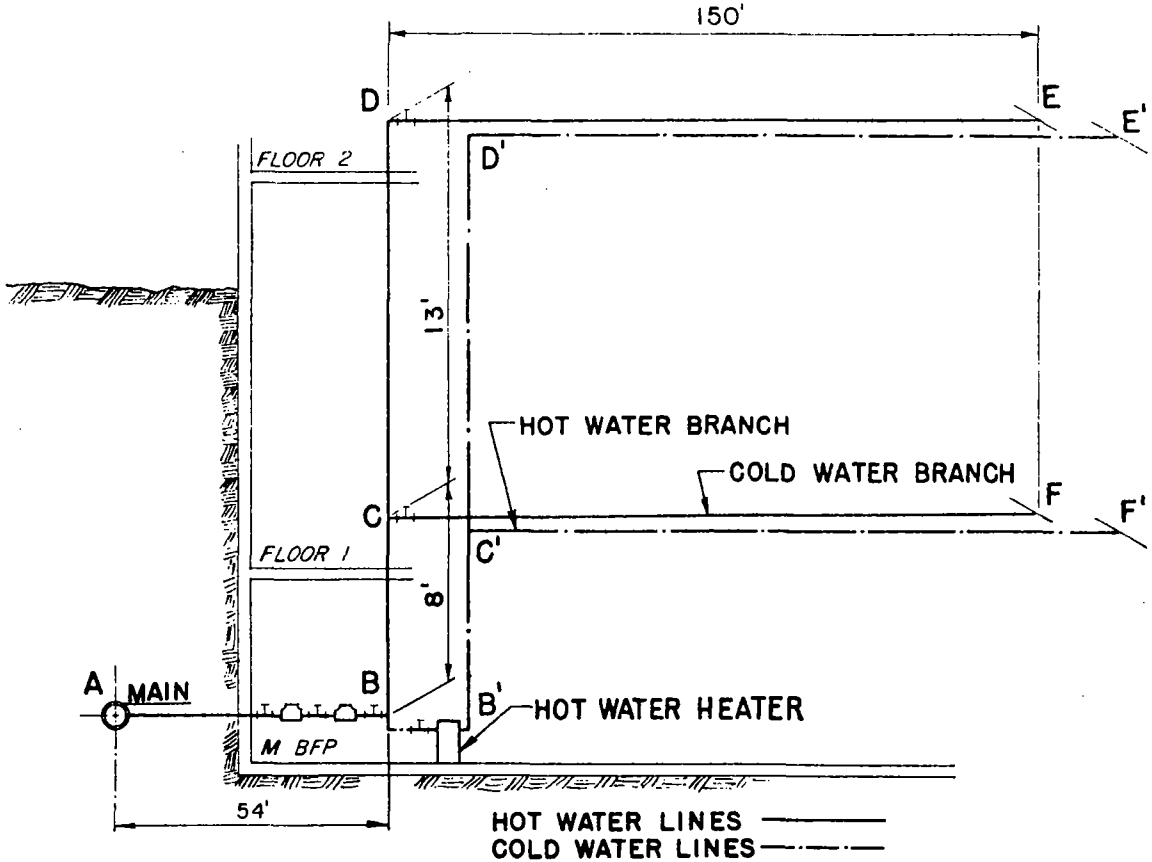


Figure D.3.3.G–Pressure Loss of Water in Pounds Per Square Inch Per 100 Feet of Copper Pipe

(1) *Example:* What size copper water pipe, service and distribution will be required to serve a two story factory building having on each floor, back-to-back, two toilet rooms each equipped with four flushometer closets, two flushometer pedestal urinals and four lavatories with hot and cold water? The highest fixture is 21 feet above the street main which is tapped with 2½" corporation at which point the minimum pressure is 55 p.s.i. In the building basement a 2-inch meter and 3-inch reduced pressure zone backflow preventer with a maximum pressure drop of 9 p.s.i. are to be installed. The system is shown by the following diagram. To be determined are the pipe sizes for the service main, and the cold and hot water distribution pipes.
A tabular arrangement such as shown below should first be constructed. The steps to be followed in solving the problem are indicated by the table itself as they are in sequence, columns 1 through 8 and lines a through l.



Recommended tabular arrangement for use in solving pipe sizing problems

	Line	Description	Lbs. per square onch-psi
Service and cold water distribution piping	a	Minimum pressure available at main	55.00
	b	Highest pressure required at a fixture (Table 130(c) (7))	15.00
	c	Meter loss 2" meter (Table D3.3A)	11.00
	d	Tap in main-loss 2½" tap (Table D3.3C)	1.29
	e	Static head loss 21 x 0.43 psi	9.03
	f	Special fixture loss—backflow preventer	9.00
	g	Special fixture loss—filter	0.00
	h	Special fixture loss—other	0.00
	i	Total overall losses and requirements, sum of lines b through h	45.32
	j	Pressure available to overcome pipe friction, line a minus sum of lines b to h.	9.68

1	2	3	4	5	6	7	8	
Pipe section	Gal. per min. through section (determine as in sec. D.3.2)	Length of section (ft.)	Trial pipe size (in.)	Equivalent length of fittings and valves (Table D.3.3B) (ft.)	Total equivalent length col. 3 and col. 5 (100 ft.)	Friction loss per 100' of trial size pipe (Table D.3.3G) (psi)	Friction loss in equivalent length col. 6 x col. 7 (psi)	
AB	107	54	2½	12.8	0.67	3.0	2.00	
BC	101	8	2½	8	0.16	2.8	0.45	
CF	76	150	2½	1.6	1.52	1.7	2.58	
CD	76	13	2½	8	0.21	1.7	0.36	
DE	76	150	2½	1.6	1.52	1.7	2.58	
	k	Total pipe friction losses (cold) 7.97 psi						7.97
	l	Difference line j minus line k						1.71
		Hot Water Distribution Piping						
AB'	107	54	2½	12.8	0.67	3.0	2.00	
B'C'	37	8	2	15.3	0.23	1.2	0.22	
C'F'	28	150	2	1.3	1.51	0.8	1.21	
C'D'	28	13	1½	5	0.18	3.2	0.58	
D'E'	28	150	1½	1.0	1.51	3.2	4.84	
	k	Total pipe friction losses (hot) 8.85 psi						8.85
	l	Difference line j minus line k						0.83

Step 1—*Column 1*—Divide the system into sections breaking at major changes in elevation or where branches lead to fixture groups. After point (B) (see sketch) separate consideration will be given to the hot and cold water piping. Enter the sections to be considered in the service and cold water piping in Column 1 of the Tabular Arrangement.

Column 8—According to the method given in Section D.3.2 determine the GPM of flow to be expected in each section of the system. These flows range from 28 to 107 GPM.

Step 2—*Line a*—Enter the minimum pressure available at the main source of supply. This is 55 p.s.i.

Line b—Determine from Table 130(c)(7) the highest pressure required for the fixtures on the system. Which is 15 p.s.i. to operate a flushometer valve.

Line c—Select from Table D.3.3A the pressure loss for the meter size given or assumed. The total water flow from the main through the service as determined in step 1 will serve to aid in the meter selected.
Line d—Select from Table D.3.3C and enter the pressure loss for the tap size given or assumed.
Line e—Determine the difference in elevation between the main or source of supply and the highest fixture on the system and multiply this figure, expressed in feet, by 0.43 p.s.i. Enter the resulting p.s.i. product on Line e.
Line f, g, h—The pressure losses through filters, backflow preventers or other special fixtures must be obtained from the manufacturer or estimated and entered on these lines.

Step 4—*Line i*—The sum of (lines b through h) the pressure requirements and losses which affect the overall system is entered on this line.

Step 5—*Line j*—Subtract line i from line a. This gives the pressure which remains available for overcoming friction losses in the system. This figure is a guide to the pipe size which is chosen for each section as the total friction losses through all the sections should not exceed this value.

Step 6—*Column 3*—Enter the length of each section.

Step 7—*Column 4*—Select a trial pipe size. A rule of thumb is that size will become progressively smaller as the system extends farther from the main or source of supply.

Step 8—*Column 5*—Select from Table D.3.3B the equivalent lengths for the trial pipe size of fittings and valves on the section. Enter the sum for each section in Column 5. (The number of fittings to be used in the installation of this piping must be an engineering estimate.)

Step 9—*Column 6*—Add the figures from Column 3 and Column 5, and enter in Column 6.
Express the sum in 100's of feet.

Step 10—*Column 7*—Select from Table D.3.3G the friction loss per 100 feet of pipe for the GPM flow in a section (Column 2) and the trial pipe size (Column 4).

Step 11—*Column 8*—Multiply the figures in Columns 6 and 7 for each section and enter in Column 8.

Step 12—*Line k*—Enter the sum of the values in Column 8.

Step 13—*Line l*—Subtract Line k from Line j.
The result should always be a positive or plus figure. If it is not, it is necessary to repeat the operation utilizing Columns 4, 5, 7 and 8 until a balance or near balance is obtained. If the difference between Lines j and k is positive and large, it is an indication that the pipe sizes are too large and may, therefore, be reduced thus saving materials. In such a case the operations utilizing Columns 4, 5, 7 and 8 should again be repeated.

Answer—The final figures entered in Column 4 become the design pipe size for the respective sections. Repeating this operation a second time using the same sketch but considering the demand for hot water, it is possible to size the hot water distribution piping. This has been worked up as a part of the overall problem in the Tabular Arrangement used for sizing the service and cold water distribution piping. It should be noted that consideration must be given the pressure losses from the street main to the water heater (section AB) in determining the hot water pipe sizes.

MINNESOTA CODE OF AGENCY RULES

RULES OF THE DEPARTMENT OF HEALTH

1982 Reprint

All rules as in effect on September 15, 1982

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For Table of Contents See Volume 39A.

4395-99

Public Water Supplies

7 MCAR S 1.145 General information and definitions.

A. Justification. These rules are adopted pursuant to legislative authority granted in Laws of 1977, chapter 66, section 3(e), which requires that the commissioner of health adopt for all public water supplies rules which are at least as stringent as the federal regulations dealing with public water supplies adopted by the United States Environmental Protection Agency, in order for the commissioner to be able to assume the primary responsibility for enforcing the federal act.

B. Definitions. The following definitions apply to 7 MCAR SS 1.145-1.149, unless the context indicates otherwise.

1. Commissioner. "Commissioner" means the commissioner of health, or his or her authorized representative.

2. Disinfectant. "Disinfectant" means any oxidant, including but not limited to chlorine, chlorine dioxide, chloramines, and ozone added to water in any part of the treatment or distribution process, that is intended to kill or inactivate pathogenic micro-organisms.

3. Dose equivalent. "Dose equivalent" means the product of the absorbed dose from ionizing radiation and such factors as account for differences in biological effectiveness due to the type of radiation and its distribution in the body as specified by the International Commission on Radiological Units and Measurements (ICRU).

4. Exemption. "Exemption" means a waiver which may be granted by the commissioner to a supply which is in operation on June 24, 1977:

a. When a maximum contaminant level or required treatment cannot be complied with because of economic or other compelling factors; and

b. If granting the waiver will not result in an unreasonable risk to health.

Such an exemption must be conditioned upon a schedule for compliance with these rules by the dates specified in 7 MCAR S 1.148 B.8. and 9.

5. Federal act. "Federal act" means the Safe Drinking Water Act of 1974, P.L. 93-523, 42 U.S.C. 300 f, and amendments thereto.

6. Federal regulations. "Federal regulations" means regulations dealing with public water supplies and drinking water quality, promulgated by the Administrator of the United States Environmental Protection Agency pursuant to the federal

act.

7. Gross alpha particle activity. "Gross alpha particle activity" means the total radioactivity due to alpha particle emission as inferred from measurements on a dry sample.

8. Gross beta particle activity. "Gross beta particle activity" means the total radioactivity due to beta particle emission as inferred from measurements on a dry sample.

9. Halogen. "Halogen" means one of the chemical elements chlorine, bromine, or iodine.

10. Manmade beta particle and photon emitters. "Manmade beta particle and photon emitters" means all radionuclides emitting beta particles or photons listed in Maximum Permissible Body Burdens and Maximum Permissible Concentration of Radionuclides in Air or Water for Occupational Exposure, NBS Handbook 69, except the daughter products of thorium-232, uranium-235 and uranium-238.

11. Maximum contaminant level. "Maximum contaminant level" means the maximum permissible level of a contaminant (any physical, chemical, biological, or radiological substance or matter) in water which is delivered to the free flowing outlet of the ultimate user of a public water supply; except in the case of turbidity where the maximum permissible level is measured at the point of entry to the distribution system. Contaminants added to the water under circumstances controlled by the user, except for those resulting from corrosion of piping and plumbing caused by water quality are excluded from this definition.

12. Maximum total trihalomethane potential. "Maximum total trihalomethane potential" means the maximum concentration of total trihalomethanes produced in a given water containing a disinfectant residual after seven days at a temperature of 25 degrees Celsius or above.

13. Person. "Person" means an individual, partnership, copartnership, cooperative, public or private association or corporation, public subdivision, agency of the state or federal government or any other legal entity or its legal representative, agent or assigns.

14. Picocurie. "Picocurie (pCi)" means that quantity of radioactive material producing 2.22 nuclear transformations per minute.

15. Public water supply. "Public water supply" or "supply" means a system providing piped water for human consumption, and either containing a minimum of 15 service connections or 15 living units, or serving at least 25 persons daily for 60 days of the year. Such term includes:

a. Any collection, treatment, storage, and

distribution facilities under control of the operator of the supply and used primarily in connection with the supply; and

b. Any collection or pre-treatment storage facilities used primarily in connection with the supply but not under control of the operator. A public water supply is either a community or a non-community water supply.

(1) "Community water supply" means a public water supply or system which serves at least 15 service connections or living units used by year-round residents, or regularly serves at least 25 year-round residents.

(2) "Non-community water supply" means any public water supply that is not a community water supply. The following are given as examples of non-community water supplies and are in no way meant to be an exhaustive list: seasonal facilities such as children's camps, recreational camping areas, resorts, or year-round facilities which serve at least 25 persons who are not residents thereof, such as churches, entertainment facilities, factories, gasoline service stations, marinas, migrant labor camps, office buildings, parks, restaurants, schools.

16. Rem. "Rem" means the unit of dose equivalent from ionizing radiation to the total body or any internal organ or organ system. A "millirem (mrem)" is 1/1000 of a rem.

17. Sanitary survey. "Sanitary survey" means an on-site review of the water source, facilities, equipment, operation and maintenance of a public water supply for the purpose of evaluating the adequacy of the source, facilities, equipment, operation and maintenance for producing and distributing safe drinking water.

18. Standard sample. "Standard sample" means the aliquot of finished drinking water that is examined for the presence of coliform bacteria.

19. Supplier. "Supplier" means any person who owns, manages, or operates a public water supply, whether or not he is an operator certified pursuant to Minnesota Statutes, sections 115.71 to 115.82.

20. Total trihalomethanes. "Total trihalomethanes" means the sum of the concentration in milligrams per liter of the trihalomethane compounds of trichloromethane (chloroform), dibromochloromethane, bromodichloromethane and tribromomethane (bromoform), rounded to two significant figures.

21. Trihalomethane. "Trihalomethane" means one of the family of organic compounds named as derivatives of methane, wherein three of the four hydrogen atoms in methane are each substituted by a halogen atom in the molecular structure.

22. Turbidity unit. "Turbidity unit" means an amount of

turbidity equivalent to that in a solution composed of .000125 percent hydrazine sulfate and .00125 percent hexamethylenetetramine in distilled and filtered (100 _ pore size membrane) water, as measured by a nephelometric turbidimeter.

23. Variance. "Variance" means a waiver which may be granted by the commissioner to a supply:

a. Which, due to the raw water quality reasonably available, cannot comply with a maximum contaminant level, despite application of the best known and available technology for treatment or other means; and

b. If granting the waiver will not result in an unreasonable risk to health.

Such a variance must be conditioned upon a schedule for implementation of control measures, and may specify an indefinite time period for compliance with the maximum contaminant level or required treatment.

24. Year-round resident. "Year-round resident" means a person who resides in the area served by the public water supply for more than six months of the year.

C. Scope and coverage.

1. These rules prescribe standards for water supply siting and construction, set maximum contaminant levels for turbidity, microbiological constituents, organic and inorganic chemicals, and radioactivity, prescribe a frequency for monitoring the levels of these constituents and sodium and corrosivity, and prescribe the procedures for reporting results, notifying the public and for maintaining records.

2. The standards and procedures adopted in 7 MCAR SS 1.145-1.149 inclusive shall apply to all public drinking water supplies, pursuant to authority granted by existing statutes and amendments thereto, notwithstanding any other water quality standards or regulations.

3. A water supply which meets all of the following requirements:

a. consists only of distribution and storage facilities;

b. obtains all of its water from, but is not owned or operated by a public water supply to which such regulations apply;

c. does not sell water to any person; and

d. is not a carrier which conveys passengers in intrastate commerce,

shall not be a public water supply for the purpose of rules 7 MCAR SS 1.145-1.149, inclusive.

4395-99

7 MCAR S 1.146 Maximum contaminant levels. The following levels shall be the enforceable maximum contaminant levels for all public water supplies in the state.

A. Microbiological. The maximum contaminant levels for coliform bacteria, applicable to both community and non-community water supplies, are as follows:

1. When the membrane filter technique pursuant to 7 MCAR S 1.147 B.1.a. is used, the number of coliform bacteria shall not exceed any of the following:

a. One per 100 milliliters as the arithmetic mean of all samples examined per compliance period pursuant to 7 MCAR S 1.147 B.2. or B.3., except that systems required to take ten or fewer samples per month may exclude one positive routine sample per month from the monthly calculation if:

(1) The commissioner determines and indicates in writing to the public water supply that no unreasonable risk to health existed, after having considered the following factors:

(a) The system provided and had maintained an active disinfectant residual in the distribution system;

(b) The potential for contamination as indicated by a sanitary survey; and

(c) The history of the water quality at the public water supply;

(2) The supplier initiates a check sample on each of two consecutive days from the same sampling point within 24 hours after notification that the routine sample is positive, and each of these check samples is negative; and

(3) The original positive routine sample is reported and recorded by the supplier pursuant to 7 MCAR S 1.149 A. and B.

The supplier shall report to the commissioner its compliance with the conditions specified in 1.a. and a summary of the corrective action taken to resolve the prior positive sample result. If a positive routine sample is not used for the monthly calculation, another routine sample must be analyzed for compliance purposes. This provision may be used only once during two consecutive compliance periods.

b. Four per 100 milliliters in more than one sample when less than 20 are examined per month; or

c. Four per 100 milliliters in more than five percent of the samples when 20 or more are examined per month.

2. a. When the fermentation tube method and 10 milliliter standard portions pursuant to 7 MCAR S 1.147 B.1.b. are used, coliform bacteria shall not be present in any of the following:

(1) More than ten percent of the portions in any month pursuant to 7 MCAR S 1.147 B.2. or B.3., except that systems required to take ten or fewer samples per month may exclude one positive routine sample resulting in one or more positive tubes per month from the monthly calculation if:

(a) The commissioner determines that the supply maintains an active disinfectant residual in the distribution system, or the commissioner determines in writing to the public water system that no unreasonable risk to health existed under the circumstances;

(b) The supplier initiates a check sample on each of two consecutive days from the sampling point within 24 hours after notification that the routine sample is positive, and each of these check samples is negative; and

(c) The original positive routine sample is reported and recorded by the supplier pursuant to 7 MCAR S 1.149 A. and B.

The supplier shall report to the commissioner its compliance with the conditions specified in 2.a.(1) and a summary of the action taken to resolve the prior positive sample result. If a positive routine sample is not used for the monthly calculation, another routine sample must be analyzed for compliance purposes. This provision may be used only once during two consecutive compliance periods.

(2) Three or more portions in more than one sample when less than 20 samples are examined per month; or

(3) Three or more portions in more than five percent of the samples when 20 or more samples are examined per month.

b. When the fermentation tube method and 100 milliliter standard portions pursuant to 7 MCAR S 1.147 B.1.b. are used, coliform bacteria shall not be present in any of the following:

(1) More than 60 percent of the portions in any month pursuant to 7 MCAR S 1.147 B.2. or B.3.; except that systems required to take ten or fewer samples per month may exclude one positive routine sample resulting in one or more positive tubes per month from the monthly calculation if:

(a) The commissioner determines that the supplier maintains an active disinfectant residual in the distribution system, or the commissioner determines in writing to the public water system that no unreasonable risk to health existed under the circumstances;

(b) The supplier initiates two consecutive daily check samples from the same sampling point within 24 hours after notification that the routine sample is positive, and each of these check samples is negative; and

(c) The original positive routine sample is reported and recorded by the supplier pursuant to 7 MCAR S 1.149 A. and B.

The supplier shall report to the state its compliance with the conditions specified in 2.b.(1) and a summary of the corrective action taken to resolve the prior positive sample result. If a positive routine sample is not used for the monthly calculation, another routine sample must be analyzed for compliance purposes. This provision may be used only once during two consecutive compliance periods.

(2) Five portions in more than one sample when less than five samples are examined per month; or,

(3) Five portions in more than 20 percent of the samples when five or more samples are examined per month.

3. For community or non-community supplies that are required to sample at a rate of less than four per month, compliance with 1. or 2. shall be based upon sampling during a three-month period, except that, at the discretion of the commissioner compliance may be based upon sampling during a one-month period.

4. If an average maximum contaminant level violation is caused by a single sample maximum contaminant level violation, then the case shall be treated as one violation with respect to the public notification requirements of 7 MCAR S 1.149 D.

B. Turbidity. The maximum contaminant levels for turbidity are applicable to both community and non-community water supplies using surface water sources in whole or in part. The maximum contaminant levels for turbidity in drinking water, measured at a representative entry point(s) to the distribution system, are:

1. One turbidity unit (t.u.) rounded off to the nearest whole number, as determined by a monthly average pursuant to 7 MCAR S 1.147 C.

2. Five turbidity units based on an average for two consecutive days, pursuant to 7 MCAR S 1.147 C.

3. A variance or exemption may be granted according to the procedure described in 7 MCAR S 1.148, to permit the supplier to provide water which contains five or less turbidity units, if the supplier can demonstrate to the commissioner that the higher turbidity does not do any of the following:

a. interfere with disinfection;

b. prevent maintenance of an effective disinfectant agent throughout the distribution system; or

c. interfere with microbiological determinations.

C. Inorganics.

1. The following are the maximum contaminant levels for inorganic chemicals applicable to community water supplies:

Contaminant	Level, milligrams per liter
Arsenic	0.05
Barium	1.
Cadmium	0.010
Chromium	0.05
Fluoride	2.2
Lead	0.05
Mercury	0.002
Nitrate (as N)	10.
Selenium	0.01
Silver	0.05

2. Compliance with maximum contaminant levels for inorganic chemicals shall be calculated in accordance with 7 MCAR S 1.147 D.3.-6.

3. The maximum contaminant level for nitrate listed in 1. also applies to non-community water supplies, except that a nitrate level not in excess of 20 milligrams per liter may be allowed in a non-community water supply if the supplier demonstrates to the satisfaction of the commissioner that:

a. The water will not be available to children under six months of age;

b. There will be continuous posting of the fact that nitrate levels exceed 10 milligrams per liter and the potential health effects of exposure;

c. Local public health authorities and the commissioner will be notified annually of nitrate levels that exceed 10 milligrams per liter; and

d. No adverse health effects shall result.

D. Organics. The following are the maximum contaminant levels for organic chemicals. They apply only to community water supplies. Compliance with maximum contaminant levels for organic chemicals is calculated pursuant to 7 MCAR S 1.147 E.2.-4.

	Level, milligrams per liter
1. Chlorinated hydrocarbons:	
Endrin (1,2,3,4,10, 10-hexachloro-6, 7-epoxy-1, 4, 4a,5,6,7,8,8a-octa-hydro-1,4-endo, endo-5,8 - dimethano-naphthalene).	0.0002
Lindane (1,2,3,4,5,6-hexachloro-cyclohexane, gamma isomer).	0.004
Methoxychlor (1,1,1-Trichloro 2,2 - bis [p-methoxyphenyl] ethane).	0.1
Toxaphene ($C_{10}H_{10}Cl_8$-Technical chlorinated camphene, 67-69 percent chlorine).	0.005
2. Chlorophenoxys:	
2,4-D, (2,4-Dichlorophenoxyacetic acid).	0.1
2,4,5-TP Silvex (2,4,5-Trichloro-phenoxypropionic acid).	0.01

E. Radiological. Maximum contaminant levels for radiological materials shall apply only to community water supplies.

1. Maximum contaminant levels for radium-226, radium-228, and gross alpha particle radioactivity:

a. Combined radium-226 and radium-228—5 pCi/1.

3. The maximum contaminant level for total trihalomethane is 0.10 milligrams per liter. This maximum contaminant level applies only to public water supplies which serve a population of 10,000 or more persons, and which add a disinfectant (oxidant) to the water in any part of the drinking water treatment process. Compliance with the maximum contaminant level for total trihalomethane shall be calculated in accordance with 7 MCAR S 1.147 E.5.

E. Radiological. Maximum contaminant levels for radiological materials shall apply only to community water supplies.

1. Maximum contaminant levels for radium-226, radium-228, and gross alpha particle radioactivity:

a. Combined radium-226 and radium-228 - 5 pCi/l.

b. Gross alpha particle activity (including radium-226 but excluding radon and uranium) - 15 pCi/l.

2. Maximum contaminant levels for beta particle and photon radioactivity from manmade radionuclides:

a. The average annual concentration of beta particle and photon radioactivity from manmade radionuclides in drinking water shall not produce an annual dose equivalent to the total body or any internal organ greater than 4 millirem/year.

b. Except for the radionuclides listed in Table A, the concentration of manmade radionuclides causing 4 or more millirem total body or organ dose equivalents shall be calculated on the basis of a two liter per day drinking water intake using the 168 hour data listed in "Maximum Permissible Body Burdens and Maximum Permissible Concentration of Radionuclides in Air or Water for Occupational Exposure," NBS Handbook 69 as amended August 1963, U. S. Department of Commerce. If two or more radionuclides are present, the sum of their annual dose equivalent to the total body or to any organ shall not exceed 4 millirem/year.

Table A. - Average annual concentrations assumed to produce a total body or organ dose of 4 millirem/year.

Radionuclide	Critical Organ	pCi/l
Tritium	Total body	20,000
Strontium-90	Bone marrow	8

7385-99

7 MCAR S 1.147 Monitoring and analytical requirements.

A. In general.

1. It shall be the responsibility of the supplier of water to monitor the quality of the water in his supply, according to the sampling schedules and testing procedures prescribed in this rule. Where a supplier has the capability for on-site testing for turbidity and/or maintains a laboratory approved to test for coliform bacteria, such supplier shall follow the relevant procedures in the appropriate parts of this rule. If an approved on-site laboratory is not available, the supplier of water shall send his water samples to an appropriate approved testing laboratory, according to procedures prescribed by the commissioner. Such procedures shall be prescribed for each supplier, and shall include a description of the type of container to be used, the manner in which the container shall be handled and delivered to the laboratory, and the date by which a sample must be sent to the approved laboratory for testing.

2. The following terms, which are used in B.-L., shall have the meanings given them. The department will make available to the public any analytical method referenced in this rule if the method is not available for lending from a public library.

a. "EPA Chemical" means "Methods of Chemical Analysis of Water and Wastes," United States Environmental Protection

Agency, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268 (EPA-600/4-79-020), March 1979, available from ORD Publications, CERI, Environmental Protection Agency, Cincinnati, Ohio 45268. For approved analytical procedures for metals, the technique applicable to total metals must be used.

b. "Standard Methods" means "Standard Methods for the Examination of Water and Wastewater," 14th Edition, American Public Health Association, 1015 15th Street N.W., Washington, D.C. 20005.

c. "USGS 1979" means "Techniques of Water Resources Investigation of the United States Geological Survey," Chapter A-1, "Methods for Determination of Inorganic Substances in Water and Fluvial Sediments," Book 5, 1979 (Stock #024-001-03177-9, available from Superintendent of Documents, United States Government Printing Office, Washington, D.C. 20402).

d. "ASTM" means "Annual Book of ASTM Standards," Part 31 Water, 1979, American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103.

e. "USGS 1972" means "Techniques of Water Resources Investigation of the United States Geological Survey," Chapter A-3, "Methods of Analysis of Organic Substances in Water," Book 5, 1972 (Stock #2401-1227, available from Superintendent of Documents, United States Government Printing Office, Washington, D.C. 20402).

f. "EPA Microbiological" means "Microbiological Methods for Monitoring the Environment, Water and Wastes," United States Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio, 45268--EPA--600/8-78-017, December 1978 (available from ORD Publications, CERI, United States Environmental Protection Agency, Cincinnati, Ohio 45268).

g. "EPA Organochlorine Methods" means "Methods for Organochlorine Pesticides and Chlorophenoxy Acid Herbicides in Drinking Water and Raw Source Water," (available from ORD Publications, CERI, United States Environmental Protection Agency, Cincinnati, Ohio 45268).

B. Microbiological contaminant sampling and analytical requirements.

1. Analyses for coliform bacteria shall be made for the purpose of determining compliance with 7 MCAR S 1.146 A. Analyses shall be conducted in accordance with the analytical recommendations set forth in Standard Methods, Method 908A, Paragraphs 1, 2 and 3; or Method 908D, Table 908:I; or Method 909A; or EPA Microbiological Methods Part III, Section B 1.0 to 2.6.2, 2.7 to 2.7.2(c); or Part III, Section B 4.0 to 4.6.4(c), except that a standard sample size as referred to in a. and b. shall be employed. See A.2.b. and f. for complete title of reference sources.

a. The standard sample used in the membrane filter procedure shall be 100 milliliters;

b. The standard sample used in the 5 tube most probable number (MPN) procedure (fermentation tube method) shall be five times the standard portion. The standard portion is 10 milliliters if compliance is to be determined according to the maximum contaminant level prescribed in 7 MCAR S 1.146 A.2.a., and it is 100 milliliters if compliance is to be determined according to the maximum contaminant level prescribed in 7 MCAR S 1.146 A.2.b. The samples shall be taken at points which are representative of the conditions within the distribution system.

2. The supplier of water for a community water supply shall take samples to be analyzed for coliform density.

a. The samples shall be taken at regular time intervals, and in number proportionate to the population served by the supply. In no event shall the frequency be less than as set forth below:

Population served:	Minimum number of samples per month
25 to 1,000	1
1,001 to 2,500	2
2,501 to 3,300	3
3,301 to 4,100	4
4,101 to 4,900	5
4,901 to 5,800	6
5,801 to 6,700	7
6,701 to 7,600	8
7,601 to 8,500	9
8,501 to 9,400	10
9,401 to 10,300	11
10,301 to 11,100	12
11,101 to 12,000	13
12,001 to 12,900	14
12,901 to 13,700	15
13,701 to 14,600	16
14,601 to 15,500	17
15,501 to 16,300	18
16,301 to 17,200	19
17,201 to 18,100	20
18,101 to 18,900	21
18,901 to 19,800	22
19,801 to 20,700	23
20,701 to 21,500	24
21,501 to 22,300	25
22,301 to 23,200	26
23,201 to 24,000	27
24,001 to 24,900	28
24,901 to 25,000	29
25,001 to 28,000	30
28,001 to 33,000	35
33,001 to 37,000	40
37,001 to 41,000	45
41,001 to 46,000	50
46,001 to 50,000	55
50,001 to 54,000	60
54,001 to 59,000	65
59,001 to 64,000	70
64,001 to 70,000	75
70,001 to 76,000	80
76,001 to 83,000	85
83,001 to 90,000	90
90,001 to 96,000	95
96,001 to 111,000	100
111,001 to 130,000	110
130,001 to 160,000	120
160,001 to 190,000	130
190,001 to 220,000	140
220,001 to 250,000	150

250,001 to 290,000	160
290,001 to 320,000	170
320,001 to 360,000	180
360,001 to 410,000	190
410,001 to 450,000	200
450,001 to 500,000	210
500,001 to 550,000	220
550,001 to 600,000	230
600,001 to 660,000	240
660,001 to 720,000	250
720,001 to 780,000	260
780,001 to 840,000	270
840,001 to 910,000	280
910,001 to 970,000	290
970,001 to 1,050,000	300
1,050,001 to 1,140,000	310
1,140,001 to 1,230,000	320
1,230,001 to 1,320,000	330
1,320,001 to 1,420,000	340
1,420,001 to 1,520,000	350
1,520,001 to 1,630,000	360
1,630,001 to 1,730,000	370
1,730,001 to 1,850,000	380
1,850,001 to 1,970,000	390
1,970,001 to 2,060,000	400
2,060,001 to 2,270,000	410
2,270,001 to 2,510,000	420
2,510,001 to 2,750,000	430
2,750,001 to 3,020,000	440
3,020,001 to 3,320,000	450
3,320,001 to 3,620,000	460
3,620,001 to 3,960,000	470
3,960,001 to 4,310,000	480
4,310,001 to 4,690,000	490
4,690,001 or more	500

Such sampling shall begin on the effective date of these rules.

b. Based on a history of no coliform bacterial contamination and on a sanitary survey by the commissioner showing the water system to be supplied solely by a protected ground water source and free of sanitary defects, a community water supply serving 25 to 1,000 persons, with written permission from the commissioner, may reduce this sampling frequency, except that in no case shall it be reduced to less than one per quarter. Such permission may be withdrawn at any time if changed conditions warrant monthly sampling.

3. The supplier of water for a non-community water supply shall sample for coliform bacteria at least once in each calendar quarter during which the supply provides water to the public. Such sampling shall begin before June 24, 1979. If the commissioner determines, on the basis of a sanitary survey which includes a determination of compliance with the Minnesota Water Well Construction Code, 7 MCAR SS 1.210-1.224, that it is more appropriate for the supply to sample on a frequency other than quarterly, the commissioner shall impose a special sampling frequency. Such special frequency shall then be the frequency required under these rules and shall be confirmed or changed on the basis of subsequent surveys.

4. Whenever any coliform bacteria are found in a single standard sample, at least two consecutive daily check samples shall be collected and examined from the same sampling point.

a. Additional check samples shall be collected daily until the results obtained from at least two consecutive daily check samples show no coliform bacteria in the case of the 100 milliliter membrane filter portions, or show no positive tubes in the case of the 10 or 100 milliliter portions analyzed by the fermentation method.

b. The location at which the check samples were taken pursuant to paragraph B.4.a. of this rule shall not be eliminated from future sampling without approval of the commissioner.

5. The results from all coliform bacterial analyses performed pursuant to this rule, except those obtained from check samples as referred to in 7 MCAR S 1.147 B.4.a. and B.4.b. and special purpose samples as referred to in 7 MCAR S 1.147 B.8., shall be used to determine compliance with the maximum contaminant level for coliform bacteria as established in 7 MCAR S 1.146 A. Check samples shall not be included in calculating the total number of samples taken each month to determine compliance with 7 MCAR S 1.146 A.

6. When the presence of coliform bacteria in water taken from a particular sampling point has been confirmed by any check samples examined as directed in paragraph B.4.a. of this rule, the analytical laboratory shall notify the supplier and the commissioner within 24 hours.

7. As soon as a maximum contaminant level set forth in 7 MCAR S 1.146 A. is exceeded, the supplier of water shall report to the commissioner and notify the public as prescribed in 7 MCAR S 1.149 D.

8. Special purpose samples, such as those taken to determine whether disinfection practices following pipe placement, replacement, or repair have been sufficient, shall not be used to determine compliance with paragraphs B.2. and B.3. of this rule.

9. A supplier of water of either a community or non-community water supply may, with the approval of the commissioner and based upon a sanitary survey, substitute the use of free chlorine residual monitoring for not more than 75 percent of the samples required to be taken by 7 MCAR S 1.147 B.2. and B.3. A supplier of water who is allowed to substitute chlorine residual sampling must take such samples at points which are representative of the conditions within the distribution system at the frequency of at least four for each substituted microbiological sample required to be taken by 7 MCAR S 1.147 B.2. and B.3. There shall be at least daily determinations of chlorine residual. When the supplier of water exercises the option of substituting chlorine residual samples, he shall maintain no less than 0.2 mg/l free chlorine throughout the public water distribution system. When a particular sampling point has been shown to have a free chlorine residual less than 0.2 mg/l, the water at that location shall be retested as soon as practicable and in any event within one hour. If the original analysis is confirmed, this fact shall be reported to the commissioner within 48 hours. Also, if the analysis is confirmed, a sample for coliform bacterial analysis must be collected from that sampling point as soon as practicable and preferably within one hour, and the results of such analysis reported to the commissioner within 48 hours. Analyses for residual chlorine shall be made in accordance with "Standard Methods for the Examination of Water and Wastewater," 13th Edition, pp. 129-132. Compliance with the maximum contaminant levels for coliform shall be determined on the monthly mean or quarterly mean basis specified in 7 MCAR S 1.146 A. including those samples taken as a result of failure to maintain the required chlorine residual level. The commissioner may withdraw his or her approval of the use of chlorine residual substitution at any time.

C. Turbidity sampling and analytical requirements.

1. a. All public water supplies, whether community or non-community, which use water obtained in whole or in part from surface sources must be sampled for turbidity. Such samples shall be taken by suppliers at representative points of entry into the water distribution system at least once per day, for the purpose of making turbidity measurements to determine compliance with 7 MCAR S 1.146 B.

b. The commissioner may reduce the sampling frequency for a non-community water supply if he determines that this reduced sampling frequency will not pose a risk to the public health and notifies the non-community water supply of this determination in writing. Such a reduction may be granted only if the non-community water supply practices disinfection and maintains an active disinfectant residual in the distribution system.

c. The measurement shall be made by the Nephelometric Method in accordance with the recommendations set forth in Standard Methods or EPA Chemical, Nephelometric Method,

180.1.1., as further described in A.2.a. and A.2.b.

d. Sampling by community water supplies shall begin before the effective date of these rules. Sampling by non-community water supplies shall begin before June 24, 1979.

2. If the result of a turbidity analysis indicates that the maximum allowable limit has been exceeded, the sampling and measurement shall be confirmed by resampling as soon as practicable and preferably within one hour. If the repeat sample confirms that the maximum allowable limit has been exceeded, the supplier of water shall report to the commissioner within 48 hours. The repeat sample shall be the sample used for the purpose of calculating the monthly average. If the monthly average of the daily samples exceeds the maximum allowable limit, or if the average of two samples taken on consecutive days exceeds five turbidity units, the supplier of water shall report to the commissioner as prescribed in 7 MCAR S 1.149 B. and shall notify the public as prescribed in 7 MCAR S 1.149 D.

D. Inorganic chemical contaminant sampling and analytical requirements.

1. Analyses for the purpose of determining compliance with 7 MCAR S 1.146 C. are required as follows:

a. Analyses for all community water supplies utilizing surface water sources shall be completed before June 24, 1978. These analyses shall be repeated at yearly intervals.

b. Analyses for all community water supplies utilizing only ground water sources shall be completed before June 24, 1979. These analyses shall be repeated at three year intervals.

c. For non-community water supplies, whether supplied by surface or ground water sources, analyses for nitrate shall be completed before June 24, 1979. These analyses shall be repeated at least once every five years after the initial determination. The commissioner may order more frequent sampling depending upon the geological formation, the level of nitrate present and the size of the population being served.

2. For the initial analyses required by paragraph D.1. of this rule, data for surface waters acquired within one year prior to June 24, 1977 and data for ground waters acquired within three years prior to June 24, 1977 may be substituted at the discretion of the commissioner.

3. Analyses conducted to determine compliance with 7 MCAR S 1.146 C. shall be made in accordance with a.-j. See A.2. for complete title of reference sources.

a. Arsenic: EPA Chemical, Method 206.2, or Method 206.3, or Method 206.4; or Standard Methods, Method 404-A and 404-B(4), or Method 301.A VII; or USGS 1979, Method I-1062-78; or ASTM, Method D-2972-78A, or D-2972-78B.

b. Barium: EPA Chemical, Method 208.1, or 208.2; or Standard Methods, Method 301-A IV.

c. Cadmium: EPA Chemical, Method 213.1, or 213.2; or Standard Methods, Method 301-A II or III; or ASTM, Method 3447-78A.

d. Chromium: EPA Chemical, Method 218.1, or 218.2; or Standard Methods, Method 301-A II or III; or ASTM, Method D-1687-77D.

e. Fluoride: EPA Chemical, Method 340.1 or 340.2, or 340.3; or Standard Methods, Method 414-A, or 414-B, or 414-C, or 603; or USGS 1979, Method I-3325-78; or ASTM, Method D-1179-72A, or D-1179-72B; or Industrial Method #129-71W, "Fluoride in Water and Wastewater," Technicon Industrial Systems, Tarrytown, New York 10591, December 1972; or Industrial Method #380-75WE, Automated Electrode Method, "Fluoride in Water and Wastewater," Technicon Industrial Systems, Tarrytown, New York, February 1976.

f. Lead: EPA Chemical, Method 239.1 or 239.2; or Standard Methods, Method 301-A II or III; or ASTM, Method D-3559-79A or B.

g. Mercury: EPA Chemical, Method 245.1 or 245.2; or Standard Methods, Method 301-A VI; or ASTM, Method D-3223-79.

h. Nitrate: EPA Chemical, Method 352.1, or 353.1 or 353.2 or 353.3; or Standard Methods, Method 419-D, or 419-C, or 605; or ASTM, Method D-992-71, or D-3867-79A or D-3867-79B.

i. Selenium: EPA Chemical, Method 270.2 or 270.3; or Standard Methods, Method 301-A VII; or USGS 1979, Method I-1667-78; or ASTM, Method D-3859-79.

j. Silver: EPA Chemical, Method 272.1 or 272.2; or Standard Methods, Method 301-A II.

4. If the result of an analysis made pursuant to paragraph D.1. of this rule indicates that the level of any contaminant listed in 7 MCAR S 1.146 C. exceeds the maximum contaminant level, the supplier of water shall report to the commissioner within seven days from the time he receives the results and he shall collect and submit for analysis three additional samples taken at the same sampling point within one month from the time the commissioner is notified.

5. When the average of four analyses made pursuant to paragraph D.4. of this rule, rounded to the same number of significant figures as the maximum contaminant level for the substance in question, exceeds the maximum contaminant level prescribed in 7 MCAR S 1.146 C., the supplier of water shall notify the commissioner within 48 hours pursuant to 7 MCAR S 1.149 B. and give notice to the public pursuant to 7 MCAR S 1.149 D. Monitoring after public notification shall be at a frequency designated by the commissioner and shall continue

until the maximum contaminant level has not been exceeded in two successive samples or until a new monitoring schedule prescribed as a condition to a variance, exemption, or enforcement action shall become effective.

6. The provisions of paragraphs D.4. and D.5. of this rule notwithstanding, compliance with the maximum contaminant level for nitrate shall be determined on the basis of the mean of two analyses. When a level exceeding the maximum contaminant level for nitrate is found, a second analysis shall be initiated within 24 hours, and if the mean of the two analyses exceeds the maximum contaminant level, the supplier of water shall report his findings to the commissioner within 48 hours pursuant to 7 MCAR S 1.149 B. and shall notify the public pursuant to 7 MCAR S 1.149 D.

E. Organic chemical contaminant sampling and analytical requirements.

1. An analysis of substances for the purpose of determining compliance with 7 MCAR S 1.146 D. shall be made as follows:

a. For all community water supplies utilizing surface water sources, analyses shall be completed before June 24, 1978. Samples analyzed shall be collected during the period of the year designated by the commissioner as the period when contamination by pesticides is most likely to occur. These analyses shall be repeated at intervals specified by the commissioner but in no event less frequently than at three year intervals.

b. For community water supplies utilizing only ground water sources, analyses shall be completed by those supplies specified by the commissioner.

2. Analytical requirements for compliance with 7 MCAR S 1.146 D.1. and D.2. shall be as described in a. and b.

a. Analyses made to determine compliance with 7 MCAR S 1.146 D.1. shall be made in accordance with EPA Organochlorine Methods; or Standard Methods, Method 509-A; or ASTM, Method D-3086-79; or USGS 1972, "Gas Chromatographic Methods for Analysis of Organic Substances in Water," Chapter A-3. See 7 MCAR S 1.147 A.2. for complete title of reference sources.

b. Analyses made to determine compliance with 7 MCAR S 1.146 D.2. shall be conducted in accordance with EPA Organochlorine Methods; or Standard Methods, Method 509-B; or ASTM, Method D-3478-79; or USGS 1972, "Gas Chromatographic Methods for Analysis of Organic Substances in Water," Chapter A-3. See 7 MCAR S 1.147 A.2. for complete title of reference sources.

3. If the result of an analysis made pursuant to paragraph E.1. of this rule indicates that the level of any

contaminant listed in 7 MCAR S 1.146 D. exceeds the maximum contaminant level, the supplier of water shall report to the commissioner within seven days and collect and submit for analysis three additional samples taken at the same sampling point within one month from the time the commissioner is notified.

4. When the average of four analyses made pursuant to paragraph D.3. of this rule, rounded to the same number of significant figures as the maximum contaminant level for the substance in question, exceeds the maximum contaminant level, the supplier of water shall report to the commissioner pursuant to 7 MCAR S 1.149 B. and give notice to the public pursuant to 7 MCAR S 1.149 D. Monitoring after public notification shall be at a frequency designated by the commissioner and shall continue until the maximum contaminant level has not been exceeded in two successive samples or until a monitoring schedule as a condition to a variance or exemption or enforcement action shall become effective.

5. Total trihalomethanes sampling, analytical and other requirements shall be as described in a.-i.

a. Community water supplies which serve a population of 10,000 or more individuals and which add a disinfectant (oxidant) to the water in any part of the drinking water treatment process shall analyze for total trihalomethanes in accordance with this section. For systems serving 75,000 or more individuals, sampling and analyses shall begin not later than the effective date of this rule. For systems serving 10,000 to 74,999 individuals, sampling and analyses shall begin not later than January 1, 1983. For the purpose of this section, the minimum number of samples required to be taken by the system shall be based on the number of treatment plants used by the system, except that multiple wells drawing raw water from a single aquifer are considered one treatment plant for determining the minimum number of samples. All samples taken within an established frequency shall be collected within a 24-hour period.

b. For all community water supplies utilizing surface water sources in whole or in part, and for all community water supplies utilizing only ground water sources that have not been determined by the commissioner to qualify for the monitoring requirements of e. and f., analyses for total trihalomethanes shall be performed at quarterly intervals on at least four water samples for each treatment plant used by the supply. At least 25 percent of the samples shall be taken at locations within the distribution system reflecting the maximum residence time of the water in the system. The remaining 75 percent shall be taken at representative locations in the distribution system, taking into account number of persons served, different sources of water and different treatment methods employed. The results of all analyses per quarter shall be arithmetically averaged and reported to the commissioner within 30 days of the supply's receipt of such results. All samples collected shall be used in

the computation of the average, unless the analytical results are invalidated for technical reasons. Sampling and analyses shall be conducted in accordance with the methods listed in h.

c. Upon the written request of a community water system, the monitoring frequency required by b. may be reduced by the commissioner to a minimum of one sample analyzed for total trihalomethanes per quarter taken at a point in the distribution system reflecting the maximum residence time of the water in the system, upon a written determination by the commissioner that the data from at least one year of monitoring in accordance with b. and local conditions demonstrate that total trihalomethane concentrations will be consistently below the maximum contaminant level.

d. If at any time during which the reduced monitoring frequency prescribed under c. applies, the results from any analysis exceed 0.10 milligrams per liter of total trihalomethanes and such results are confirmed by at least one check sample taken promptly after such results are received, or if the supply makes any significant change to its source of water or treatment program, the supply shall immediately begin monitoring in accordance with the requirements of b. and shall continue that monitoring for at least one year before the frequency may be reduced again.

e. Upon written request to the commissioner, a community water supply utilizing only ground water sources may seek to have the monitoring frequency required by b. reduced to a minimum of one sample for maximum total trihalomethane potential per year for each treatment plant used by the supply taken at a point in the distribution system reflecting maximum residence time of the water in the system. The supply shall submit to the commissioner the results of at least one sample analyzed for maximum total trihalomethane potential for each treatment plant used by the supply taken at a point in the distribution system reflecting the maximum residence time of the water in the system. The supply's monitoring frequency may only be reduced upon a written determination by the commissioner that, based upon the data submitted by the supply, the supply has a maximum total trihalomethane potential of less than 0.10 milligrams per liter and that, based upon an assessment of the local conditions of the supply, the supply is not likely to approach or exceed the maximum contaminant level for total trihalomethanes. All samples collected shall be used for determining whether the supply must comply with the monitoring requirements of b.-d., unless the analytical results are invalidated for technical reasons. Sampling and analyses shall be conducted in accordance with the methods listed in h.

f. If at any time during which the reduced monitoring frequency prescribed under e. applies, the results from any analysis taken by the supply for maximum total trihalomethane potential are equal to or greater than 0.10 milligrams per liter, and those results are confirmed by at least one check sample taken promptly after such results are received, the

supply shall immediately begin monitoring in accordance with the requirements of b.-d. The monitoring shall continue for at least one year before the frequency may be reduced again. In the event of any significant change to the supply's raw water or treatment program, the supply shall immediately analyze an additional sample for maximum total trihalomethane potential taken at a point in the distribution system reflecting maximum residence time of the water in the system for the purpose of determining whether the supply must comply with the monitoring requirements of b.-d.

g. Compliance with 7 MCAR S 1.146 D.3. shall be determined based on a running annual average of quarterly samples collected by the supply as prescribed in b. and c. If the average of samples covering any 12-month period exceeds the maximum contaminant level prescribed in 7 MCAR S 1.146 D.3., the supplier of water shall report to the state pursuant to 7 MCAR S 1.149 B. and notify the public pursuant to 7 MCAR S 1.149 D. Monitoring after public notification shall be at a frequency designated by the commissioner and shall continue until a monitoring schedule as a condition to a variance, exemption or enforcement action shall become effective.

h. Sampling and analyses made pursuant to this section shall be conducted by one of the following methods:

(1) "The Analysis of Trihalomethanes in Finished Waters by the Purge and Trap Method," Method 501.1, Environmental Monitoring and Support Laboratory, United States Environmental Protection Agency, Cincinnati, Ohio 45268.

(2) "The Analysis of Trihalomethanes in Drinking Water by Liquid/Liquid Extraction," Method 501.2, Environmental Monitoring and Support Laboratory, United States Environmental Protection Agency, Cincinnati, Ohio 45268.

Samples for total trihalomethane shall be dechlorinated upon collection to prevent further production of trihalomethanes, according to the procedures described in (1) and (2). Samples for maximum total trihalomethane potential should not be dechlorinated, and should be held for seven days at 25 degrees Celsius prior to analysis, according to the procedures described in (1) and (2).

i. Before a community water supply makes any significant modifications to its existing treatment process for the purposes of achieving compliance with 7 MCAR S 1.146 C.3., such supply must submit to the commissioner and obtain the commissioner's approval of a detailed plan setting forth its proposed modification and those safeguards that it will implement to ensure that the bacteriological quality of the drinking water served by such supply will not be adversely affected by such modification. Each supply shall comply with the provisions set forth in the plan as approved. At a minimum, an approved plan shall require the system modifying its disinfection practice to:

(1) Evaluate the water supply for sanitary defects and evaluate the source water for biological quality;

(2) Evaluate its existing treatment practices and consider improvements that will minimize disinfectant demand and optimize finished water quality throughout the distribution system;

(3) Provide baseline water quality survey data of the distribution system. Such data shall include the results from monitoring for coliform and fecal coliform bacteria, standard plate counts at 35 degrees Celsius and 20 degrees Celsius, phosphate, ammonia nitrogen and total organic carbon;

(4) Conduct additional monitoring to assure continued maintenance of optimal biological quality in finished water, for example, when chloramines are introduced as disinfectants or when pre-chlorination is being discontinued; and

(5) Demonstrate an active disinfectant residual throughout the distribution system at all times during and after the modification.

F. Radiological contaminant sampling and analytical requirements for community water supplies.

1. Monitoring requirements for gross alpha particle activity, radium-226 and radium-228;

a. Initial sampling to determine compliance with 7 MCAR S 1.146 E.1. shall begin before June 24, 1979 and the analysis shall be completed before June 24, 1980. Compliance shall be based on the analysis of an annual composite of four consecutive quarterly samples or the average of the analyses of four samples obtained at quarterly intervals.

(1) A gross alpha particle activity measurement may be substituted for the required radium-226 and radium-228 analyses provided that the measured gross alpha particle activity does not exceed 5 pCi/l at a confidence level of 95 percent (1.65 σ where σ is the standard deviation of the net counting rate of the sample).

(2) In localities where radium-228 may be present in drinking water, analyses for radium-226 and/or radium-228 are required when the gross alpha particle activity exceeds 2 pCi/l at a confidence level of 95 percent.

(3) When the gross alpha particle activity exceeds 5 PCi/1, the same or an equivalent sample shall be analyzed for radium-226. If the concentration of radium-226 exceeds 3 pCi/l, the same or an equivalent sample shall be analyzed for radium-228.

b. Suppliers of water shall monitor at least once

every four years following the procedure required by paragraph F.1.a. of this rule. When an annual record taken in conformance with paragraph F.1.a. has established that the average annual concentration is less than half the maximum contaminant levels established by 7 MCAR S 1.146 E.1., analysis of a single sample may be substituted for the quarterly sampling procedure required by 7 MCAR S 1.147 F.1.a.

(1) More frequent monitoring shall be conducted when ordered by the commissioner in the vicinity of mining or other operations which may contribute alpha particle radioactivity to either surface or ground water sources of drinking water.

(2) A supplier of water shall monitor in conformance with paragraph F.1.a. within one year of the introduction of a new water source for a community water supply. More frequent monitoring shall be conducted when ordered by the commissioner in the event of possible contamination or when changes in the distribution system or treatment process occur which may increase the concentration of radioactivity in finished water.

(3) A community water supply using two or more sources having different concentrations of radioactivity shall monitor source water, in addition to water from a free-flowing tap, when ordered by the commissioner.

(4) Monitoring for compliance with 7 MCAR S 1.146 E.1. after the initial period need not include radium-228 except when required by the commissioner, provided that the average annual concentration of radium-228 has been assayed at least once using the quarterly sampling procedure required by 7 MCAR S 1.147 F.1.a.

(5) Suppliers of water shall conduct annual monitoring of any community water supply in which the radium-226 concentration exceeds 3 pCi/1, when ordered by the commissioner.

c. If the average annual maximum contaminant level for gross alpha particle activity or total radium as set forth in 7 MCAR S 1.146 E.1. is exceeded, the supplier of a community water system shall give notice to the commissioner pursuant to 7 MCAR S 1.149 B. and notify the public as required by 7 MCAR S 1.149 D. Monitoring at quarterly intervals shall be continued until the annual average concentration no longer exceeds the maximum contaminant level or until a monitoring schedule as a condition to a variance, exemption or enforcement action shall become effective.

2. Monitoring requirements for manmade radioactivity in community water supplies using surface sources and serving more than 100,000 persons, and such other community water supplies as are designated by the commissioner;

a. Before June 24, 1979, such supplies shall be monitored for compliance with 7 MCAR S 1.146 E.2. by analysis of a composite of four consecutive quarterly samples or analysis of

four quarterly samples. Compliance with 7 MCAR S 1.146 E.2. may be assumed without further analysis if the average annual concentration of gross beta particle activity is less than 50 pCi/l and if the average annual concentrations of tritium and strontium-90 are less than those listed in Table A, provided that if both radio nuclides are present the sum of their annual dose equivalents to bone marrow shall not exceed 4 millirem/year.

(1) If the gross beta particle activity exceeds 50 pCi/l, an analysis of the sample must be performed to identify the major radioactive constituents present and the appropriate organ and total body doses shall be calculated to determine compliance with 7 MCAR S 1.146 E.2.

(2) Suppliers of water shall conduct additional monitoring, as ordered by the commissioner, to determine the concentration of manmade radioactivity in principal watersheds designated by the commissioner.

b. At the discretion of the commissioner suppliers of water utilizing only ground waters may be required to monitor for manmade radioactivity.

c. After the initial analysis required by 7 MCAR S 1.147 F.2.a., these suppliers shall monitor at least every four years following the procedure given in paragraph F.2.a.

d. Before June 24, 1979 the supplier of any community water supply which is found by the commissioner to be utilizing waters contaminated by effluents from nuclear facilities shall initiate quarterly monitoring for gross beta particle and iodine-131 radioactivity and annual monitoring for strontium-90 and tritium.

(1) Quarterly monitoring for gross beta particle activity shall be based on the analysis of monthly samples. If the gross beta particle activity in a sample exceeds 15pCi/l, the same or an equivalent sample shall be analyzed for strontium-89 and cesium-134. If the gross beta particle activity exceeds 50 pCi/l, an analysis of the sample must be performed to identify the major radioactive constituents present and the appropriate organ and total body doses shall be calculated to determine compliance with 7 MCAR S 1.146 E.2.

(2) For iodine-131, a composite of five consecutive daily samples shall be analyzed once each quarter. As ordered by the commissioner, more frequent monitoring shall be conducted when iodine-131 is identified in the finished water.

(3) Annual monitoring for strontium-90 and tritium shall be conducted by means of the analysis of four quarterly samples.

(4) The commissioner may allow the substitution of environmental surveillance data taken in conjunction with a nuclear facility for direct monitoring of manmade radioactivity

by the supplier of water where the commissioner determines such data is applicable to a particular community water supply.

e. If the average annual maximum contaminant level for manmade radioactivity set forth in 7 MCAR S 1.146 E.2. is exceeded, the supplier of a community water supply shall give notice to the commissioner pursuant to 7 MCAR S 1.149 B. and to the public as required by 7 MCAR S 1.149 D. Monitoring at monthly intervals shall be initiated and continued until the concentration no longer exceeds the maximum contaminant level or until a monitoring schedule as a condition to a variance, exemption or enforcement action shall become effective.

3. Analytical methods.

a. Measurements made to determine compliance with 7 MCAR S 1.146 E. shall be made in accordance with the following methods:

(1) Gross Alpha and Beta - Section 302 "Gross Alpha and Beta Radioactivity in Water" Standard Methods for the Examination of Water and Wastewater, 13th Edition, American Public Health Association, New York, N.Y., 1975.

(2) Total Radium - Section 304 "Radium in Water by Precipitation" Ibid.

(3) Radium-226 - Section 305 "Radium-226 by Radon in Water" Ibid.

(4) Strontium-89, 90 - Section 303 "Total Strontium and Strontium-90 in Water" Ibid.

(5) Tritium - Section 306 "Tritium in Water" Ibid.

(6) Cesium-134 - ASTM D-2459 "Gamma Spectrometry in Water," 1975 Annual Book of ASTM Standards, Water and Atmospheric Analysis, Part 31, American Society for Testing and Materials, Philadelphia, PA (1975).

(7) Uranium - ASTM D-2907 "Microquantities of Uranium in Water by Fluorometry," Ibid.

When the identification and measurement of radionuclides other than those listed above is required, the following references are to be used, except in cases where alternative methods have been approved in accordance with 7 MCAR S 1.147 G.

(8) Procedures for Radiochemical Analysis of Nuclear Reactor Aqueous Solutions, H. L. Krieger and S. Gold, EPA-R4-73-014. USEPA, Cincinnati, Ohio, May 1973.

(9) HASL Procedure Manual, Edited by John H. Harley. HASL 300, ERDA Health and Safety Laboratory, New York, N.Y., 1973.

b. For the purpose of monitoring radioactivity concentrations in drinking water, the required sensitivity of the radioanalysis is defined in terms of a detection limit. The detection limit shall be that concentration which can be counted with a precision of plus or minus 100 percent at the 95 percent confidence level (1.96 σ where σ is the standard deviation of the net counting rate of the sample).

(1) To determine compliance with 7 MCAR S 1.146 E.1.a., the detection limit shall not exceed 1 pCi/l. To determine compliance with 7 MCAR S 1.146 E.1.b., the detection limit shall not exceed 3 pCi/l.

(2) To determine compliance with 7 MCAR S 1.146 E.2. the detection limits shall not exceed the concentrations listed in Table B.

Table B - Detection Limits for Manmade Beta Particle and Photon Emitters.

Radionuclide	Detection Limit
Tritium	1,000 pCi/l
Strontium-89	10 pCi/l
Strontium-90	2 pCi/l
Iodine-131	1 pCi/l
Cesium-134	10 pCi/l
Gross beta	4 pCi/l
Other radionuclides	1/10 of the applicable limit

c. To judge compliance with the maximum contaminant levels listed in 7 MCAR S 1.146 E.1. and E.2., averages of data shall be used and shall be rounded to the same number of significant figures as the maximum contaminant level for the substance in question.

G. Alternative analytical techniques. With the written permission of the commissioner, an alternative analytical technique may be employed. An alternative technique shall be acceptable only if it is substantially equivalent to the prescribed test in both precision and accuracy as it relates to the determination of compliance with any maximum contaminant level. The use of the alternative analytical technique shall not decrease the frequency of monitoring required by this rule.

H. Approved laboratories. For the purpose of determining compliance with A.-F., samples may be considered only if they have been analyzed by a laboratory approved by the commissioner, except that measurements for temperature, pH, turbidity, and free chlorine residual may be performed by any person acceptable to the commissioner.

I. Monitoring consecutive systems. When a public water supply provides water to one or more other public water supplies, the monitoring requirements imposed by 7 MCAR S 1.147 A.-F. may be superseded by a special monitoring schedule prescribed by the commissioner. Such a special monitoring

schedule may be imposed to the extent that the interconnection justifies treating them as a single supply for monitoring purposes, and is enforceable just as any other monitoring requirement imposed by these rules. Such a special monitoring schedule shall include an agreement which names the supply or supplies responsible for monitoring, reporting, giving public notice, and maintaining records.

J. The commissioner may impose additional monitoring requirements if the results of a sanitary survey indicate that a public health risk may exist. The commissioner may impose a requirement for more frequent sampling if the analytical results of water tests show that a previously measured contaminant is approaching a maximum contaminant level as prescribed in 7 MCAR S 1.146.

K. Special monitoring for sodium.

1. Community public water supplies shall collect and analyze one sample per treatment plant at the entry point of the distribution system for the determination of sodium concentration levels. Samples must be collected and analyzed annually for supplies utilizing surface water sources in whole or in part, and at least every three years for supplies utilizing solely ground water sources. The minimum number of samples required to be taken by the supply shall be based on the number of treatment plants used by the supply, except that multiple wells drawing raw water from a single aquifer will be considered one treatment plant for determining the minimum number of samples.

2. The supplier of water shall report the results of the analyses for sodium within the first ten days of the month following the month in which the sample results were received or within the first ten days following the end of the required monitoring period as stipulated by the commissioner whichever of these is first. If more than annual sampling is required, the supplier shall report the average sodium concentration within ten days of the month following the month in which the analytical results of the last sample used for the annual average were received.

3. Analyses for sodium shall be performed by the flame photometric method in accordance with the procedures described in Standard Methods, Method 320A; or EPA Chemical, Method 273.1 or 273.2; or ASTM, Method D-1428-64A. See 7 MCAR S 1.147 A.2. for complete title of reference sources.

L. Special monitoring for corrosivity characteristics.

1. Community public water supplies shall collect samples from a representative entry point to the water distribution system for the purpose of analysis to determine the corrosivity characteristics of the water.

a. The supplier shall collect for analysis for each

treatment plant using surface water sources in whole or in part, one sample during midwinter and one sample during midsummer. The supplier of the water shall collect for analysis one sample per treatment plant for each treatment plant using ground water sources. The minimum number of samples required to be taken by the supply shall be based on the number of treatment plants used by the supply, except that multiple wells drawing raw water from a single aquifer may be considered one treatment plant for determining the minimum number of samples.

b. Determination of the corrosivity characteristics of the water shall include measurement of pH, calcium hardness, alkalinity, temperature, total dissolved solids or total filterable residue, and calculation of the Langelier Index in accordance with 3. The determination of corrosivity characteristics shall only include one round of sampling. One round of sampling consists of two samples per treatment plant for surface water and one sample per treatment plant for ground water sources.

2. The supplier of water shall report the results of the analyses for the corrosivity characteristics within the first ten days of the month following the month in which the sample results were received. If more frequent sampling is required the supplier can accumulate the data and report each value within ten days of the month following the month in which the analytical results of the last sample were received.

3. Analyses conducted to determine the corrosivity of the water shall be made in accordance to the methods described in a.-f. See 7 MCAR S 1.147 A.2. for complete title of reference sources.

a. Langelier Index - Standard Methods, Method 203.

b. Total Filterable Residue - Standard Methods, Method 208B; or EPA Chemical, Method 160.1.

c. Temperature - Standard Methods, Method 212.

d. Calcium - Standard Methods, Method 306C; or ASTM, Method D-1126-67B.

e. Alkalinity - Standard Methods, Method 403; or ASTM, Method D-1067-70B; or EPA Chemical, Method 310.1.

f. pH - Standard Methods, Method 424; or EPA Chemical, Method 150.1; or ASTM, Method D-1293-78 A or B.

4. Community water supplies shall identify whether the following construction materials are present in their distribution system and report to the commissioner the existence of any of the following materials:

a. Lead from piping, solder, caulking, interior lining of distribution mains, alloys, and home plumbing;

b. Copper from piping and alloys, service lines, and home plumbing;

c. Galvanized piping, service lines, and home plumbing;

d. Ferrous piping materials such as cast iron and steel;

e. Asbestos cement pipe;

f. Vinyl-lined asbestos cement pipe; or

g. Coal tar lined pipes and tanks.

4395-99

7 MCAR S 1.148 Variances and exemptions.

A. Variances.

1. The commissioner may grant one or more variances from a maximum contaminant level prescribed in 7 MCAR S 1.146 or from a treatment required by these rules, pursuant to authority granted in Laws of 1977, chapter 66, section 3(e), according to the procedure described below.

2. A supplier may request a variance whenever he determines that his supply is exceeding or will exceed a maximum contaminant level. A supplier who has not requested a variance or has not taken corrective action to bring his supply into compliance by the date specified in the notification of violation shall be subject to the penalties of Laws of 1977, chapter 66, section 3(e).

3. In deciding whether to grant a variance from a maximum contaminant level, the commissioner shall consider:

a. The availability and effectiveness of treatment methods for the contaminant for which the variance is requested; and

b. cost and other economic considerations such as implementing treatment, improving the quality of the source water or using an alternative source.

4. The commissioner may grant a variance from a maximum contaminant level upon finding that:

a. because of the characteristics of the raw water sources which are reasonably available to the supply, the supply cannot meet the requirements respecting the maximum contaminant levels prescribed in 7 MCAR S 1.146 despite the application of the best known and economically feasible technology for treatment or other means, and

b. the variance will not result in an unreasonable risk to health.

5. The commissioner may grant a variance from any required treatment upon finding that the supply has demonstrated that such treatment is not necessary to meet a maximum contaminant level or to protect the health of persons, because of the nature of the raw water source of the supply.

6. Application procedure. A request for a variance shall be submitted to the commissioner in writing and shall contain the following information:

a. the nature and duration of the variance being requested;

b. relevant analytical results of water quality sampling of the supply, including results of relevant tests conducted pursuant to the requirements of these rules;

c. for any request for a variance from a maximum contaminant level, the notice shall also contain:

(1) an explanation in full and evidence of the best available treatment;

(2) economic and legal factors relevant to the ability to comply;

(3) analytical results of raw water quality relevant to the variance request;

(4) a proposed compliance schedule, including the date each step toward compliance will be achieved. Such a schedule shall include as a minimum the following dates:

(a) a date by which arrangement for alternative raw water source or improvement of existing raw water source will be completed;

(b) a date for initiation of the connection of the alternative raw water source or improvement of existing raw water source;

(c) a date by which final compliance is to be achieved;

(5) a plan for the provision of safe drinking water in the case of an excessive rise in the contaminant level for which the variance is requested;

(6) a plan for interim control measures during the effective period of variance.

d. for any request for a variance from a required treatment, the notice shall include a statement that the supply will perform monitoring and other reasonable requirements prescribed by the commissioner as a condition to the variance;

e. such other information as the commissioner may require;

f. any information which the supplier believes is pertinent to the request.

7. Disposition of a request for a variance. Upon receipt of an application for a variance the commissioner shall initiate, within 90 days, the procedure for a contested case. Notice and opportunity for hearing shall be given according to Minnesota Statutes, chapter 15 (1976) and the rules of the office of hearing examiners.

8. The commissioner shall within one year after the variance is granted, impose a schedule for compliance with 7 MCAR SS 1.145-1.149, after notice and opportunity for hearing have been given.

9.a. A variance from a maximum contaminant level may be terminated by the commissioner when the supply comes into compliance with the applicable rule, and may be terminated by the commissioner upon a finding that the supply has failed to comply with any requirement of a final schedule imposed by the commissioner pursuant to this rule.

b. A variance from a required treatment may be terminated at any time upon a finding by the commissioner that the nature of the raw water source is such that the required treatment for which the variance was granted is necessary to protect the health of persons, or upon a finding by the commissioner that the supply has failed to comply with monitoring and other requirements prescribed as a condition to the granting of the variance.

10. A compliance schedule imposed by the commissioner pursuant to the grant of a variance shall be enforceable as if it were a rule of the commissioner.

B. Exemptions.

1. The commissioner may grant one or more exemptions from a maximum contaminant level prescribed in 7 MCAR S 1.146 or from a treatment required by these rules, pursuant to authority granted in Laws of 1977, chapter 66, section 3(e), according to the procedure described below.

2. A supplier may request an exemption whenever he determines that his supply is exceeding or will exceed a maximum contaminant level. A supplier who has not requested an exemption or has not taken corrective action to bring his supply into compliance by the date specified in the notification of violation shall be subject to the penalties of Laws of 1977, chapter 66, section 3(e)..

3. The commissioner may grant an exemption from a maximum contaminant level or from a required treatment:

a. after having considered the following:

(1) construction, installation, or modification of treatment equipment or systems;

(2) the time needed to put into operation a new treatment facility to replace an existing supply which is not in compliance;

(3) economic feasibility of compliance;

b. and upon finding that:

(1) due to compelling factors (which may include economic factors), the supply is unable to comply with such contaminant level or required treatment;

(2) the supply was in operation on the date on which such contaminant level or required treatment went into effect; and

(3) the granting of the exemption will not result in an unreasonable risk to health.

4. Application procedure. A request for an exemption shall be submitted to the commissioner in writing and shall contain the following information:

a. the nature and duration of the exemption being requested;

b. relevant analytical results of water quality sampling of the supply, including results of relevant tests conducted pursuant to the requirements of these rules;

c. an explanation of the compelling factors such as time or economic factors which prevent the supply from complying with a maximum contaminant level or required treatment on the effective date of the applicable standard;

d. a proposed compliance schedule, including the date when each step toward compliance will be achieved;

e. such other information as the commissioner may require;

f. any other information which the applicant believes is pertinent to the request.

5. Disposition of a request for an exemption. Upon receipt of an application for an exemption the commissioner shall initiate within 90 days, the procedure for a contested case. Notice and opportunity for hearing shall be given according to Minnesota Statutes, chapter 15 (1976) and the rules of the office of hearing examiners.

6. The commissioner shall within one year after the exemption is granted, impose a schedule for compliance with these rules after notice and opportunity for hearing have been given.

7. An exemption may be terminated by the commissioner when the supply comes into compliance with the applicable rule, and may be terminated by the board upon a finding by the commissioner that the supply has failed to comply with any requirement of a final schedule imposed pursuant to this rule.

8. Any compliance schedule issued pursuant to an exemption shall require compliance with these rules before January 1, 1981. Compliance with the requirements of revised federal regulations will have to be achieved within seven years of the date on which such federal regulations become effective.

9. If the supply which seeks the exemption has entered into an enforceable agreement to become a part of a regional system, as determined by the commissioner, the compliance schedule shall require compliance by the supply with each maximum contaminant level or required treatment prescribed by these rules before January 1, 1983. For such a supply (which will become part of a regional system) compliance with the requirements of the revised federal regulations shall be required within nine years of the effective date of the revised federal regulations.

10. A compliance schedule imposed by the commissioner pursuant to the grant of an exemption shall be enforceable as if it were a rule of the commissioner.

4395-99

7 MCAR S 1.149 Record maintenance; reporting; public notification.

A. Record maintenance. Any owner or operator of a public water supply shall retain on its premises or at a convenient location near the premises, and shall make available for public inspection, the following records for the specified period of time:

1. a. Records of bacteriological analyses and turbidity measurements made pursuant to 7 MCAR S 1.147 B. and C. shall be kept for not less than five years.

b. Records of chemical analyses made pursuant to 7 MCAR S 1.147 D.-F. shall be kept for not less than ten years.

2. Actual laboratory reports may be kept, or data may be transferred to tabular summaries, provided that the following information is included:

a. the date, place, and time of sampling, and the name of the person who collected the sample;

b. identification of the sample as to whether it was a routine distribution system sample, check sample, raw or process water sample or other special purpose sample;

c. date of analysis;

d. laboratory and person responsible for performing analysis;

e. the analytical technique or method used; and

f. the results of the analysis.

3. Records of action taken by the supply to correct violations of rules dealing with public water supplies shall be kept for a period not less than three years after the last action taken with respect to the particular violation involved.

4. Copies of any written reports, summaries or communications relating to sanitary surveys of the supply conducted by the supply itself, by a private consultant, or by any local, state or federal agency, shall be kept for a period of not less than ten years after completion of the sanitary survey involved.

5. Records concerning a variance or exemption granted to the supply shall be kept for a period ending not less than five years following the expiration of such variance or exemption.

B. Reporting requirements.

1. All the results of analyses performed on samples which are to be tested pursuant to these rules shall be reported as follows:

a. the approved laboratory shall submit all analytical results on reporting forms to be prescribed by the commissioner. These forms shall be prepared in triplicate, with one copy being sent to the supplier, one copy being sent to the State Department of Health, Division of Environmental Health, Section of Public Water Supplies, and the third being retained by the laboratory;

b. results of turbidity and chlorine residual measurements shall be submitted by the supplier on the prescribed reporting forms.

2. Except when a shorter reporting period is specified, all results of tests, analyses or measurements shall be submitted on prescribed reporting forms to the commissioner within the time period specified in a. or b., whichever is shorter:

a. The first ten days following the month in which the result is received by the supplier; or

b. The first ten days following the end of the required monitoring period as stipulated by the commissioner.

3. A laboratory performing microbiological analyses pursuant to these rules shall report to the supplier and to the commissioner any positive test results within 24 hours of the time the positive result becomes available.

4. The supplier shall report to the commissioner a positive bacteriological test result within 24 hours of the time the supplier learns of such a result.

5. The supplier of water shall report to the commissioner within 48 hours the failure to comply with any of the rules relating to public water supplies, including the failure to comply with a monitoring requirement, as set forth in rule 7 MCAR S 1.147.

C. Right of inspection. The commissioner, or one of its authorized representatives, upon presenting appropriate credentials to any water supplier, is authorized to enter and inspect any establishment, facility or other property of such supplier, in order to determine whether such supplier has acted or is acting in compliance with the rules of the commissioner relating to water supplies, including for this purpose, the inspection of records, files, papers, processes, controls, and facilities, or in order to test any feature of a public water supply, including its raw water source.

D. Public notification.

1. Public notification must be made by a supplier of water whenever a public water supply:

a. fails to comply with a maximum contaminant level prescribed in 7 MCAR S 1.146;

b. fails to comply with a prescribed monitoring schedule pursuant to 7 MCAR S 1.147;

c. fails to submit timely reports pursuant to 7 MCAR S 1.149 B;

d. is granted a variance or exemption from a maximum contaminant level pursuant to 7 MCAR S 1.148;

e. fails to comply with a schedule prescribed pursuant to such a variance or exemptions or;

f. fails to comply with an applicable testing method established in 7 MCAR S 1.147.

2. A notice given pursuant to this rule shall be written in a manner reasonably designed to inform fully the user of the supply. The notice shall be conspicuous and shall not use unduly technical language, unduly small print or other methods

which would frustrate the purpose of the notice. The notice shall disclose all material facts regarding the subject including the nature of the problem and, where appropriate, a clear statement that a rule dealing with public water supplies has been violated, and shall also disclose any preventive measures that should be taken by the public. Where appropriate, or where required by the commissioner, bilingual notice shall be given. Notices may include a reasonable explanation of the subject of the notice and of its significance or seriousness to the public health, a fair explanation of steps taken by the supply to correct any problems, and the results of any additional sampling.

3. Notice by community water supply.

a. In the case of a community water supply, the supplier shall give notification as referred to in 7 MCAR S 1.149 D.1. and D.2.:

(1) by including a notice in the first set of water bills issued after any of the conditions described in paragraph D.1. of this rule occurs;

(2) if the supply issues bills less frequently than every three months, or does not issue water bills, the supplier must give notice by direct mail to every residence served, within six weeks after the condition which gave rise to the need for such notice has occurred;

(3) in addition, a copy of every notice mailed pursuant to this rule shall be sent to the commissioner, as part of the same mailing which is made to the supply's customers.

b. In the case of a failure to comply with a maximum contaminant level, such written notice shall be repeated according to the procedure prescribed in 7 MCAR S 1.149 D.3.a. not less than once every three months after the initial notice. Such continuing notice must be given as long as the failure to comply continues, whether or not the supply has a variance or exemption relating to the maximum contaminant level which is being exceeded.

c. In the case of a failure to comply with a maximum contaminant level which is not corrected promptly after discovery, the supplier must give other general public notice of the failure, in addition to the notice by direct mail, in a manner to be prescribed by the commissioner. Such additional notice may include announcements to communications media in the area served by the supply.

4. Notice by non-community water supply. In the case of non-community supply, the supplier must give notice by conspicuous posting. Notice must be posted at or near every tap or drinking fountain, or wherever the public can draw the water. If the water is served to the consumer, then additional notice must be posted on the menu, or registration form, or in

some other obvious location to assure adequate readability of the notice, before the water is consumed. The commissioner shall order the form and location for the posting of such notice. Such notice must remain posted as long as any one of the conditions cited in paragraph D.1. of this rule continues to exist.

5. Whenever the commissioner determines that a supply is providing water which, if consumed, might create an imminent risk to the public health, the commissioner may order the supplier to give a notice or warning of such risk in a prescribed manner.

6. The commissioner may issue any notice or warning required by this rule on behalf of a supplier, but a supplier is not relieved of any responsibility to issue any notice or warning under this rule, unless he has been specifically relieved of the responsibility by the commissioner, in writing.

4395-99

7 MCAR S 1.150 Water haulers.

A. This rule is adopted for the purpose of assuring that sanitary procedures are followed by those who distribute drinking water by tank truck and that the public health is thereby preserved. The authority for adopting this rule may be found in Minnesota Statutes, section 144.12, subdivision 1(5) (1976) as amended by Laws of 1977, chapter 66, section 10 which states that the commissioner of health may regulate the "distribution of water by persons."

B. Definitions.

1. "Accessible" means capable of being exposed for cleaning and inspection.

2. "Approved source" means a public water supply which is in compliance with state rules relating to water supplies, and is equipped with a permanent overhead delivery system designed to prevent the introduction of biological or chemical contaminants.

3. "Commissioner" means the commissioner of health or his or her authorized representative.

4. "Corrosion-resistant" means capable of maintaining original surface characteristics under the prolonged influence of the use environment, including the expected water contact and normal use of cleaning compounds and sanitizing solutions.

5. "Easily cleanable" means readily accessible, and of such material and finish and so fabricated that cleaning can be accomplished by hand scrubbing.

6. "Sanitize" means the bactericidal treatment of the interior surfaces of the tank by a process which has proven

effective and does not leave a toxic residue.

7. "Smooth" means a surface free of pits and inclusions.

8. "Toxic" means having an adverse physiological effect on man.

9. "Water hauler" or "hauler" means a person engaged in bulk vehicular transportation of water to other than the hauler's household, which is intended for use or used for drinking or domestic purposes.

C. A water hauler shall be free of any infectious or communicable disease.

D. The water hauler shall consult with regional district personnel of the Minnesota Department of Health before implementing any questionable procedures.

E. Dipping into the filled tank is prohibited.

F. Tank requirements.

1. The tank shall be constructed of stainless steel or be lined with glass or other acceptable, corrosion-resistant and non-toxic material, with rounded corners and a smooth surface so that the interior may be thoroughly cleaned and sanitized.

2. The system shall be completely closed except for vents which are properly constructed and screened.

3. Caps on inlets and outlets shall be hinged or chained to provide a permanent attachment.

4. The inlets and outlets shall be easy to clean and so located and protected as to minimize the hazard of contamination.

5. Filters shall not be used.

6. The tank shall be filled only from the top.

7. The outlet hose from the tank shall be maintained in a sanitary condition at all times, shall be flushed clean prior to every delivery, and shall not impart any taste or odor to the water.

8. The tank shall be accessible internally, for proper cleaning, disinfection and inspection.

9. The tank shall never have been used to haul any materials which might have a deleterious effect on health or on the quality of the water being transported. If the tank has been used for transporting any materials other than water, the hauler shall obtain the approval of the commissioner before using the tank to haul water for drinking or domestic use.

G. Cleaning and disinfection.

1. The tank and all fittings shall be cleaned and sanitized according to the following procedures before they can be used to haul water, and thereafter once per week:

a. the tank shall be cleaned by scrubbing manually with brushes and non-corrosive detergents, or

b. by automation using a spray ball within the tank which provides cleaning solution with sufficient velocity to remove all soil from the tank interior;

2. The tank and fittings shall then be rinsed.

3. The tank and fittings shall be sanitized by any of the following methods:

a. filling with water from an approved source to which 50 parts per million chlorine has been added, mixing and allowing it to stand for three to four hours; or 100 parts per million chlorine for not less than 20 minutes;

b. the commissioner may approve the use of an alternate sanitizing method if the supplier can show that the use of the alternate method assures a level of biocidal activity comparable to that provided by the use of chlorine.

4. The tank may be cleaned and sanitized in a single step by using a commercial detergent-sanitizer according to the manufacturer's directions.

5. After sanitizing, the tank shall be drained, and the tank and fittings shall be rinsed with water from an approved source.

6. The sanitized tank shall be filled with water from an approved source.

7. The hauler shall add sufficient chlorine to assure that there is one part per million free chlorine residual when the last remaining quantity of water is delivered to a user. The hauler shall test the chlorine residual in each tankful of water using the DPD method.

H. Testing. Once each month the hauler shall collect a sample of water from each tank and shall submit the water sample to the State Department of Health Laboratory for a bacteriological analysis. Sample collecting bottles for this purpose may be obtained from any Minnesota Department of Health Regional District Office or by writing to the Minnesota Department of Health, Section of Analytical Services, 717 Delaware Street S.E., Minneapolis, Minnesota 55440.

I. Records. The hauler shall retain a written log for each tank and shall record therein:

1. the date when the tank is sanitized;

2. the date on which the tank is filled and the name of the approved source from which the water is obtained;

3. the chlorine residual and date on which it is measured;

4. date on which water samples are sent for analysis; and

5. customer's name, address, date and quantity delivered.

4401-4412

7 MCAR S 1.151 Lodging establishments.

A. Scope. This rule shall be applicable to all lodging establishments, such as hotels, motels, lodging houses and resorts as defined in Minnesota Statutes, chapter 157.

B. Definitions.

1. Commissioner. The term "commissioner" shall mean the Minnesota Commissioner of Health and the Minnesota Department of Health, which terms shall be synonymous.

2. Approved. The term "approved" shall mean acceptable to the commissioner following his determination as to conformity with established public health practices.

3. Clean. The term "clean" shall mean the absence of dirt, grease, rubbish, garbage and other offensive, unsightly or extraneous matter.

4. Good repair. The term "good repair" shall mean free of corrosion, breaks, cracks, chips, pitting, excessive wear and tear, leaks, obstructions and similar defects so as to constitute a good and sound condition.

5. Usable floor space. The term "usable floor space" means all floor space in a sleeping room not occupied by closets, toilet rooms, shower or bathrooms.

7 MCAR S 1.152 Sanitation requirements.

The construction, operation, maintenance and equipment of lodging establishments shall be regulated as follows:

A. Building. Every building, structure or enclosure used to provide lodging accommodations for the public shall be kept in good repair, and so maintained as to promote the health, comfort, safety and well being of persons accommodated.

B. Floors. The floors of all guest rooms, hallways, bathrooms, store rooms, and all other spaces used or traversed by guests shall be of such construction as to be easily cleaned, shall be smooth, and shall be kept clean and in good repair. Cleaning of floors shall be so done as to minimize the raising of dust and the exposure of guests thereto. The requirements of this section shall not prevent the use of rugs, carpets or natural stone which can be kept clean. Abrasive strips for safety purposes may be used wherever deemed necessary to prevent accidents.

C. Walls and ceilings. The walls and ceilings of all rooms, halls and stairways shall be kept clean and in good repair. Studs, joists or rafters shall not be left exposed except when suitably finished and kept clean.

D. Screening. When flies, mosquitoes, and other insects are prevalent, all outside doors, windows and other outer openings shall be screened: Provided that such screening shall not be required for rooms deemed by the commissioner to be located high enough in the upper stories of the building as to be free of such insects, or in such areas where other effective means are provided to prevent their entrance.

E. Lighting and ventilation. All rooms and areas used by patrons and guests and all other rooms or spaces in which lighting and ventilation, either natural or artificial, are essential to the efficiency of the business operation shall be well lighted and ventilated.

An area shall be considered well ventilated when excessive heat, odors, fumes, vapors, smoke or condensation is reduced to a negligible level and barely perceptible to the normal senses. During seasons when weather conditions require tempering of make-up air, adequate equipment shall be provided to temper the make-up air. Every gas-fired or oil-fired room heater and water heater shall be vented to the outside air.

F. Space. Every room occupied for sleeping purposes by one person shall contain at least 70 square feet of usable floor space, and every room occupied for sleeping purposes by more than one person shall contain not less than 60 square feet of usable floor space for each occupant thereof. Under no circumstances shall there be provided less than 400 cubic feet of air space per occupant. Beds shall be spaced at least three feet apart when placed side by side. No sleeping quarters shall be provided in any basement having more than half its clear floor to ceiling height below the average grade of the adjoining ground. When strict compliance herewith is impracticable, the commissioner may waive any of the provisions of this paragraph subject to such conditions as may be deemed desirable in the individual case.

G. Bedding and linen. All beds, bunks, cots, and other sleeping places provided for guests in hotels, motels, resorts and lodging houses shall be supplied with suitable pillow slips and under and top sheets. All bedding including mattresses, quilts, blankets, pillows, sheets, spreads, and all bath linen shall be kept clean. No bedding including mattresses, quilts, blankets, pillows, bed and bath linen, shall be used which are worn out or unfit for further use. Pillow slips, sheets and bath linen after being used by one guest shall be washed before they are used by another guest, a clean set being furnished each succeeding guest. For any guest occupying a guest room for an extended period of time, a fresh set of sheets and pillow slips shall be furnished at least once each week, and at least two clean towels shall be furnished each day, except that the proprietor will not be responsible for the sheets, towels, pillow slips, and bath linen furnished by a guest.

H. Room furnishings. All equipment, fixtures, furniture and furnishings, including windows, draperies, curtains and carpets,

shall be kept clean and free of dust, dirt, vermin and other contaminants, and shall be maintained in good order and repair.

I. Toilets. Every hotel, motel and lodging house shall be equipped with adequate and conveniently located water closets for the accommodation of its employees and guests. Water closets, lavatories and bathtubs or showers, shall be available on each floor when not provided in each individual room. Toilet, lavatory and bath facilities shall be provided in the ratio of one toilet and one lavatory for every ten occupants, or fraction thereof, and one bathtub or shower for every twenty occupants, or fraction thereof. Toilet rooms shall be well ventilated by natural or mechanical methods. The doors of all toilet rooms serving the public and employees shall be self-closing. Toilets and bathrooms shall be kept clean and in good repair and shall be well lighted and ventilated. Handwashing signs shall be posted in each toilet room used by employees. Every resort shall be equipped with adequate and convenient toilet facilities for its employees and guests. If privies are provided they shall be separate buildings and shall be constructed, equipped, and maintained in conformity with the standards of the commissioner and shall be kept clean.

J. Water supply. A safe adequate supply of water shall be provided. The water supply system shall be located, constructed and operated in accordance with the rules of the commissioner. After September 30, 1980, the temperature of hot water which is provided in any public area or guest room, including but not limited to lavatories, bathtubs or showers, shall not exceed 130 degrees F. (approximately 55 degrees C.).

K. Handwashing. All lavatories for public use or furnished in guest rooms at hotels, motels, lodging houses and resorts shall be supplied with hot and cold running water and with soap. Scullery sinks should not be used as handwashing sinks.

In the case of separate housekeeping cabins at resorts not supplied with running hot water, equipment shall be provided for heating water in the cabin.

Individual or other approved sanitary towels or warm-air dryers shall be provided at all lavatories for use by employees or the public.

L. Eating utensils and drinking vessels provided in guest rooms.

1. After each usage, all multi-use eating utensils and drinking vessels shall be thoroughly washed in hot water containing a suitable soap or synthetic detergent, rinsed in clean water, and effectively subjected to a bactericidal process approved by the commissioner. Approved facilities for manual dishwashing shall consist of a three compartment sink with stacking and drainboards at each end. All mechanical dishwashing machines shall conform to Standard Number 3 of the National Sanitation Foundation, dated April, 1965. All dishes,

glasses, utensils and equipment after washing and bactericidal treatment shall be permitted to drain and air dry.

2. Single service utensils or vessels as defined in MHD 162(s) must be handled in a sanitary manner. Such utensils may not be re-used.

M. Waste disposal. All liquid wastes shall be disposed of in an approved public sewerage system or in a sewerage system which is designed, constructed and operated in accordance with the rules of the Minnesota Pollution Control Agency (6 MCAR S 4.8040).

Prior to removal, all garbage and refuse in storage shall be kept in water-tight, non-absorbent receptacles which are covered with close-fitting, fly-tight lids. All garbage, trash and refuse shall be removed from the premises frequently to prevent nuisance and unsightly conditions, and shall be disposed of in a sanitary manner. All garbage receptacles shall be kept clean and in good repair.

N. Insect and rodent control. Every hotel, motel, lodging house and resort shall be so constructed and equipped as to prevent the entrance, harborage or breeding of flies, roaches, bedbugs, rats, mice and all other insects and vermin, and specific means necessary, for the elimination of such pests such as cleaning, renovation or fumigation shall be used. The commissioner may order the facility to hire an exterminator licensed by the state to exterminate pests when:

1. The infestation is so extensive that it is unlikely that a non-professional can eradicate the pests effectively, or

2. The extermination method of choice can only be carried out by a licensed exterminator, or

3. Upon reinspection, it is found that an establishment has not been brought into compliance with a prior order to rid the establishment of pests.

O. Personnel health and cleanliness. No person shall resume work after visiting the toilet without first thoroughly washing his hands.

Personnel of hotels, motels, lodging houses and resorts may be required to undergo medical examination to determine whether or not they are cases or carriers of a communicable disease.

P. Cleanliness of premises. The premises of all hotels, motels, lodging houses and resorts shall be kept clean and free of litter or rubbish.

Q. Fire protection. All lodging establishments shall provide suitable fire escapes which shall be kept in good repair and accessible at all times. Hallways shall be marked and exit lights provided; fire extinguishers shall be provided and shall

be recharged annually and kept accessible for use. No sleeping quarters shall be maintained in rooms which do not have unobstructed egress to the outside or to a central hall leading to a fire escape. ALL FIRE PROTECTION MEASURES SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF THE STATE FIRE MARSHAL.

R. Plumbing and swimming pools. All new plumbing in hotels, motels, lodging houses and resorts, and all plumbing reconstructed or replaced after January 1, 1968 shall be designed, constructed and installed in conformity with the Minnesota Plumbing Code (7 MCAR SS 1.120-1.134).

All swimming pools and other artificial recreational bathing facilities shall be located, constructed and operated in conformity with 7 MCAR S 1.141.

S. Sanitary dispensing of ice. Any lodging establishment which makes ice available in public areas, including but not limited to lobbies, hallways, and outdoor areas shall restrict access to such ice in accordance with the following provisions:

1. After the effective date of this rule, any newly-constructed lodging establishment which installs ice-making equipment, and any existing lodging establishment which installs or replaces ice-making equipment shall install only automatic dispensing, sanitary ice-making and storage equipment in areas to which the public has access. Any such establishment may install open-type ice bins only if the ice therefrom is dispensed in the manner provided in subpart S.2.

2. After December 31, 1984, any existing lodging establishment which has not converted to automatic dispensing ice-making and storage equipment shall no longer permit unrestricted public access to open-type ice bins, and shall dispense ice to guests only by having employees give out prefilled, individual sanitary containers of ice, or by making available prefilled, disposable, closed bags of ice.

4401- 4412

MHD 154 Rescinding of existing regulations.

The following regulation is hereby rescinded: Regulation 10947 dated July 1, 1961.

7 MCAR S 1.155 Initial and renewal license fees; license expiration dates.

A. Fee schedule. License applications for lodging establishments as defined in 7 MCAR S 1.151 shall be accompanied by the applicable fee as determined from the following fee schedule.

Fee Schedule

Number of Sleeping Rooms	Fee

1 - 18	$23.00
19 - 35	$45.00
36 - 100	$60.00
101 and over	$75.00

B. Expiration date. Initial and renewal lodging establishment licenses shall be issued for the calendar year for which application is made and shall expire on December 31 of such year.

C. License renewals. License renewals shall be obtained on an annual basis. License renewal applications shall be submitted to the commissioner of health on forms provided no later than December 31 of the year preceding the year for which application is made.

D. Penalty fee. A penalty fee of $10 shall be added to the amount of the license fee if the application has not reached the office of the commissioner of health before January 31, or in the case of a new business, 30 days after the opening of such business.

E. Reduced license fee. From and after October 1 of each year, the license fee for new establishments or new operators shall be one half of the appropriate annual license fee plus any penalty which may be required.

MINNESOTA DEPARTMENT OF HEALTH

Rules and Regulations

CHAPTER TEN: MHD 161-170
REQUIREMENTS FOR FOOD AND BEVERAGE ESTABLISHMENTS

MHD 161 SCOPE. This regulation shall be applicable to all food and beverage establishments such as restaurants, boarding houses and places of refreshment as defined in Minnesota Statutes Chapter 157, and shall include drive-ins, bars, taverns, drive-in cafes, clubs, lodges, eating facilities at resorts, private schools, public buildings and churches, except as exempted by Section 157.14, and all other businesses and establishments where meals, lunches or drinks are served. In addition this regulation shall serve as the criteria for evaluation of food and beverage service facilities in children's camps as defined in Section 144.72.

4401-4412 → 7 MCAR S 1.162 Definitions. .

(a) **Adulterated** shall mean the condition of a food (a) if it bears or contains any poisonous or deleterious substance in a quantity which may render it injurious to health; (b) if it bears or contains any added poisonous or deleterious substance for which no safe tolerance has been established by regulation, or in excess of such tolerance if one has been established; (c) if it consists in whole or in part of any filthy, putrid, or decomposed substance, or if it is otherwise unfit for human consumption; (d) if it has been processed, prepared, packed, or held under insanitary conditions, whereby it may have become contaminated with filth, or whereby it may have been rendered injurious to health; (e) if it is in whole or in part the product of a diseased animal, or an animal which has died otherwise than by slaughter; or (f) if its container is composed in whole or in part of any poisonous or deleterious substance which may render the contents injurious to health.

(b) **Approved** shall mean acceptable to the State Board of Health following its determination as to conformity with departmental standards and established public health practices.

(c) **Board** shall mean the Minnesota State Board of Health and the Minnesota Department of Health, which terms shall be synonymous.

(d) **Closed** shall mean fitted together snugly leaving no openings large enough to permit the entrance of vermin.

(e) **Clean** shall mean free from physical, chemical and microbial substances discernible by ordinary sight or touch, by ultraviolet light, by artificial light, and by the safranine-O dye test, and free from insects, vermin and debris. (The safranine-O dye test is a procedure for determining the effectiveness of the washing-sanitizing of dishes and glassware. Washed, sanitized, and drained dry glasses are dusted lightly with a mechanical mixture of talc (85%) and safranine-O dye (15%). When wetted the dye becomes red. Dusted glasses are subjected to a gentle rinse for five seconds, or until run-off is no longer red. Since the dye-impregnated talc clings tenaciously to residual organic matter on the glass, the appearance of red spots or areas on drained glasses is an index of ineffective washing. Reference —

Abele, C. A., "Needed: A Reliable Field Determinate of Cleanliness." JOURNAL OF FOOD AND MILK TECHNOLOGY, August 1965. Also — Armbruster, E. H., Rodenour, G. M. "Field Test Procedure for Cleanliness Measurement of Multiple-Use Eating Utensils." THE SANITARIAN, September-October 1960.)

(f) **Corrosion-Resistant Material** shall mean a material which maintains its original surface characteristics under prolonged influence of food, cleaning compounds and sanitizing solutions which may contact it.

(g) **Easily Cleanable** shall mean readily accessible and of such material and finish and so fabricated that residue may be completely removed by normal cleaning methods.

(h) **Embargo** shall mean the withholding of food, equipment, utensils or clothing from sale or use in any establishment licensed as a restaurant, boarding house or place of refreshment until approval is given by the State Board of Health for such sale or use.

(i) **Employee** shall mean any person working in a licensed establishment who transports food or food containers, who engages in food preparation or service, or who comes in contact with any food utensils or equipment.

(j) **Equipment** shall mean all stoves, ranges, hoods, meatblocks, worktables, counters, refrigerators, freezers, sinks, dishwashing machines, steam tables, and similar items, other than utensils, used in the operation of a food-service establishment.

(k) **Food** shall mean any raw, cooked, or processed substance, beverage or ingredient used or intended for use in whole or in part for human consumption. The term food shall further include, but not be limited to, ice and water.

(l) **Food-Contact Surfaces** shall mean those surfaces of equipment and utensils with which food normally comes in contact, and those surfaces with which food may come in contact and drain back onto surfaces normally in contact with food.

4401-4412

(m) Food establishment shall mean food and beverage service establishments as defined in Minnesota Statutes, chapter 157 and Minnesota Statutes, section 144.72 and shall include drive-ins, bars, taverns, drive-in cafes, clubs, lodges, eating facilities at resorts and churches, temporary and limited food service establishments, except as exempted by section 157.14.

(n) **Perishable Food** shall mean any food of such type or in such condition as may spoil.

(o) **Potentially Hazardous Food** shall mean any perishable food which consists in whole or in part of milk or milk products, eggs, meat, poultry, fish, shellfish, or other food capable of supporting rapid and progressive growth of infectious or toxigenic microorganisms: Provided, that products in hermetically sealed containers processed to prevent spoilage, and dehydrated, dry or powdered products so low in moisture content as to preclude development of microorganisms, are excluded from the terms of these definitions.

(p) **Safe Temperatures,** as applied to potentially hazardous food, shall mean temperatures of 40° F. or below, and 150° F. or above.

(q) **Sanitize** shall mean effective bactericidal treatment of clean surfaces of equipment and utensils by a process which has been approved by the Board as being effective in destroying microorganisms, including pathogens.

(r) **Sealed** shall mean free of cracks or other openings which permit the entry or passage of moisture.

(s) **Single-Service Articles** shall mean cups, containers, lids, or closures; plates, knives, forks, spoons, stirrers, paddles; straws, place mats, napkins, doilies, wrapping material; and all similar articles which are constructed wholly or in part from paper, paperboard, molded pulp, foil, wood, plastic, synthetic, or other readily destructible materials, and which are intended by the manufacturers and generally recognized by the public as for one usage only, then to be discarded.

(t) **Tableware** shall mean all multi-use eating and drinking utensils, including flatware (knives, forks, and spoons).

(u) **Temporary Food-Service Establishment** shall mean any food-service establishment which operates at a fixed location for a temporary period of time, not to exceed two weeks, in connection with a fair, carnival, circus, public exhibition, or similar transitory gathering.

(v) **Utensil** shall mean any tableware and kitchenware used in the storage, preparation, conveying, or serving of food.

4401-4412 (w) Limited food service establishment shall mean an itinerant establishment, or one serving only prepackaged foods (e.g., frozen pizza and sandwiches) which receive only heat treatment.

7 MCAR S 1.163 Sanitation requirements.

(a) **Food Supplies:** All food in food-service establishments shall be from sources approved or considered satisfactory by the Board, and shall be clean, wholesome, free from spoilage, free from adulteration and misbranding, and safe for human consumption. No hermetically sealed, non-acid or low-acid food which has been processed in a place other than a commercial food-processing establishment shall be used.

(b) **Food Protection:** All food while being stored, prepared, displayed, served, or sold at food-service establishments, or during transportation between such establishments, shall be protected from contamination. All perishable food shall be stored at such temperatures as will protect against spoilage. All potentially hazardous food shall be maintained at safe temperatures (40° F. or below, or 150° F. or above), except during necessary periods of preparation and service. Refrigerated display cases may be maintained at a temperature of 45° F. to prevent sweating, however, foods shall not be stored in such display cases for periods exceeding four hours. A variation of 5° F. in refrigerator temperatures is permitted during times of meal service. Raw fruits and vegetables shall be washed before use. Stuffing, poultry, stuffed meats, stuffed poultry, and pork and pork products shall be thoroughly cooked before being served. Individual portions of food once served to the customer shall not be served again: Provided, that wrapped food which has not been unwrapped and which is wholesome may be reserved.

Only such poisonous and toxic materials as are required to maintain sanitary conditions and for sanitization purposes may be used or stored in food-service establishments. Poisonous and toxic materials shall be identified, and shall be used only in such manner and under such conditions as will not contaminate food, or constitute a hazard to employees or customers as determined by the Board.

(c) **Health and Disease Control:** No person while affected with any disease in a communicable form, or while a carrier of such disease, or while afflicted with boils, infected wounds, sores, or an acute respiratory infection, shall work in any area of a food-service establishment in any capacity in which there is a likelihood of such person contaminating food or food-contact surfaces with pathogenic organisms, or transmitting disease to other individuals; and no person known or suspected of being affected with any such disease or condition shall be employed in such an area or capacity.

(d) **Cleanliness:** All employees shall wear clean outer garments, maintain a high degree of personal cleanliness, and conform to hygienic practices while on duty. They shall wash their hands thoroughly in an approved hand-washing facility before starting work, and as often as may be necessary to remove soil and contamination. No employee shall resume work after visiting the toilet room without first washing his hands. No person shall expectorate or use tobacco in any form while engaged in food preparation or service, or while in equipment and utensil washing or food preparation areas. Hairnets, headbands, caps, or other hair restraints shall be used by employees engaged in the preparation and service of food to keep hair from food and food contact surfaces.

(e) **Sanitary Design, Construction and Installation of Equipment and Utensils:** All equipment and utensils shall be so designed and of such material and workmanship as to be smooth, easily cleanable and durable, and shall be in good repair; and the food-contact surfaces of such equipment and utensils shall, in addition, be easily accessible for cleaning, non-toxic, corrosion-resistant and relatively non-absorbent.

All equipment shall be so installed and maintained as to facilitate the cleaning thereof, and of all adjacent areas.

All new equipment installed after the effective date of this Regulation shall comply with the following standards of the National Sanitation Foundation when applicable:

Standard No. 1 — Soda Fountain and Luncheonette Equipment, April 1965

Standard No. 2 — Food Service Equipment, April 1965

Standard No. 3 — Spray Type Dishwashing Machines, April 1965

Standard No. 4 — Gas and Electric Commercial Cooking and Warming Equipment, July 1963

Standard No. 5 — Gas and Electric Commercial Hot Water Generating Equipment, January 1959

Standard No. 6 — Dispensing Freezers, January 1959

Standard No. 7 — Food Service Refrigerators and Food Service Storage Freezers April 1964

Standard No. 8 — Commercial Powered Food Preparation Equipment, April 1965

Standard No. 12 — Automatic Ice-Making Equipment June 1963

Criteria C-1 — Vending Machines, February 1963

Criteria C-2 — Special Equipment and/or Devices April 1964

Used equipment which has been granted the seal of approval by the National Sanitation Foundation under earlier standards may be installed when such equipment is in good repair and does not constitute a health hazard as determined by the Board.

Equipment in use at the time of adoption of this regulation which does not meet fully the above requirements may be continued in use only if it is in good repair, capable of being maintained in a sanitary condition and the food-contact surfaces are non-toxic, and is approved by the Board.

Single-service articles shall be made from non-toxic materials.

(f) **Cleaning, Bactericidal Treatment and Storage of Utensils and Equipment:** All equipment, fixtures, and furnishings, including windows, shall be kept clean and free from dust, dirt, insects and other contaminating materials. All cloths used by waiters, chefs and other employees shall be clean.

Single-service containers, utensils and equipment shall be used only once.

After each usage all multi-use eating and drinking utensils shall be thoroughly washed in hot water containing a suitable soap or synthetic detergent, rinsed in clean water, and effectively subjected to a bactericidal process approved by the Board. All multi-use utensils used in the preparation or serving of food and drink shall be thoroughly washed, rinsed, and effectively subjected to an approved bactericidal process after each use or immediately following the day's operations, and such utensils shall not be re-used without having been so treated. Where dishwashing is done by hand, the sink compartments shall be adequate in size to permit the introduction of the largest utensils to be washed and wire baskets or racks of dishes, and shall be supplied with hot and cold running water. Approved facilities for manual dishwashing shall consist of a three-compartment sink with stacking and drain boards at each end. Facilities for washing multi-use utensils where mechanical dishwashing is used, and for drive-ins using paper service, may consist of a two-compartment sink with stacking and drain boards. Utensils which, because of size and weight, are not normally washed in sink compartments may be washed, rinsed and sanitized as individual units.

Dishwashing machines shall be equipped with thermometers which will accurately indicate the temperature of the wash and rinse water.

Either of the following bactericidal processes for manual dishwashing is regarded as approved:

(1) Complete immersion in clean water at a temperature of not lower than 170° Fahrenheit for at least two minutes. The bactericidal treatment compartment must be properly equipped with a heating unit or other means to maintain the specified temperature while in use.

(2) Complete immersion in clean water containing not less than 50 parts per million of available chlorine if hypochlorites are used, or not less than 200 parts per million if chloramines are used, for not less than two minutes. Other compounds acceptable to the Board may be used in accordance with standards recommended at the time of acceptance. Equipment that is too large to immerse may be treated (1) with live steam from a hose, in the case of equipment in which steam can be confined, or (2) by spraying or a swabbing with chlorine solution of approved strength.

Any other processes acceptable to the Board may be used for machine or manual dishwashing.

All dishes, utensils and equipment after washing and bactericidal treatment shall be permitted to drain and air dry.

After bactericidal treatment, eating and drinking utensils and utensils used for the preparation and serving of food and drink shall be stored in a clean, dry place protected from flies, dust and other contamination, and shall be so handled as to prevent contamination. Wet cold storage of glasses or similar utensils is prohibited except in approved equipment as determined by the Board. All under-counter utensil storage compartments less than 18 inches from the floor and located in traffic areas shall be enclosed and shall be kept enclosed except during times of meal service. Enclosed automatic utensil elevators are accepted. Cups and glasses stored on shelves shall be inverted. Rack or tray stacking of glasses is accepted. Shelving shall be protected by easily cleanable, non-absorbent materials.

Single-service utensils shall be purchased only in sanitary containers, shall be stored therein in a clean, dry place until used, and shall be handled in a sanitary manner.

(g) **Water Supply:** A safe and adequate supply of water shall be provided. The water supply system shall be located, constructed and operated in accordance with the standards of the Board. Water, if not piped into the establishment, shall be transported and stored in approved containers and shall be handled and dispensed in a sanitary manner. Ice used for any purpose shall be made from water which comes from an approved source and shall be used only if it has been manufactured, stored, transported and handled in a sanitary manner. When strict compliance with the provisions for location and construction specified in this item is impractical, the Board may waive any of the requirements subject to such conditions as may be deemed desirable in the individual case.

(h) **Sewage Disposal:** All liquid waste shall be disposed of in an approved public sewerage system or in a sewerage system which is designed, constructed and operated in accordance with the standards of the Board.

(i) **Plumbing:** All new plumbing and all plumbing reconstructed or replaced after the effective date of this regulation shall be designed, constructed and installed in conformity with the Minnesota Plumbing Code.

(j) **Toilet Facilities:** Each food-service establishment shall be provided with adequate, conveniently located toilet facilities for its employees. Toilet fixtures shall be of sanitary design and easy to clean. Toilet facilites, including rooms and fixtures, shall be kept in a clean condition and in good repair. The doors of all toilet rooms shall be self-closing. Toilet tissue shall be provided. Easily cleanable receptacles shall be provided for waste materials, and such receptacles in toilet rooms for women shall be covered. Where the use of non-water-carried sewage disposal facilities have been approved by the Board, such facilities shall be separate from the establishment and in accordance with the standards of the Board. When toilet facilities are provided for the patrons, such facilities shall meet the requirements of this section.

(k) **Hand-washing Facilities:** Each food-service establishment shall be provided with adequate, conveniently located hand-washing facilities for its employees, including a lavatory or lavatories equipped with hot and cold or tempered running water, hand-cleansing soap or detergent, and approved sanitary towels or other approved hand-drying devices. Such facilities shall be kept clean and in good repair.

(l) **Garbage and Rubbish Disposal:** All garbage and rubbish containing food waste shall, prior to disposal, be kept in leak-proof, non-absorbent containers which shall be kept covered with tight-fitting lids when filled or stored, or not in continuous use: Provided, that such containers need not be covered when stored in a special vermin proofed room or enclosure, or in a food-waste refrigerator. All other rubbish shall be stored in containers, rooms or areas in an approved manner. The rooms, enclosures, areas and containers used shall be adequate for the storage of all food waste and rubbish accumulating on the premises. Adequate cleaning facilities shall be provided, and each container, room, or area shall be thoroughly cleaned after the emptying or removal of garbage and rubbish. Food-waste grinders, if used, shall be installed in compliance with State and local standards and shall be of suitable construction. All garbage and rubbish shall be disposed of with sufficient frequency and in such a manner as to prevent a nuisance.

(m) **Vermin Control:** Effective measures shall be taken to protect against the entrance into the establishment and the breeding or presence on the premises of vermin.

(n) **Floors, Walls, and Ceilings:** The floor surfaces in kitchens, in all other rooms and areas in which food is stored or prepared and in which utensils are washed, and in walk-in refrigerators, dressing or locker rooms and toilet rooms, shall be of smooth, relatively non-absorbent materials, and so constructed as to be easy to clean and shall be coved at the juncture of the floor and wall: Provided, that the floors of non-refrigerated, dry-food-storage areas need not be non-absorbent. All floors shall be kept clean and in good repair. Floor drains shall be provided in all rooms where floors are subjected to flooding-type cleaning or where normal operations release or discharge water or other liquid waste onto the floor. All exterior areas where food is served shall be kept clean and properly drained, and surfaces in such areas shall be finished so as to facilitate maintenance and minimize dust.

The walls and ceilings of all rooms shall be kept clean and in good repair. All walls of rooms or areas in which food is prepared, or utensils or hands are washed, shall be easy to clean, smooth and light-colored, and shall have washable surfaces up to the highest level reached by splash or spray.

(o) **Lighting:** All areas in which food is prepared or stored or utensils are washed, hand-washing areas, dressing or locker rooms, toilet rooms, and garbage- and rubbish-storage areas shall be well lighted. All working surfaces shall be illuminated at not less than 20 foot candles of light. At least 10 foot candles of light shall be provided on all other surfaces and equipment. In storage areas five foot candles of light 30 inches from the floor is acceptable. Subdued lighting in dining rooms and public access areas is acceptable: Provided, that lighting meeting the standards of this section shall be available during all cleanup periods.

(p) **Ventilation:** All rooms in which food is prepared or served or utensils are washed, dressing or locker rooms, toilet rooms, and garbage- and rubbish-storage areas shall be well ventilated and free of disagreeable or excessive odors, condensation, vapors, smoke and fumes. Ventilation hoods and devices shall be designed to prevent grease or condensate from dripping into food or onto food preparation surfaces. Air replacement vents shall be provided and designed to permit the entrance of an equal volume of displaced air and to prevent the entrance of insects, dust, or other contaminating materials. During seasons when weather conditions require tempering of make-

up air, adequate equipment shall be provided to temper the make-up air. Every gas- or oil-fired room heater or water heater shall be vented to the outside air in accordance with the American Gas Association Standards entitled, "Installation of Gas Appliances and Gas Piping," September, 1964.

(q) **Dressing Rooms and Lockers:** Adequate facilities shall be provided for the orderly storage of employees' clothing and personal belongings. Where employees routinely change clothes within the establishment, one or more dressing rooms or designated areas shall be provided for this purpose. Such designated areas shall be located outside of the food preparation, storage, and serving areas, and the utensil-washing and storage areas: Provided, that when approved by the Board, such an area may be located in a storage room where only completely packaged food is stored. Designated areas shall be equipped with adequate lockers, and lockers or other suitable facilities shall be provided in dressing rooms. Dressing rooms and lockers shall be kept clean.

(r) **Housekeeping:** All parts of the establishment and its premises shall be kept neat, clean, and free of litter and rubbish. Cleaning operations shall be conducted in such a manner as to minimize contamination of food and food-contact surfaces. None of the operations connected with a food-service establishment shall be conducted in any room used as living or sleeping quarters. Soiled linens, coats, and aprons shall be kept in suitable containers until removed for laundering. No live birds or animals shall be allowed in any area used for the conduct of food-service establishment operations: Provided, that guide dogs accompanying blind persons may be permitted in dining areas.

(s) Temporary or limited food service establishments. A temporary or limited food service establishment shall comply with all provisions of 7 MCAR SS 1.161-1.165 which are applicable to its operation; provided, that the commissioner may augment such requirements when needed to assure the service of safe food, may prohibit the sale of certain potentially hazardous food, and may modify specific requirements for physical facilities when in his opinion no health hazard will result.

(t) **Embargo, Condemnation and Tagging:** Equipment and utensils which do not meet the requirements of this regulation may be embargoed. Equipment and utensils shall be released from the embargo upon notification of the Board by the licensee of alteration of such equipment or utensils to meet the requirements of this regulation, and after inspection of such utensils and equipment by the Board. The Board may condemn and forbid the sale of, or cause to be removed or destroyed, any food which is unwholesome or adulterated, or prepared, processed, handled, packaged, transported or stored in any unwholesome manner unfit for human consumption or otherwise prohibited by State or Federal law. The Board may condemn and cause to be removed any equipment, clothing or utensils found in a food establishment, the use of which would not comply with this regulation or which is being used in violation of this regulation, and also may condemn or cause to be removed any equipment, clothing or utensils which, by reason of dirt, filth, extraneous matter, insects, corrosion, open seams or chipped or cracked surfaces, is unfit for use. The Board shall place a tag to indicate the embargo or the condemnation upon such food, equipment, utensils or clothing. No person shall remove such tag except under the direction of the Board.

(u) **Plan Review of Future Construction:** When an establishment licensed or to be licensed under the provisions of Section 157.03 Minnesota Statutes is hereafter constructed or extensively remodeled, or when an existing structure is converted for use as a licensed establishment, properly prepared plans and specifications for such construction, remodeling, or alteration, showing layout, arrangement, and construction materials of work areas, and the location, size, and type of fixed equipment and facilities, shall be submitted to and approved by the Board before such work is begun. The plans and specifications shall be submitted in duplicate and drawn to scale, shall be legible and complete in all details. The Board shall review such plans and report their findings within 15 working days of the date that plans are received.

(v) **Procedure When Infection is Suspected.** When the Board has reasonable cause to suspect possibility of disease transmission from a food service establishment employee, the Board shall secure a morbidity history of the suspected employee, or make such other investigation as may be indicated, and take appropriate action. The Board may require any or all of the following measures: (a) the immediate exclusion of the employee from all food-service establishments; (b) the immediate closure of the food-service establishment concerned until, in the opinion of the Board, no further danger of disease outbreak exists; (c) restriction of the employee's services to some area of the establishment where there would be no danger of transmitting disease; and (d) adequate medical and laboratory examinations of the employee, of other employees, and of his or their body discharges.

(w) Emergency first aid for choking. Any food service establishment which is not a temporary or limited food service establishment shall post a chart illustrating the use of an emergency first aid procedure which is approved by the commissioner for use to relieve a patron with a restricted airway. Such an illustration shall be posted in the food preparation area where all employees may easily see it.

4401-4412

MHD 164 RESCINDING OF EXISTING REGULATIONS. The following regulation is hereby rescinded: Regulation 10947 dated July 1, 1961.

4401-4412

7 MCAR S 1.165 Initial and renewal license fees; license expiration dates.

A. Fee schedule. Initial and renewal license applications for food and beverage establishments as defined in 7 MCAR S 1.162 shall be accompanied by the applicable fee as determined from the schedule below. The average number of employees shall be computed in accordance with Minnesota Statutes, section 157.03.

Food or Beverage Establishment Fee Schedule

Number of Employees	Fee
1 - 4	$21.00
5 - 18	$36.00
19 - 28	$54.00
29 - 35	$75.00
36 and over	$90.00
limited or temporary food service	$15.00

B. Expiration date. Initial and renewal food and beverage establishment licenses shall be issued for the calendar year for which application is made and shall expire on December 31 of such year.

C. License renewals. License renewals shall be obtained on an annual basis. License renewal applications shall be submitted to the State Board of Health on forms provided by it no later than December 31 of the year preceding the year for which application is made.

D. Penalty fee. A penalty fee of $10 shall be added to the amount of the license fee if the license renewal application has not reached the office of the State Board of Health before January 31 of the year for which the license is to be issued, or in the case of a new business, 30 days after the opening of such business.

E. Reduced license fee. From and after October 1 of each year, the license fee for new establishments or operators shall be one half of the appropriate annual license fee plus any penalty which may be required.

4401-4412

MDH 171 Private baby homes and infant homes.

(a) Rooms for babies must have plenty of fresh air and sunshine, preferably southern exposure, with at least one good-sized window opening outside. There must be adequate outside ventilation, both winter and summer.

(b) Temperature in the room must be maintained at from 65 to 76 degrees F.

(c) Beds for infants over three months must be at least six feet apart unless separated by suitable screens.

(d) Babies with communicable diseases must be kept in separate rooms away from all other babies.

(e) All soiled napkins must be thoroughly boiled.

(f) All milk given babies must be boiled two minutes.

(g) Babies under six months of age must have a diet prescribed by a licensed physician. Such babies must be seen and examined by the physician at least once a month.

(h) Any baby losing weight or any baby who fails to gain an average weight of four ounces per week for two consecutive weeks must be seen in person by a licensed physician.

DEPARTMENT OF HEALTH

Chapter Eleven

7 MCAR § 1.172 Rules relating to tests of infants for inborn metabolic errors causing mental retardation.

A. Purpose and scope of the rule. This Rule describes the responsibilities of the hospitals, physicians and the Minnesota Department of Health to assure that all newborn infants are screened for phenylketonuria, galactosemia and hypothyroidism.

B. Definitions. For the purposes of this Rule, the following terms have the meanings given them:

1. "Attending physician" means the physician who is identified on the specimen card as the physician submitting the specimen.

2. "Newborn infant" means a child from birth through the first five days of life.

3. "Positive screening results" means that laboratory tests clearly indicate that the child has a high risk for developing one or more of the diseases covered by this Rule.

4. "Responsible party" means the administrative officer or other person in charge of each hospital where the child is born, and the physician or other person operating under the supervision of a physician in attendance at the birth, or if not so attended, one of the parents.

5. "Screen" means to carry out a series of laboratory tests on a dried capillary blood specimen which will identify those newborn infants who may develop phenylketonuria, galactosemia and/or hypothyroidism.

6. "Specimen" means a specimen of dried capillary blood from the newborn infant collected on a specimen card.

7. "Specimen card" means a filter paper card provided by the Minnesota Department of Health and used to collect the specimen.

C. Responsibilities of parties involved in the newborn metabolic screening program.

1. The responsible party shall do all of the following:

a. Inform the parent(s) or legal guardian that their newborn(s) will be screened for the metabolic diseases phenylketonuria, galactosemia and hypothyroidism, and explain the reasons for such screening and their right to refuse this screening on the grounds that such tests conflict with their religious tenets and practices.

b. Collect or have collected a specimen for screening no later than the fifth day after the infant's birth, unless the parents lawfully object to such screening. If this specimen is taken prior to the third day of life or prior to 24 hours after beginning breast or milk formula feeding, the responsible party shall notify the parents or legal guardian verbally and in writing of the necessity of having the PKU test repeated on their newborn not later than the 14th day of life. If taking a blood sample at the times specified above is medically contraindicated, the sample shall be taken as soon as the infant's condition permits.

c. Record on a permanent record the date the specimen is collected.

d. Send the specimen and the following information to the Minnesota Department of Health laboratory within 24 hours after collection:

(1) Newborn Infant's Name

(2) Sex

(3) Mother's Name

(4) Home Address

(5) Date of Birth

(6) Date of First Feeding

(7) Date Specimen Collected

(8) Name and Address of Attending Physician and Hospital Submitting Specimen

(9) County

(10) Premature (Yes or No)

(11) Bottle Breast Both

e. If the newborn infant is transferred to a second health care facility before the specimen is collected, the responsible party shall inform the second facility of this fact and may delegate to it the responsibility for collecting and transmitting the specimen.

2. The Minnesota Department of Health shall do all of the following:

a. Develop specimen cards and make them available at no charge to the responsible party.

b. Maintain a record of all cases of phenylketonuria, galactosemia and hypothyroidism reported to it.

c. Notify the attending physician within 24 hours, verbally and in writing by deposition in first class mail, of positive screening results and provide consultation on diagnostic and treatment sources available.

3. The attending physician shall do all of the following:

a. Report, in writing, all confirmed diagnoses of phenylketonuria, galactosemia and hypothyroidism to:

Human Genetics Unit
Minnesota Department of Health
717 S.E. Delaware Street
Minneapolis, MN 55440

b. If he refers a patient with positive screening results to a medical specialist for diagnosis and/or treatment, he may delegate the responsibility for reporting a confirmed diagnosis to the medical specialist.

4401-4412

MHD 173 Reporting of maternal deaths.

Any death associated with pregnancy, including abortion and extrauterine pregnancy, or the puerperium for a period of three months postpartum, whether or not it is the actual cause of death, shall be reported by mail within three days after death to the Minnesota Department of Health, section of maternal and child health, by the attending physician and by the hospital where the death occurred.

DEPARTMENT OF HEALTH

RULES RELATING TO THE APPROVAL OF EARLY AND PERIODIC HEALTH AND DEVELOPMENTAL SCREENING PROGRAMS

CHAPTER ELEVEN: 7 MCAR §§ 1.174-1.178

7 MCAR § 1.174 General.

A. Declaration of purpose, scope and applicability. The purpose and scope of these Rules is to establish minimum standards and procedures for MDH approved nurse-administered local provision of comprehensive health screening of children.

These Rules apply to those organizations seeking MDH approval in order to qualify for reimbursement by third parties for which such reimbursement requires MDH approval; and constitutes standards for the nurse-supervised EPSDT programs as prescribed in Department of Public Welfare (DPW) Rule 12 MCAR § 2.061 and Preschool Screening Program as prescribed in Department of Education (SDE) 5 MCAR §§ 1.0720-1.0725.

B. Definitions. For the purposes of these Rules the following terms have the meanings given them:

1. "Applicant" means a local organization, such as but not limited to a community health agency, hospital, voluntary nonprofit group or school, which is seeking approval and has submitted for approval a completed plan for an Early and Periodic Screening (EPS) program.

2. "Application" means a written request for MDH program approval in a format as specified by the MDH. This format shall require submission of the information required by 7 MCAR § 1.176 A., B., C., herein.

3. "Approved program" means a screening program which offers regularly scheduled comprehensive health screening for children from birth through 20 years of age, in accordance with the standards contained in 7 MCAR § 1.175, and which has been approved by MDH.

4. "Children" means those individuals from birth through 20 years of age.

5. "Diagnosis" means the systematic classification of the nature or the cause of physical or mental disease or abnormality through the combined use of health history, physical, developmental and psychological assessments and laboratory tests and x-rays.

6. "Early" means the entrance of a child to the health care system at his/her youngest possible age.

7. "EPS" means Early and Periodic Screening.

8. "EPS trained nurse" means the nurse who is trained to perform the screening assessments and tests in an approved program inasmuch as she meets the qualifications as contained in 7 MCAR § 1.175 B. 1. b.

9. "MDH" means the Minnesota Department of Health.

10. "Periodic" means health screening occurring at predetermined intervals.

11. "Periodicity schedule" means the schedule set out in 7 MCAR § 1.175 A. 3., and which specifies the frequency and age ranges at which the specified screening assessments and tests are to be administered to a child.

12. "Physician Integration Plan" means the option whereby an MDH approved program seeks to extend its services by substituting a physician-administered health history, physical examination and laboratory services, and immunizations for the nurse-administered health history, physical assessment and laboratory services.

13. "Preschool Screening Program" means the health and developmental screening program under the auspices of the Department of Education, whereby children are screened once before they enter kindergarten, pursuant to Minn. Stat. § 123.701 et seq.

14. "Screening" means the use of those simple and quick procedures as outlined in 7 MCAR § 1.175 A. 2. to sort out apparently well children from those in need of more definitive study of possible physical or developmental problems.

15. "EPSDT Invoice" means a report when completed by approved programs and submitted to MDH provides a summary of results of screening for each child and contains data which can be used for MDH and local program analysis and evaluation pursuant to 7 MCAR § 1.178 E.

16. "Sliding fee scale" means a predetermined schedule which identifies the amount to be paid by the parent(s) or guardian(s) toward the cost of screening. The sliding fee scale is developed by the applicant or approved program and is based on such factors as average incomes for the region, individual family income and the number of persons in the family.

17. "Third party reimbursement" means payment to approved programs, by sources other than the child, or his/her parent(s) or guardian(s) and which is applied to the cost of screening. The sources of this reimbursement may include Title XIX (Medical Assistance), other federal, state or local monies, insurance benefits or in-kind contributions converted into dollar equivalency.

18. "Title XIX (Medical Assistance)" means the program authorized

under the Social Security Act, USC 42, Title XIX - Sec. 1901-1910, and rules promulgated thereunder, to provide medical care for individuals whose resources do not enable them to purchase such care.

19. "Tracking" means documenting the results of diagnosis and treatment resulting from the screening of a child. This data also may be used to evaluate the type and appropriateness of referrals.

20. "Treatment" means medical, dental, nursing, preventive, rehabilitative or other relevant services to prevent, correct, or ameliorate disease or disability detected by diagnostic services for a qualified professional.

7 MCAR § 1.175 Minimum standards to qualify for MDH approval.

A. Applicants seeking MDH program approval shall develop a screening program containing the following components:

1. An outreach component which shall include a demonstrated ability to stimulate or encourage participation in the screening program.

a. Information about a screening program may be disseminated by a variety of methods such as the following:

(1) Person-to-person communication.

(2) Public information outreach such as, but not limited to, planned meetings with groups, contacts with agencies such as schools or Head Start, in order to obtain assistance with regard to their specific child populations, distribution of pamphlets, use of the mass media.

b. Outreach efforts shall be coordinated with the outreach function of local welfare departments in relation to children under the Title XIX (Medical Assistance) Program and with local school districts in relation to children under the Preschool Screening Program.

2. A screening component which shall include a demonstrable ability to provide at least the following assessments and tests which must be available at the frequency and age ranges as specified in the Periodicity Schedule found in 7 MCAR § 1.175 A. 3.

a. A health history assessment which shall include at least an individual review of past and present health status including perinatal, psychosocial and family health.

b. An immunization assessment which shall include a review of the immunization status of the child in relation to the following immunizations: diphtheria, pertussis, tetanus, polio, measles, mumps, rubella.[1]

[1] It is recommended that approved programs provide immunizations on site.

c. A nutrition status assessment which shall include at least a review of the child's food intake for a 24-hour period preceding screening.

d. A physical growth assessment which shall include measurement of the child's height, weight, and head circumference and comparison with the ranges considered normal for children of that age.

e. An unclothed physical assessment which shall include pulse, respiration, blood pressure, head, eyes, ears, nose, pharynx, neck, chest, heart, lungs, genitals, abdomen, spine, extremities, joints, muscle tone, skin and neurologic reaction.

f. A dental inspection which shall include inspection of the child's mouth for any evident oral or dental abnormalities.

g. Developmental screening tests which shall assess the child's development in the areas of fine and gross motor skills, speech and language, social-emotional behavior and self-help skills.

(1) In order to assess these developmental areas, MDH recommends the use of the Denver Prescreening Developmental Questionnaire (PDQ) and the Denver Developmental Screening Test (DDST) with its manual or an acceptable alternative meeting the criteria of 7 MCAR § 1.175 A. 2. g. (2).

(2) Alternative tests shall be approved as substitutes for the Denver Developmental Screening Test (DDST) provided the following criteria in (a) (b) herein are fulfilled:

(a) An applicant considering substitution for the Denver Prescreening Developmental Questionnaire (PDQ) and the Denver Developmental Screening Test (DDST) shall submit a narrative which describes the alternative test in the following areas: content and construction of the test, norms, administration, scoring and interpretation, validity and reliability.

(b) In order to secure approval of an alternative test, such a test must be standardized and able to provide at a minimum:

i. Written procedures for administration and scoring.

ii. Evidence of validated norms for age range being tested.

iii. The same information regarding the child's development as would be provided through the use of the Denver Developmental Screening Test (DDST).

h. A hearing assessment shall include procedures which test for deviations from the normal range of auditory acuity.

(1) MDH approved programs must use the puretone audiometric screening procedure. A Verbal Auditory Screening for Children (VASC) hearing procedure as described in the 1977 Edition of "Fortunate Fours: Preschool Medical Survey of Vision and Hearing" may be used for four-year-old children.

i. A vision assessment shall include procedures which test for eye health deviations, including the normal range of visual acuity and muscle balance in the child. Approved programs must:

(1) Observe and examine the child's pupils and light following reflex, presence or absence of nystagmus, muscle balance, and an inspection of the eyes.

(2) Muscle balance screening procedures include at least observation, cover test, Hirschberg Test. The Worth 4-Dot may be used for children age five or over who are cooperative.

(3) Test for visual acuity. A test, as appropriate for the child's age, such as the Screening Test for Young Children and Retardates (STYCAR), the Snellen E Cube, the Snellen E Chart, and the Plus Lenses shall be used.

j. Laboratory tests: The following tests shall be administered according to the Periodicity Schedule found in 7 MCAR § 1.175 A. 3.

(1) Urine and bacteriuria (Bililabstix and Culturia Assay) test for bacteria and other abnormal substances in the urine.

(2) Anemia (Microhematocrit, Hemoglobin) tests.

(3) A Blood Lead test for increased lead absorption and for lead poisoning in children whose history indicates the possibility of exposure to undue levels of lead in the environment or atmosphere.

(4) A Sickle Cell test shall be administered only with the consent of the parent(s), or guardian(s), or the child, if he/she is over 18 years, and only to those children at risk for the sickle cell trait or disease.

3. The assessment and tests listed above shall be available on the following periodic schedule.

EPS PERIODICITY CHART

INTERVALS (1)	MONTHS					YEARS					
	6-7	8-11	12-15	16-19	20-35	3-4	5-7	8-10	11-13	14-17	18-21
History											
Health	X	X	X	X	X	X	X	X	X	X	X
Perinatal	X	◄	◄	◄	◄	◄					
Psychosocial	X	X	X	X	X	X	X	X	X	X	X
Nutrition	X	X	X	X	X	X	X	X	X	X	X
Immunization Review	X	X	X	X	◄	◄	X	◄	◄	X	◄
Developmental											
DDST	X	X	◄	◄	◄	X					
PDQ			X	X	X						
Assessment											
Height	X	X	X	X	X	X	X	X	X	X	X
Weight	X	X	X	X	X	X	X	X	X	X	X
OFC	X	X	X	X	X	◄	◄				
Physical Inspection	X	X	X	X	X	X	X	X	X	X	X
Oral Inspection	X	X	X	X	X	X	X	X	X	X	X
Blood Pressure						X	X	X	X	X	X
Tests											
Hearing	X	◄	X	X	X	X	X	X	X	X	X
Vision	X	◄	X	◄	X	X	X	X	X	X	X
Urine (BiliLabstix)						X	◄	◄	◄	◄	◄
*Bacteriuria (females)						X	◄	X	◄	◄	◄
Microhematocrit or Hgb.	X	◄	X	◄	X	X	◄	◄	◄	X	◄
Blood Lead (Only if history positive)			X	◄	X	X					
Sickle Cell (Upon parental request)	X	◄	◄	◄	◄	◄	◄	◄	◄	◄	◄

(1) The period, birth to six months, is not addressed in the program based upon the assumption that nearly all children of this age interval are receiving ongoing physical care.

Procedure to be completed if not done at the previous visit; or on the first visit.

* The local agency may wish to consult with the local medical society regarding use of this procedure.

4. An interpretation and parent education component which shall include discussions aimed at sharing with the family and child information collected during screening. These discussions must incorporate guidance regarding sound health practices, normal growth and development, and the clarification of any concerns on the part of the child or family. A copy of the screening results shall be given to the parents.

5. A referral component which shall include an organized system of arranging for children with problems identified through screening to be seen by an appropriate resource for evaluation, diagnosis or treatment. Arrangements shall be made to establish all children who have been screened with ongoing health care services. Whenever a child identifies a personal physician, that person shall be notified of the referral.

6. A follow-up component which shall include an organized system for securing information on children who are referred to another resource for evaluation, diagnosis and treatment. Follow-up efforts are to assure that the required services were made available and to evaluate the effectiveness of the screening program.

a. A follow-up plan shall consist of at least the following:

(1) Written and formal arrangements with other agencies such as the county welfare departments, Head Start, Developmental Achievement Centers, community action councils, public health nursing services, and school services to define and coordinate each agency's responsibilities with respect to follow-up.

(2) A description of activities such as personal contact with the child, family or referral resource. At least two attempts shall be made to contact parent(s) or provider(s) concerning diagnosis and treatment results.

(3) A written identification of nursing personnel who shall have supervisory responsibility for follow-up.

B. Personnel for EPS Screening of Children.

1. Qualifications and/or responsibilities of the screening personnel: An individual may perform one or more of the functions in the screening program provided that the appropriate qualifications are met. The use of volunteers is encouraged in the screening program, providing they meet the qualifications as defined in 7 MCAR § 1.175 B. 1. a.-f.

a. EPS clinic coordinator shall have the responsibility for coordination and management of the local screening program. These responsibilities include management as well as specific organization of activity in the clinics.

b. EPS trained nurse shall meet all of the following criteria:

(1) Be currently licensed as a professional nurse by the Minnesota Board of Nursing.

(2) Have successfully completed EPS training seminars provided by MDH, or have participated in equivalent training programs designated by MDH.

(3) Demonstrate ability to satisfactorily perform to an EPS Consultant designated by MDH, those child assessments as required in 7 MCAR § 1.175 A. 2. a.-j.

c. EPS Laboratory Assistant shall be:

(1) A lab technician or an assistant who can document training in performing the specific tests used in the screening session under the supervision of the EPS nurse.

d. EPS Vision and Hearing Technician shall:

(1) Have documentation of the successful completion of a course in vision and hearing screening offered by MDH and demonstrate ability to satisfactorily perform the vision and hearing screening as required in 7 MCAR § 1.175 A. 2. h. i. and;

(2) If the VASC is used, have documentation of the completion of training to perform the Verbal Auditory Screening of Children (VASC).

e. EPS Clinic Assistant shall:

(1) Be able to document the completion of training in the administration of the developmental tests selected for use in the screening program. Such training may be provided by the EPS nurse or consultant who has documented training in developmental testing from institutions such as, but not limited to, area mental health centers, or community colleges and schools.

(2) Have experience in working with children either through paid employment or volunteer activity.

C. The physical facility shall meet the following requirements:

1. As appropriate, areas shall be provided for screening procedures, waiting, and play areas.

2. Physical privacy shall be maintained for interviewing and physical assessment.

3. Equipment needed for the assessments and tests shall be available to the program and maintained in serviceable and reliable condition so as to insure the integrity of the tests specified in 7 MCAR § 1.175 A. 2. a.-j.

7 MCAR § 1.176 Application procedures for EPS program approval.

A. Local organizations shall notify MDH in writing of their intent to estab-

lish an EPS program and to apply for MDH program approval in accordance with the standards specified in these Rules. The sections of the application addressing Statement of Need, and Evaluation and Fiscal Management, shall be considered for purposes of program planning at state and local level and, if necessary, for provision of technical consultation by MDH. The section of the application relating to the Methods of Accomplishing Program Components, and Personnel shall be applicable to the approval process as defined in 7 MCAR § 1.176 D.

B. Upon receipt of the letter of intent, MDH shall transmit application instructions to the applicant.

C. Submission of Application. The applicant shall submit the completed application to MDH and to the MDH District Nursing Consultant for the district in which the applicant is located. The application shall include at least the following information;

1. A Statement of Need for EPS - The applicant shall provide a general statement of the extent of the need for this kind of preventive health service in the community to be served and includes information on the following:

a. The geographic area of the proposed program.

b. The age range and numbers of children to be served in each age group.[1]

c. The estimate of the number of Title XIX (Medical Assistance) eligible children identified in each age group.

d. The identification of all the school districts within the geographic area of the proposed program.

e. The identification of other child and adolescent health screening programs in the area and specification of how the proposed program will coordinate with these programs.

f. The identification of existing and on-going health services in the community to prevent duplication of services and care, and how this proposed program will coordinate and utilize the existing network.

2. A description of the method of accomplishing each of the program components: outreach, screening and interpretation, education, referral and follow-up.

3. Personnel - Outline the number and type of personnel necessary to implement each component and the plans for training personnel.

4. Evaluation - Outline the methods other than those specified in this

[1] An applicant may elect to serve only one age group of children.

Rule, by which the applicant will evaluate its own program. Such methods may include parent surveys, and/or analysis of the use of referral resources, and numbers of children screened.

5. Fiscal Management - include the following:

a. The method for determining unit cost.

b. The plan for implementing a sliding fee scale and for collecting third-party reimbursements and a copy of the sliding fee scale except where prohibited by Laws of 1977 ch. 437, the Preschool Screening Act.

c. The copy of the authorization from the duly constituted authority (such as county commissioners, city councils) to charge fees for services, except as prohibited by Laws of 1977 ch. 437, the Preschool Screening Act.

D. Review and disposition of application. There shall be a two stage approval process.

1. With regard to the first stage of approval:

a. Upon receipt, the application shall be reviewed by MDH staff in order to determine that it contains the information specified in 7 MCAR § 1.176 C. 1.-5.

b. The MDH staff shall make arrangements for the local EPS personnel to be trained in EPS seminars.

c. An initial screening session shall be scheduled by the applicant. An EPS Consultant, as designated by MDH will be assigned to the applicant for on-site consultation to assist the applicant to develop adequate skills. A subsequent consultation may be provided as necessary.

2. Provisional approval.

a. Upon completion of application, training, the initial screening session, and a satisfactory EPS consultant report, the Commissioner of Health shall grant provisional approval to the applicant prior to any other screening of children by the applicant. Provisional approval by MDH shall constitute approval for purposes of other governmental agencies and their provision of third-party reimbursement.

b. In the event that MDH staff intends to recommend to the Commissioner of Health a denial of provisional approval, the staff shall notify the applicant in writing of the conditions necessary to gain approval. Technical assistance and consultation shall be offered by MDH to the applicant.

c. If following the offer of consultation and with reconsideration MDH staff intends to recommend to the Commissioner of Health denial of provisional approval, the staff shall notify the applicant at least 35 days prior

to the submission of the recommendation to the Commissioner of Health. If the applicant contests the proposed staff recommendation to deny provisional approval, it shall request in writing a hearing within 30 days of receipt of the proposed staff recommendation or otherwise it shall be deemed to concur with the staff recommendation. This hearing shall be conducted in accordance with the Minnesota Administrative Procedures Act and the Rules of the Office of Hearing Examiners.

3. With regard to the final stage of approval:

a. A second visit shall be made by the EPS Consultant within the first six months of the program's operation to evaluate the screening program and staff performance to assure implementation and fulfillment of the program components as specified in 7 MCAR § 1.175 A., B., C.

b. The MDH staff shall make a final staff review of the screening program. This review consists of the EPS Consultant's evaluation of the ability of program personnel to adequately perform the screening procedures as outlined in the Rule, the MDH District Nursing Consultant's evaluation of the overall program administration and a review of the application in accordance with standards as specified in 7 MCAR § 1.175 A., B., C.

c. If the Commissioner of Health concurs with staff comments and recommendation, the Commissioner shall notify the applicant within 30 days of final approval.

Such approval by MDH shall constitute approval for purposes of other governmental agencies and their provision of third-party reimbursement.

d. If not in substantial compliance:

(1) The conditions necessary to gain approval shall be stated in writing by MDH staff to the applicant. Technical assistance and consultation shall be offered by MDH staff to the applicant.

(2) If following the offer of consultation and reconsideration, MDH staff intends to recommend to the Commissioner of Health a denial of final approval, the staff shall notify the applicant in writing of the reasons therefore at least 35 days prior to the submission of the recommendation to the Commissioner of Health. If the applicant contests the proposed staff recommendation to deny approval, it shall request in writing a hearing, within 30 days of the receipt of the proposed staff recommendation, or otherwise it shall be deemed to concur with the staff recommendation. This hearing shall be conducted in accordance with the Minnesota Administrative Procedures Act and the Rules of the Office of Hearing Examiners.

E. Annual reapproval.

1. An approved program shall be reviewed annually by the MDH staff

to determine if approval status shall continue. Reapproval shall be based on the program's continued compliance with the standards specified in 7 MCAR § 1.175 A., B., C.

2. The Commissioner of Health shall notify the program within 30 days after receipt of the staff recommendation of reapproval.

3. In the event that MDH staff intends to recommend to the Commissioner of Health a denial of reapproval, the staff shall notify the program in writing of the conditions necessary to gain reapproval. Technical assistance and consultation shall be offered by MDH to the program. If following the offer of consultation and with reconsideration, MDH staff intends to recommend to the Commissioner of Health denial of reapproval, the staff shall notify the program at least 35 days prior to the submission of the recommendation to the Commissioner of Health. If the program contests the proposed staff recommendation to deny reapproval, it shall request in writing a hearing within 30 days of receipt of the proposed staff recommendation or otherwise it shall be deemed to concur with the staff recommendation. This hearing shall be conducted in accordance with the Minnesota Administrative Procedures Act and the Rules of the Office of Hearing Examiners.

7 MCAR § 1.177 MDH responsibilities in relation to applicants and approved programs.

A. The MDH shall provide technical assistance and consultation for the planning, implementing and administering of EPS programs and those programs seeking approval.

B. The MDH shall survey and evaluate approved programs on a periodic basis to assure compliance with the standards contained in these Rules.

C. The MDH shall provide in-service EPS training seminars for local staff based upon the needs as determined jointly by approved programs and MDH staff. This training shall address at least the following areas:

1. Administration of EPS.

2. Pediatric nursing skills in relation to the specific screening assessments and tests of children.

7 MCAR § 1.178 Approved program responsibilities.

A. Approved programs shall provide EPS service in accordance with or exceeding the standards contained in these Rules.

B. Approved programs shall refer children to an appropriate resource for evaluation, diagnosis and treatment. Whenever a child identifies a personal physician that person shall be provided a copy of the screening results with the approval of the parent/guardian or emancipated child.

C. Approved programs shall assure that EPS personnel obtain continuing education in order to maintain or improve clinical skills. This training may be provided by MDH or the University of Minnesota, School of Public Health. The content shall relate to child ambulatory health care, screening principles and clinical skills.

D. Approved programs shall coordinate the EPS program with schools or other community child health programs and health care providers.

E. Approved programs shall participate in evaluation of their programs and submit evaluation data as requested by MDH. This data includes at least an EPSDT Invoice and forms for tracking diagnosis and treatment results. Data provided to MDH by approved programs may be summarized and the child's identity shall remain anonymous.

F. Approved program option. Approved programs may include the Physician Integration Plan, provided such a plan meets or exceeds the standards contained in these Rules. If this plan is included, the health history, physical examination and the laboratory tests shall be performed on the child, under a physician's supervision. This examination shall be performed within the previous 6 months if the child is under the age of 2, within 12 months if the child is 2 years or older, or 60 days after the provision of the other EPS screening tests (vision, hearing, and developmental). There shall be a mutual exchange of information to assure that each provider has the complete health and developmental profile of the child.

Minnesota State Board of Health

REGULATIONS ON IONIZING RADIATION

CHAPTER TWELVE

MHD 181 General Provisions

(a) **Declaration of Purpose and Scope**

Whereas, ionizing radiation can be instrumental in the improvement of health, welfare, and productivity of the public if properly utilized, and may impair the health of the people and the industrial and agricultural potentials of the State if improperly utilized, and the Board has the statutory authority and duty to adopt, alter, and enforce regulations for the preservation of the public health and thereby to control sources of ionizing radiation and the handling, storage, transportation, use, and disposal of radioactive isotopes and fissionable materials within this State, and to observe their effect upon human health, it is hereby declared to be the purpose of the Board in these regulations to secure information concerning the nature and extent of the employment of radiation-emitting equipment and radioactive materials within this State, and to control or prevent dangers to health from ionizing radiation without limiting or interfering with the constructive uses of radiation consistent with a policy of reducing radiation exposure to persons and the general public by all practical means. The scope of these regulations does not include, except for the provision of registration, those sources of ionizing radiation known as byproduct materials, source materials, or special nuclear material.

(b) **Definitions**

Appropriate limit or appropriate limits—The maximum permissible dose or doses of radiation that may be administered to the whole body or a given part of a human being. See "maximum permissible concentrations," "maximum permissible doses," and "maximum permissible neutron radiation."

Attenuation—The reduction of exposure rate upon passage of radiation through matter.

Board—The Minnesota State Board of Health.

Collimation—The restriction of the useful beam to an appropriate area.

Commissioner—The Commissioner of the Minnesota Department of Health.

Controlled area—A defined area in which the exposure of persons to radiation is under the supervision of a Radiation Protection Supervisor. (This implies that a controlled area is one that requires control of access, occupancy, and working conditions for radiation protection purposes.)

Curie (Ci)—The special unit of activity equal to a disintegration rate of 37 billion disintegrations per second. One millicurie (mCi) equals 0.001 curie; one microcurie (uCi) equals 0.000001 curie.

Dead-man switch—A switch so constructed that a circuit-closing contact can be maintained only by continuous pressure on the switch.

Diagnostic-type protective tube housing—An x-ray tube housing so constructed that the leakage radiation measured at a distance of 1 meter from the source cannot exceed 100 milliroentgens in 1 hour when the tube is operated at its maximum continuous rated current for the maximum rated tube potential.

Dose equivalent (DE)—A quantity used for radiation protection purposes that expresses on a common scale for all radiations the irradiation incurred by exposed persons. It is defined as the product of the absorbed dose in rads and certain modifying factors. The unit of dose equivalent is the rem. (The modifying factors are:

1 for gamma and x rays and beta particles

10 for alpha particles and for neutrons

10 for protons with energies up to 10 million electron volts

20 for heavy ions

For x and gamma rays, the dose in rems may be assumed to be numerically equivalent to the exposure in roentgens and the absorbed dose in rads.)

Filter-filtration—Material in the useful beam which absorbs preferentially the less penetrating radiation.

Healing arts—Health professions for diagnostic and/or healing treatment of human and animal maladies including but not limited to the following which are duly licensed by the State of Minnesota for the lawful practice of: medicine and its associated specialties, dentistry, veterinary medicine, osteopathy, chiropractic, and podiatry.

Half-value layer (HVL)—Thickness of a specified substance which, when introduced into the path of a given beam of radiation, reduces the exposure rate by one half.

High radiation area—Any area, accessible to individuals, in which there exists radiation at such levels that a major portion of the body could receive in any 1 hour a dose in excess of 100 millirem.

Industrial radiographer—Any individual who performs or who, in attendance at the site where sources of radiation are being used, personally supervises industrial radiographic operations and who is responsible to the registrant for assuring compliance with the requirements of these regulations.

Industrial radiography—The examination of the macroscopic structure of materials by nondestructive methods utilizing sources of radiation.

Inherent filter—The filter permanently in the useful beam; it includes the window of the x-ray tube and any permanent tube or source enclosure.

Interlock—A device which automatically causes a reduction of the exposure rate upon entry by personnel into a high radiation area. Alternatively, an interlock may prevent entry into a high radiation area.

Ionizing radiation—See radiation.

Iso-line—A line, usually irregular, along which the exposure rates are the same at any point.

Kilovolt peak (kVp)—The crest value in kilovolts of the potential difference of a pulsating potential generator. When only one half of the wave is used, the value refers to the useful half of the cycle.

Lead equivalence—The thickness of lead affording the same attenuation, under specified conditions, as the material in question.

Leakage radiation—See radiation.

Maximum permissible concentrations (MPC)—Those amounts listed as maximum permissible concentrations in Handbook 69, "Maximum Permissible Body Burdens and Maximum Permissible Concentrations of Radionuclides in Air and in Water for Occupational Exposure," U. S. Department of Commerce, National Bureau of Standards, June 5, 1959.

Maximum permissible dose or dose equivalent (MPD)—For radiation protection purposes, the maximum dose equivalents that persons shall be allowed to receive in a stated period of time (see Table 1 in the Appendix). This excludes patients receiving radiation for diagnostic or therapeutic purposes under supervision of licensed practitioners of the healing arts.

Maximum permissible neutron radiation—The amount of neutron radiation in rems that is equivalent to the maximum permissible dose. Neutron flux dose equivalents are given in Table 2 of the Appendix.

One general site—The building or adjacent buildings at the same address in which the sources of ionizing radiation for the registrant are located.

Person—Any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, agency, political subdivision of this State, and any legal successor, representative, agent or agency of the foregoing, but not federal government agencies.

Personnel monitor—An appropriately sensitive device used to estimate the radiation exposure of an individual, (e.g., film badges, pocket chambers, pocket dosimeters, film rings, thermo-luminescent dosimeters, and other devices having the same purpose).

Picocurie—A micromicrocurie or that quantity of radioactive material which decays at the rate of 2.2 disintegrations per minute.

Primary beam—See radiation: useful beam.

Primary protective barrier—See protective barrier.

Protective apron—Apron made of radiation absorbing materials, used to reduce radiation exposure.

Protective barrier—A barrier of radiation absorbing material(s) used to reduce radiation exposure.

Primary protective barrier—Barrier sufficient to attenuate the useful beam to the required degree.

Screening—The testing with x-ray machines of human beings or human population groups for the detection or evaluation of health conditions when such x-ray tests are not specifically and individually ordered by a licensed healing arts practitioner, legally authorized to order such x-ray tests, 1) for the purpose of diagnosis or treatment or 2) as part of a physical examination conducted by a licensed practitioner. Screening does not include research protocols utilizing x-ray procedures when such protocols are part of research projects 1) sponsored or financed by agencies of the federal government, 2) conducted by educational institutions training practitioners of the

healing arts or, 3) conducted in hospitals, when such research is authorized by or under control of the governing body of that hospital.

Secondary protective barrier—Barrier sufficient to attenuate stray radiation to the required degree.

Protective glove—Glove made of radiation absorbing materials used to reduce radiation exposure.

Rad—A special unit of absorbed dose equal to 100 ergs per gram. One millirad (mrad) equals 0.001 rad.

Radiation—(Ionizing) Any electromagnetic or particulate radiation capable of producing ions directly or indirectly, by interaction with matter. (This includes gamma rays and x rays, alpha and beta particles, high-speed electrons, neutrons, protons, and other nuclear particles, but does not include sound or radio waves, or visible, infrared or ultraviolet light.)

Leakage radiation—All radiation coming from within the source or tube housing except the useful beam. (Note: Leakage radiation includes the portion of the direct radiation not absorbed by the protective source or tube housing as well as the scattered radiation produced within the housing.)

Scattered radiation—Radiation that, during passage through matter, has been deviated in direction. (It may have been modified also by a decrease in energy.)

Secondary radiation—Radiation emitted by an irradiated material such as bone or tissue and all inanimate objects.

Stray radiation—The sum of leakage and scattered radiation.

Useful beam—Radiation which passes through the window, aperture, cone or other collimating device of the source housing. Sometimes called "primary beam."

Radiation hazard—A condition under which persons might receive radiation in excess of the maximum permissible dose.

Radiation machine—Any device capable of producing radiation except devices which produce radiation only from radioactive material.

Radiation protection—The use of shielding, protective clothing, protective equipment, and other means to eliminate or reduce exposure to ionizing radiation.

Radiation protection survey—See survey.

Radiation Safety—A condition assumed to exist when following a policy of minimization the doses of radiation are eliminated or reduced to the lowest practicable amount and are less than those shown under the definitions of maximum permissible concentrations, maximum permissible doses, and maximum permissible neutron radiation.

Radioactive material—Any solid, liquid, or gaseous substance which emits radiation spontaneously.

Radiographic exposure device—Any device containing a sealed source, fastened or contained therein in which the sealed source or shielding thereof may be moved, or otherwise changed, from a shielded to an unshielded position for purposes of making a radiographic exposure.

Registrant—A person having possession of any source of ionizing radiation except those specifically exempted under MHD 181 (d) (1) or MHD 181 (d) (4), who has complied with MHD 181 (d) (1).

Rem—The unit of dose equivalent. One millirem (mrem) equals 0.001 rem.

Restricted area—Any area to which access or egress may be limited by the registrant for purposes of protection of individuals from exposure to radiation and radioactive materials.

Roentgen (R)—A special unit of exposure equal to 2.58×10^{-4} coulomb per kilogram of air. One milliroentgen (mR) equals 0.001 roentgen.

Scattered radiation—See radiation.

Secondary protective barrier—See protective barrier.

Secondary radiation—See radiation.

Source—A discrete amount of radioactive material or the target (focal spot) of the x-ray tube.

Storage container—A device in which sources are transported or stored.

Stray radiation—See radiation.

Survey—An evaluation of the adequacy of radiation protection and assessment of the situation incident to the production, use, release, disposal, or presence of sources of ionizing radiation under a specific set of conditions. When appropriate, such evaluation includes a physical survey of the location of materials and equipment, and measurements of levels of radiation or concentrations of radioactive material present in and around the installation.

Television receiver—An electronic product designed to receive and display a television picture through broadcast, cable, or closed-circuit television.

Therapeutic-type protective tube housing—

(1) For x-ray therapy equipment not capable of operating at 500 kilovolt peak (kVp) or above, the following definition applies: An x-ray tube housing so constructed that the leakage radiation at a distance of 1 meter from the source does not exceed 1 roentgen in an hour when the tube is operated at its maximum rated continuous current for the maximum rated tube potential.

(2) For x-ray therapy equipment capable of operation at 500 kilovolt peak (kVp) or above, the following definition applies: An x-ray tube housing so constructed that leakage radiation at a distance of 1 meter from the source does not exceed either 1 roentgen in an hour or 0.1 percent of the useful beam dose rate at 1 meter from the source, whichever is greater, when the machine is operated at its maximum rated continuous current for the maximum rated accelerating potential.

(3) In either case, small areas of reduced protection are acceptable provided the average reading over any 100 square centimeters area at 1 meter distance from the source does not exceed the values given above.

Unit of exposure—The roentgen.

Unit of radioactivity—The curie.

Units of radiation dose—The rad (unit of absorbed dose) and the rem (radi-

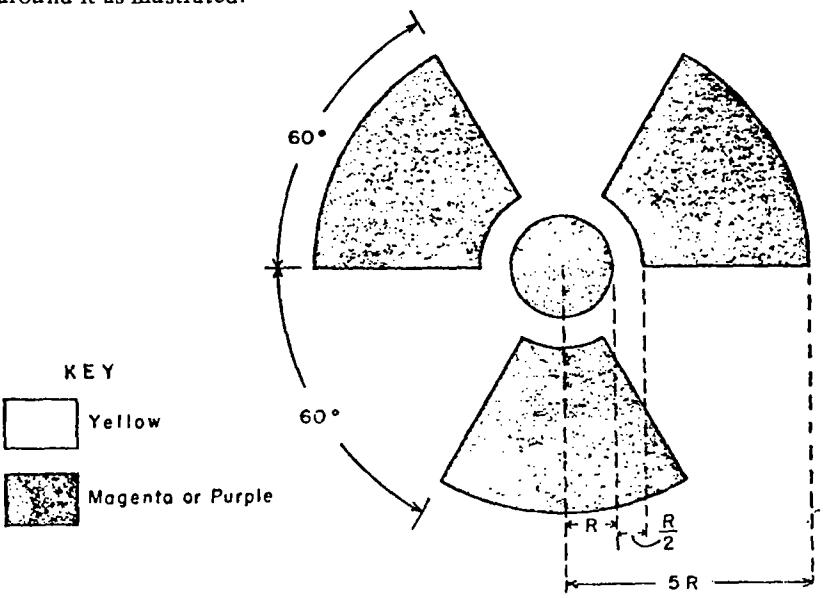
ation to body tissues in terms of its estimated biological effect relative to an exposure of 1 roentgen of x ray).

Useful beam—See radiation.

(c) **Precautionary Procedures**

(1) **Radiation Symbol and Labeling**

(aa) Each radiation sign or label shall bear the standard symbol specified in these regulations and the specified printed warning in capital block letters. The warning CAUTION RADIATION AREA or DANGER RADIATION AREA shall appear on signs in an area in which a radiation hazard may exist. The warning CAUTION, RADIOACTIVE MATERIAL(S) or DANGER, RADIOACTIVE MATERIAL(S) shall appear on containers containing radioactive materials greater than the applicable quantities listed in Tables 3 and 4 in the Appendix. The standard symbol for designating any radiation hazard shall be a circle with three propeller-like blades arranged around it as illustrated:



The boundaries of the three blades of the propeller-like symbol shall be confined within a 60° sector of the circle delineated by their outer edges, and said blades shall be symmetrically distributed 60° apart. The radius (R) of the central circle of the symbol shall be the standard for its other dimensions as follows: Overall radius of symbol = 5R, shortest distance from circumference of central circle to inner edge of nearest blade = R/2. The standard color specifications shall be a background of yellow with lettering and distinctive symbol in magenta or purple. The symbol and lettering shall be as large as practical, consistent with the size of the equipment or material upon which they appear.

(bb)The use of the specified radiation symbol for any other purpose than designating or referring to an area of detectable radiation is expressly prohibited.

(cc) All containers of radioactive material for storage and disposal, storage areas, work areas, and other normally occupied areas where a radiation hazard may exist shall be conspicuously posted with radiation warning labels.

(dd)Conspicuous radiation warning labels shall be posted in areas which are not readily accessible and may be only occasionally occupied but in which a radiation hazard may exist.

(ee) Readily accessible areas in which a radiation hazard may exist shall be suitably delineated and conspicuously posted with radiation warning labels. This applies even if the area is not normally occupied.

(ff) All radiation-hazard labels posted when a radiation hazard existed shall be removed when the hazard is no longer present.

(2) **Personnel Monitoring**

(aa) Each registrant shall supply appropriate personnel monitoring equipment to, and shall require the use of, such equipment by:

(i) Each individual, except a patient, who enters a restricted area under such circumstances that he or she receives, or is likely to receive, a dose in excess of one quarter of the maximum permissible dose as defined in these regulations.

(ii) Each individual who enters a high radiation area.

(bb)Records of exposures shall be maintained permanently by the registrant.

(d) **Registration**

(1) **Registration Requirements.** The owner or person having possession of any source of ionizing radiation except those specifically exempted under this regulation or under MHD 181 (d) (4) or in the case of nuclear facilities which are registered in accordance with special procedures required by MHD 185, shall:

(aa) Register such sources with the Board within 30 days of its acquisition upon forms prescribed and provided for that purpose.

(bb)Designate an individual who will be responsible for radiation protection from the source. Such individual, the radiation protection officer, shall:

(i) Be qualified by training and experience concerning all hazards and precautions involved in operating or in using the source for which he is responsible;

(ii) establish a detailed program of radiation safety for effective compliance with the applicable requirements of these regulations;

(iii) give instructions concerning hazards and safety practices to individuals under his supervision who may be exposed to radiation from the source; and

(iv) make surveys and carry out other procedures as required by these regulations.

When, in the opinion of the Board, the individual designated to be responsible for radiation safety does not have qualifications sufficient to insure safe operating or using of the source, the Board may require the registrant to designate another individual who meets the requirements of MHD 181 (d) (1) (bb) above.

(cc) Every hospital in which radioisotopes are used shall have a committee which coordinates the use of radioisotopes within the hospital and assures the radiation safety of the patients and personnel involved during the use of these isotopes.

(dd)The registrant shall notify the Board within 30 days of any change in the ownership or disposition of registered sources.

(ee) No person in any advertisement shall refer to the fact that a source is registered with the Board, and no person shall state or imply that any activity under such registration has been approved by the Board.

(ff) The registrant shall be subject to all applicable requirements of these regulations.

(gg) The registration requirements shall not apply to facilities subject to MHD 185, nor to sources or conditions exempted under MHD 181 (d) (4), nor to by-product materials, source materials, or special nuclear materials licensed by the U. S. Atomic Energy Commission not in excess of the kind and quantity specified in Tables 3 and 4 of the Appendix.

(2) **Renewal of Registration.** Each registration pursuant to these regulations shall be renewed biennially during the month of January of odd-numbered years so long as the activity requiring registration continues. If there has been no substantial change in the matters described in the last prior registration or renewal, the renewal of the registration shall so state. If there has been any accession of additional radiation sources or other substantial change in the matters described in the preceding registration or renewal, the renewal shall state the accession or other change and give the information relating to such accession or other change that would be required upon original registration.

(3) **Registration Fees.**

(aa) The initial or renewal biennial registration of every source of ionizing radiation required to be registered by Minn. Rule MHD 181 (d) shall be accompanied by a fee as prescribed herein. The fee shall be based upon the number of x-ray tubes and facilities using radium registered by each person, company, hospital, group, practice, or other organization or association at one general site as follows:

(i) First tube, $30.00;

(ii) Each additional tube not to exceed 15 additional tubes, $10.00 per tube;

(iii) Each facility using radium, $100.00.

(bb)Applications for initial or renewal registrations submitted to the Board after the time specified by these rules shall be accompanied by a penalty fee, in addition to the fee prescribed in Minn. Rule MHD 181 (d) (3) (aa), as follows:

(i) For applications submitted up to 30 days after the required initial or renewal date, $5.00;

(ii) For applications submitted between 31 and 60 days after the required initial or renewal date, $10.00;

(iii) For applications submitted 60 days or more after the required initial or renewal date, $15.00.

(cc) The initial registration fee for any source of ionizing radiation

required to be registered during the last three months of a biennial registration period shall be $5.00 per x-ray tube up to a maximum of 16 tubes and $20.00 for each facility using radium. The penalty fees as specified in Minn. Rule MHD 181 (d) (3) (bb) shall apply to this section. This provision shall not apply to any application for registration which should have been submitted to the Board in a timely manner prior to the last three months of a registration period.

(4) **Records, Inspections, and Tests.**

(aa) Each registrant shall keep records showing the receipt, transfer, and disposal of all sources of radiation subject to these and all other state and federal regulations.

(bb) Each owner, renter, or other person in possession of a source of radiation subject to registration or expected under MHD 181 (d) (1) or MHD 181 (d) (4) shall afford agents of the Board, at all reasonable times, opportunity to inspect sources of radiation and the premises and facilities wherein such sources of radiation are used or stored, and shall make available to the agent, upon reasonable notice, records maintained pursuant to these regulations.

(cc) Each owner, renter, or other person in possession of a source of radiation shall perform or cause to be performed such reasonable procedures as are necessary to assure radiation safety including, but not limited to, tests of:

(i) Sources of radiation;

(ii) facilities wherein sources of radiation are used or stored; and

(iii) radiation detectors, monitoring instruments, and other equipment and devices used in connection with utilization or storage of sources of radiation.

Results of such tests shall be available for submission to the Board when requested.

(5) **Exemptions.** These regulations shall not apply to the following sources or conditions:

(aa) Natural radioactive materials of an equivalent specific radioactivity not exceeding that of natural potassium;

(bb) timepieces, instruments, or devices containing self-luminous elements, except during manufacture or repair of the self-luminous elements themselves;

(cc) electrical equipment that is not intended primarily to produce radiation and that, by nature of design, does not produce radiation at the point of nearest approach at a weekly rate higher than one tenth (1/10) of the appropriate limit for any critical organ exposed. The production testing or production servicing of such equipment shall not be exempt;

(dd) a radiation machine not being used in a manner such that it produces radiation;

(ee) domestic television receivers, provided the dose rate at 5 cm from any outer surface of 10 cm^2 is less than 0.5 mrem per hour;

(ff) any radioactive material being transported in conformity with regulations adopted by the U. S. Department of Transportation and other agencies of the United States having jurisdiction;

(gg) any quantities of thorium contained in

(i) incandescent gas mantles

(ii) vacuum tubes

(iii) welding rods

(iv) electric lamps for illuminating purposes provided that each lamp does not contain more than 50 milligrams of thorium

(v) germicidal lamps, sunlamps, and lamps for outdoor or industrial lighting provided that each lamp does not contain more than 2 grams of thorium; and

(vi) rare earth metals and compounds, mixtures, and products containing not more than 0.25 percent by weight thorium, uranium, or any combination of these.

(hh)radiation sources specifically designated by the Board as exempt by virtue of being known to be without hazard to health.

(e) **Vendor Responsibility**

(1) No person shall make, sell, lease, transfer, lend, or install x-ray or fluoroscopic equipment or the supplies used in connection with such equipment unless such supplies and equipment, when properly placed in operation and properly used, will meet the requirements of these regulations. This includes, but is not restricted to, responsibility for the delivery of cones or collimators, filters, adequate timers, and fluoroscopic shutters (where applicable).

(2) Persons selling, leasing, or transferring registerable sources of radiation shall notify the Board in writing within 30 days of such sale, lease, or transfer, and shall supply the name and address of the purchaser and such pertinent information as is requested by the Board.

(f) **Transportation**

(1) The provisions of this section apply to the transportation of radioactive materials or the delivery of radioactive material to a carrier for transportation, not subject to the rules and regulations of the U. S. Department of Transportation and other agencies of the United States having jurisdiction.

(2) No person shall transport any radioactive material outside the confines of the facility or other authorized location of use, or deliver any radioactive material to a carrier for transportation, unless the person complies with all requirements, appropriate to the mode of transportation, relating to the packaging of the radioactive material and to the marking and labeling of the package and transporting vehicle, of the rules and regulations, published by the U. S. Department of Transportation (46 C.F.R., Part 146, 49 C.F.R., Parts 173-179, and 14 C.F.R., Part 103) to the same extent as if the transportation were subject to the rules and regulations of that agency.

(g) **Notification of Incidents and Lost Sources**

(1) **Immediate Notification.** The owner, operator, radiation safety officer, or the person in charge of the radiation source shall immediately notify the Board by telephone or telegraph of any incident involving registered sources of ionizing radiation which may have caused, or threatens to cause:

(aa) A dose equivalent to the whole body of any individual of 25 rems or more of radiation;

(bb)a dose equivalent to the skin of the whole body of any individual of 150 rems or more of radiation; or

(cc) a dose equivalent to the feet, ankles, hands, or forearms of any individual of 375 rems or more of radiation.

(2) **Twenty-four Hour Notification.** The owner, operator, radiation safety officer, or the person in charge of the radiation source shall within 24 hours notify the Board by telephone or telegraph of any incident involving registered sources of ionizing radiation which may have caused, or threatens to cause:

(aa) A dose equivalent to the whole body of any individual of 5 rems or more of radiation;

(bb)a dose equivalent to the skin of the whole body of any individual of 30 rems or more of radiation; or

(cc) a dose equivalent to the feet, ankles, hands, or forearms of any individual of 75 rems or more of radiation.

(3) When a theft or loss of a radiation source occurs, the owner, operator, radiation safety officer, or the person in charge shall notify the Board by telephone immediately upon discovery of the situation and shall report all known facts and circumstances relating to the occurrence in writing within 7 days thereafter. The owner shall notify the Board of actions taken to recover the stolen or lost source and shall report any substantive additional information on the loss or theft which becomes available to the registrant within 30 days after he learns of such information.

(h) **Restrictions**

(1) ***Prohibitions***

(aa) Because of the public health hazard involved in the indiscriminate use of radiation, it is hereby prohibited for any person to operate or maintain within the State any shoe-fitting fluoroscopic device.

(bb)Radiation shall not be applied to a person for the purpose of instruction or training.

(cc) Only those individuals who are licensed practitioners of the healing arts, or individuals that are qualified by training and experience and are under the direct supervision of a licensed practitioner of the healing arts, may intentionally apply radiation to a person.

(dd)The use of x-ray machines for the purpose of screening is prohibited without prior written approval of the Commissioner.

(2) **Commissioner approval of screening.** Any person desiring Commissioner approval for screening purposes as specified in MHD 181 (h) (1) (dd) shall submit an application to the Commissioner requesting his permission to perform screening. The burden of justifying the requested screening rests on the applicant. Approval will be granted if the Commissioner is satisfied that:

(aa) The proposed screening is a justified public health measure;

(bb)The benefit derived from the proposed screening will outweigh the detriment of x-ray exposure; and

(cc) The x-ray screening will be conducted properly, safely, and legally, i.e., in accordance with all applicable statutes and rules of the State of Minnesota or federal government.

(3) **Content of application for approval of screening.** The application for approval of a screening program must contain the following information and data:

(aa) Name and Minnesota business address.

(i) If the applicant is a corporation or other business or non-business association, the name of the person representing the association shall be given.

(ii) If the applicant's principal location or home office is not in Minnesota, the principal location or home office address shall be given as well as the name of the person who may be contacted by the Commissioner with respect to the application.

(iii) If the applicant is a foreign corporation subject to the provisions of Minnesota Statute Chapter 303 it shall submit a certified copy of its Certificate of Authority issued by the Minnesota Secretary of State. The certification shall be dated no more than one month prior to the date of submission of the application to the Commissioner.

(bb) When and where the proposed screening is to be performed.

(cc) Description of the specific screening proposed.

(dd) Description of the age distribution of the population to be screened.

(ee) The amount of x-ray exposure to which individuals will be subjected by the proposed screening.

(i) Applications for screening for pulmonary (lung) conditions shall not be approved if the incident (skin entrance) x-ray exposure will exceed 50 milliroentgens per radiograph for the posterior-anterior (PA) view. Using normally accepted exposure techniques, a Victoreen R-chamber placed at a distance of 11 inches from the center of the film with a scatter phantom (Alderson "Rando" phantom or equivalent) positioned in front of the center of the film, or an equivalent method, shall be the method used for measuring the incident (skin entrance) exposure.

(ii) Commonly accepted state-of-the-art techniques and equipment shall be the methods used for measuring x-ray exposure from other types of screening. A written description of the specific method used shall be submitted to the Commissioner. The amount of x-ray exposure shall be specified as skin entrance or film exposure and shall not exceed amounts normally given during such projections based on the studies "Population Exposure to X-Rays U. S. 1970" (DHEW Publication (FDA) 73-8047, November 1973)[1] and "National Evaluation of X-Ray Trends: Tabulation of Data for 'All States' for Period January 1, 1974 to December 31, 1974".[2]

(ff) Why the screening is being planned. A detailed statement shall specify the compelling health reasons, health benefits, or health emergency which justifies the radiation exposure to which individuals will be subjected by the proposed screening.

[1]The estimated mean exposure per film by type of radiographic examination specified in this publication is reproduced in Appendix A.

[2]The weighted mean indexes by type of exam/projection specified in this publication are reproduced in Appendix B.

(gg) Who will interpret the x-ray film and to whom will the results, interpretation, or findings be sent.

(hh) Where the x-ray film will be filed.

(ii) Who will have access to the x-ray film.

(jj) If the persons screened will not be given the x-ray film or will not be personally informed by the applicant of the results, interpretation or findings.

(i) How will this information be communicated to those individuals who have been screened.

(ii) What arrangements will be made to assure that those persons who have been screened will be informed as to the need for further medical and health care evalution or treatment.

(kk) Why alternate screening methods, not requiring use of x-ray machines, are not acceptable.

(ll) Who will conduct the screening (operators) and their qualifications, with complete information pertaining to the operators including their formal training and specifically describing any licenses, registration or other authority held from Minnesota or other state or federal agencies or professional associations.

(mm) Who will supervise the operators conducting the screening, with complete information pertaining to the supervisor's qualifications and specifically describing any licenses, registration or other authority held from Minnesota or other state or federal agencies or professional associations. The method of supervision shall be specified.

(nn) What equipment will be used in connection with the screening, and whether it complies with Minnesota law and regulations and whether such equipment has been inspected, licensed or approved in any other way by a Minnesota agency, or by any other state or federal agency.

(oo) Any other information requested by the Commissioner which he deems necessary to enable him to determine whether or not the proposed x-ray exposure the subjects of the screening will receive is a justified public health measure, the benefit of which outweighs the potential detriment of x-ray exposure. The Commissioner may request the submission of additional information and data subsequent to the submission of the original application. The Commissioner may deny approval of any request to perform screening as specified in MHD 181 (h) (1) (dd) if the applicant fails to or refuses to submit all requested data.

(4) **Approval of changes in screening program.** It is the responsibility of the applicant to inform the Commissioner of any changes in its screening program from that which is described in the application and receive Commissioner approval of such changes prior to commencement of the screening program.

(5) **Violations.**

(aa) **General.**[3] If in the opinion of the Commissioner, it is necessary to do so to protect persons from hazards of radiation, an injunction or other court order may be obtained prohibiting any violation of any provision of

[3]This subsection (i.e., MHD 181 H.5.a.) already exists in the rules and is not being amended except by being designated as subparagraph "a. General".

any regulation or order issued thereunder. Any person who willfully violates any provision of any regulation or order issued thereunder may be guilty of a crime, and, upon conviction, may be punished by fine or imprisonment or both, as provided by law.

(bb) **Commissioner Approved Screening.**

(i) The Commissioner or his representative may inspect the screening program while in progress to assure that it is being carried out as described in the application and in compliance with Minnesota Rules MHD 181-186 relating to ionizing radiation.

(ii) Approval may be withdrawn immediately if after an inspection the Commissioner finds the existence of conditions which would result in serious overexposure. All screening procedures shall be terminated immediately upon receipt of the written notice of existence of such over-exposure. The applicant may request a contested case hearing within five days after receipt of the notice, provided, however, the request for hearing does not stay the Commissioner's order of immediate cessation of the screening program. The hearing shall be scheduled within ten days of receipt of the request for the hearing.

(iii) Approval may be withdrawn if after an inspection the Commissioner finds discrepancies between the screening program as implemented and as described in the application or for violation of Minnesota Rules MHD 181-186 relating to ionizing radiation. A hearing shall be held if requested by the applicant within three days after the receipt of the notice of withdrawal of approval. The hearing may be held upon granting the applicant three days notice. If a hearing is requested, withdrawal of approval shall not take effect until a final order is issued by the Commissioner.

(i) **Special Provisions**

(1) **Safety and Precaution**

(aa) The registrant shall assure himself that each individual operating x-ray equipment under his control is thoroughly conversant with the recommendations of the National Council on Radiation Protection and Measurements pertaining to x rays, currently found in NCRP Report Number 33, "Medical X-Ray and Gamma-Ray Protection for Energies up to 10 MeV," issued February 1, 1968, NCRP Report No. 35, "Dental X-Ray Protection," issued March 9, 1970, NCRP Report No. 36, "Radiation Protection in Veterinary Medicine," issued August 15, 1970, and where applicable National Bureau of Standards Handbook 93, "Safety Standard for Non-Medical X-Ray and Sealed Gamma-Ray Sources," issued January 3, 1964.

(bb) The registrant shall provide safety rules to each individual operating x-ray equipment under his control, including any restrictions of the operating technique required for the safe operation of the particular x-ray apparatus, and shall require that the operator demonstrate familiarity with these rules.

(cc) The amount of ionizing radiation that may be applied to a person for diagnostic purposes shall be the minimum required to obtain the clinical information desired.

(dd) The darkroom for film development shall be light-tight.

(2) **Shielding**

(aa) Each installation where radiation is used shall be provided with

such primary barriers and/or secondary barriers as are necessary to assure radiation safety. Each installation shall comply with the special shielding requirements applicable to the type of installation under consideration as specified in subsequent parts of these regulations. Primary and/or secondary barrier requirements shall be deemed to be met if the thicknesses of such barriers are equivalent to those as computed in accordance with Appendix C, NCRP Report No. 34, "Medical X-Ray and Gamma-Ray Protection for Energies Up to 10 MeV," National Council on Radiation Protection and Measurement, March 2, 1970, and where applicable, National Bureau of Standards Handbook 93, "Safety Standard for Non-Medical X-Ray and Sealed Gamma-Ray Sources," issued January 3, 1964.

(bb) Lead barriers shall be mounted in such a manner that they will not sag or cold-flow because of their own weight and shall be protected against mechanical damage.

(cc) Joints between different kinds of protective materials shall be so designed that the overall protection of the barrier is not impaired.

(dd) Holes in protective barriers shall be covered so that the overall attenuation is not impaired.

(ee) Windows, window frames, doors, and door frames shall have the same lead equivalent as that required of the adjacent wall.

Appendix A
Population Exposure to X-Rays U.S. 1970
Estimated mean exposure per film by type of radiographic examination

Type of Examination	Milliroentgens (at skin entrance)
Head and Neck	300
skull	330
cervical spine	240
examinations of head and neck, n.e.c.	330
Thorax	(not given)
chest, photofluorographic	(not given)
chest, radiographic	44
shoulder	260
thoracic spine and cervical spine	980
exams of chest or thorax, n.e.c.	1,520
Abdomen	960
Upper abdomen	960
cholecystography or cholangiogram	620
lumbar spine or dorsolumbar spine	1,920
upper gastrointestinal series	710
gastrointestinal, n.e.c.	920
upper abdomen, n.e.c.	1,240
Lower abdomen	970
barium enema	1,320
abdomen, KUB, flat plate	670
intra or retrograde pyelogram	590

Appendix A, cont.

Type of Examination	Milliroentgens (at skin entrance)
Lower abdomen, cont.	
pelvis or lumbo-pelvic	610
lumbosacral or sacral spine	2,180
hip	560
lower abdomen, n.e.c.	850
Extremities	100
Upper extremities	90
hand and/or wrist	100
forearm or elbow	60
upper extremities, n.e.c.	90
Lower extremities	110
ankle	140
foot and toes or heel	120
knee	110
tibia and fibula	40
femur or entire leg	120
lower extremities, n.e.c.	140
More than one body area	500

Appendix B
Nationwide Evaluation of X-Ray Trends
Weighted mean indexes by type of exam/projection

Type of exam/projection	Exposure at skin entrance (mR)
Chest (P/A)	23.0
Skull (Lateral)	276.0
ABD. (KUB) (A/P)	652.9
Retr. Pyelo. (A/P)	847.9
Thor. Spine (A/P)	851.3
Cervical Spine (A/P)	302.9
Lum - Sac Spine (A/P)	888.6
Full Spine (A/P)	306.6
Feet (D/P)	202.5
Dental B.W. Post	506.8
Dental Periapical	698.3
Dental Ceph. (Lateral)	31.8

MHD 182 X-Ray Uses

(a) **Healing Arts**

(1) **Fluoroscopic**

(aa) ***Equipment***

(i) The protective tube housing shall be of the diagnostic type.

(ii) The target-to-panel or target-to-tabletop distance shall not be less than 12 inches.

(iii) The exposure switch shall be of the dead-man type.

(iv) A manually reset cumulative timing device activated by the fluoroscope exposure switch shall be used which will either indicate elapsed time by an audible signal or turn off the apparatus when the total exposure exceeds a predetermined limit in 1 or in a series of exposures not exceeding 5 minutes.

(v) The total filtration permanently in the useful beam shall not be less than 2.5 millimeters aluminum equivalent. When the table-top or panel surface is interposed between the source and the patient, its aluminum equivalent may be included as part of the total filtration. This requirement shall be assumed to have been met if the half-value layer is not less than that shown in the following table:

Operating Voltage (kVp)	Half-Value layer (millimeters aluminum)
80	2.4
90	2.6
100	2.8
120	3.1

(vi) The useful beam shall be attenuated by a primary barrier which shall be either:

(A) The fluoroscopic screen glass and frame which shall be the equivalent of 1.5 millimeters of lead shielding for voltages up to 100 kilovolts peak, 1.8 millimeters of lead shielding for voltages greater than 100 kilovolts peak but less than 125 kilovolts peak, and 2.0 millimeters for voltages 125 kilovolts peak or greater.

(B) The image intensification mechanism.

(vii) Collimators shall be provided to restrict the size of the useful beam to less than the area of the primary barrier, irrespective of the panel-to-screen distance. During fluoroscopy with image intensifiers, the useful beam shall not exceed the diameter of the input phosphor. Collimators, adjustable diaphragms, and shutters shall provide the same degree of protection as is required of the tube housing.

(viii) The tube mounting and the primary barrier shall be so linked together that the barrier always intercepts the useful beam. Exposure shall terminate if the primary barrier is removed from the useful beam. The unit shall be nonoperable without the primary barrier in place.

(ix) The screen shall be protected by a light-proof and dust-proof cover when the screen is not in use.

(x) A shielding device of at least 0.25 millimeter lead equivalent for covering the bucky slot during fluoroscopy shall be provided.

(xi) Devices which indicate the x-ray tube potential and current shall be provided.

(xii) Flexible leaded flaps which are the equivalent of 0.25 millimeter of lead shielding and which are hung from the screen shall be provided. The fluoroscopist shall wear a lead apron which is the equivalent of 0.25 millimeter of lead shielding.

(bb) **Structural Shielding.** All provisions of MHD 181 (i) (2) shall apply except that only secondary barriers shall be required.

(cc) **Operating Conditions**

(i) The exposure rate measured at the panel or tabletop shall be as low as practicable but shall not exceed 10 roentgens per minute.

(ii) With the fluorescent screen 14 inches (35 centimeters) from the panel or tabletop, the exposure rate 2 inches (5 centimeters) beyond the viewing surface of the screen shall not exceed 30 milliroentgens per hour for each roentgen per minute at the tabletop with the screen in the useful beam without a patient and with the fluoroscope operating at the highest potential employed.

(iii) The fluoroscopist shall wear a pair of protective gloves of at least 0.25 millimeter lead equivalent when the hands are used in the primary unattenuated beam or on the patient.

(iv) Extraneous light that interferes with the fluoroscopic examination shall be eliminated.

(v) The fluoroscopist's eyes shall be sufficiently dark-adapted for the visual task required before commencing fluoroscopy. Wearing red goggles for 10 minutes will usually satisfy adaptation requirements. Dark adaptation normally is not necessary when image intensifiers are used.

(dd) **Mobile Fluoroscopic Equipment.** Mobile fluoroscopic equipment shall meet the requirements of MHD 182 (a) (1) (aa) and (bb) where applicable, except that:

(i) In the absence of a tabletop, a cone or spacer frame shall limit the target-to-skin distance to not less than 12 inches.

(ii) Image intensification shall always be provided.

(iii) It shall be impossible to operate mobile fluorscopic equipment unless the useful beam is intercepted by the image intensifier.

(2) Radiographic Installations Other than Dental, Veterinary Medicine, and Industrial

(aa) **Equipment**

(i) The protective tube housing shall be of the diagnostic type.

(ii) Suitable devices (diaphragms, cones, adjustable collimators) capable of restricting the useful beam to the area of clinical interest shall be provided to define the beam and shall provide the same degree of attenuation as that required of the tube housing. Such devices shall be calibrated in terms of the size of the projected useful beam at all utilized focal spot to film distances.

(iii) Radiographic equipment, particularly multipurpose machines, should be equipped with adjustable collimators containing light localizers that define the entire field. Rectangular collimators are usually preferable. The field size indication on adjustable collimators shall be accurate to within

1 inch for a source-film distance of 72 inches. The light field shall be aligned with the x-ray field with the same degree of accuracy. The size of the x-ray beam projected by fixed aperture cones and collimators shall not exceed the dimensions of the x-ray film by more than 2 inches for a source-film distance (SFD) of 72 inches or 1 inch for a source-film distance of 36 inches.

(iv) Ruled scales shall be aligned both on the machine and beside the chest cassette holder to aid in accurately positioning the tube. A light beam indicator or a coupling device may be used in place of ruled scales.

(v) The aluminum equivalent of the total filtration in the useful beam shall be not less than that shown in the following table:

Operating Kilovolts Peak	Minimum Total Filtration (inherent plus added)
Below 50	0.5 millimeter aluminum
50-70	1.5 millimeters aluminum
Above 70	2.5 millimeters aluminum

The above requirements for filtration shall be assumed to have been met if the half-value layer is not less than that shown in the following table:

Operating Voltage (kVp)	Half-Value layer (millimeters aluminum)
49	0.6
70	1.6
90	2.6
100	2.9
110	3.1
120	3.4

(vi) A device shall be provided to terminate the exposure after a preset time or exposure.

(vii) A dead-man type of switch shall be so arranged that it cannot be conveniently operated from a position outside a shielded area. Exposure switches for spot film devices used in conjunction with fluoroscopic tables are exempted from this shielding arrangement.

(viii) The control panel shall include a device (usually a milliammeter) to give positive indication of the production of x rays whenever the x-ray tube is energized. The control panel shall include devices (labelled control settings and/or meters) indicating the physical factors (such as kilovolts peak, milliamperage, exposure time, or whether timing is automatic) used for the exposure.

(bb) **Structural Shielding.** In addition to the requirements of MHD 181 (i) (2) the following apply:

(i) All wall, floor, and ceiling areas exposed to the usful beam shall have primary barriers. Primary barriers in walls shall extend to a minimum height of 84 inches from the floor.

(ii) Secondary barriers shall be provided in all wall, floor, and ceiling areas not having primary barriers or where the primary barrier requirements are lower than the secondary barrier requirements.

(iii) The operator's station at the control shall be behind a protective barrier, either in a separate room, in a protected booth, or behind a shield

which will intercept the useful beam and any radiation which has been scattered only once.

(iv) A lead glass window with a lead-equivalence equal to that of the adjacent barrier or a mirror system shall be provided large enough and so placed that the operator can see the patient without having to leave the protected area during exposure.

(v) Radiographic x-ray units powered equivalent to dental units shall meet the same shielding requirements as MHD 182 (a) (5) (bb) and MHD 182 (a) (8) (bb).

(cc) **Operating Procedures**

(i) No individual occupationally exposed to radiation shall be permitted to hold patients during exposures except during emergencies, nor shall any individual be used regularly for this service. Anyone holding a patient during x-ray exposures shall wear a protective apron and protective gloves of at least 0.25 millimeter of lead equivalence. He shall be so positioned that no part of his body will be struck by the useful beam.

(ii) Only individuals required for the radiographic procedure shall be in the radiographic room during exposures. Except for the patient, no parts of their bodies shall be in the useful beam. The useful beam shall be restricted to the area of clinical interest.

(iii) Adults of reproductive age and children should be provided with gonadal protection of a least 0.25 millimeter of lead equivalent when appropriate.

(3) **Special Requirements for Mobile Diagnostic Radiographic Equipment Other than Dental, Veterinary Medicine, and Industrial**

(aa) **Equipment**

(i) All requirements of MHD 182 (a) (2) (aa) apply except MHD 182 (a) (2) (aa) (iii) and MHD 182 (a) (2) (aa) (vi).

(ii) The exposure control switch shall be of the dead-man type and shall be so arranged that the operator can stand at least 6 feet from the patient and well away from the useful beam.

(iii) A light beam indicator shall be used to aid in accurately positioning the tube.

(bb) **Structural Shielding.** When a mobile unit is used routinely in one location, it shall be considered a fixed installation subject to the shielding requirements specified in MHD 181 (i) (2) and MHD 182 (a) (2) (bb).

(cc) **Operating Procedures**

(i) All provisions of MHD 182 (a) (2) (cc) apply except MHD 182 (a) (2) (cc) (ii).

(ii) Inherent provision shall be made so that the equipment is not operated at source-skin distances of less than 12 inches.

(iii) Personnel monitoring shall be required for all individuals operating mobile x-ray equipment.

(iv) Protective lead aprons of at least 0.25 millimeter of lead equivalence shall be worn by operators of mobile radiographic equipment.

(4) **Special Requirements for Chest Photofluorographic Installations**

(aa) **Equipment.** All provisions of MHD 182 (a) (2) (aa) apply except that a collimator shall restrict the useful beam to the area of the photofluorographic screen and a movable tube housing shall be coupled to the screen.

(bb) **Structural Shielding.** All provisions of MHD 181 (i) (2) and MHD 182 (a) (2) (bb) apply.

(cc) **Operating Procedures**

(i) All provisions of MHD 182 (a) (2) (cc) apply.

(ii) All individuals except the patient being examined shall be in shielded positions during exposures.

(iii) Personnel monitoring shall be required for all individuals operating the equipment and for clerical assistants in the controlled area.

(5) **Dental Radiographic Installations**

(aa) **Equipment**

(i) The tube housing shall be of diagnostic type.

(ii) Diaphragms or cones shall be used for collimating the useful beam and shall provide the same degree of protection as the housing. The diameter of the useful beam at the cone tip shall not be more than 2¾ inches for intra-oral radiography. With rectangular collimation, the longer side of the rectangle shall not exceed 2 inches.

(iii) Only open-end shielded cones shall be used after January 1, 1975.

(iv) A cone or spacer frame shall provide a target-to-skin distance of not less than 7 inches with apparatus operating above 50 kilovolts peak or 4 inches with apparatus operating at 50 kilovolts peak or below.

(v) The aluminum equivalent of the total filtration in the useful beam shall be not less than that shown in the following table:

Operating Kilovolts Peak	Minimum Total Filtration (inherent plus added)
At or Below 70	1.5 millimeters aluminum
Above 70	2.5 millimeters aluminum

The above requirements for filtration shall be assumed to have been met if the half-value layer is not less than that shown in the following table:

Operating Voltage (kVp)	Half-Value layer (millimeters aluminum)
At or Below 70	1.5
Above 70	2.5

(vi) A device shall be provided to terminate the exposure after a preset time or exposure.

(vii) The exposure control switch shall be of the dead-man type.

(viii) Each installation shall be provided with a protective barrier for the operator or shall be so arranged that the operator can stand at least 6 feet from the patient and well away from the useful beam.

(ix) Mechanical suport of the tube head and pointer cone shall maintain the exposure position without drift or vibration.

(x) The x-ray control panel shall include means for indication of:

(A) Tube voltage, (B) tube current (mA), and (C) exposure duration. The control panel should be so placed that the magnitude of these factors can be observed during the exposure procedure. The tube voltage and milliamperage shall be indicated by meters or by control settings. A milliammeter, a light or other device shall give visual indication when x rays are being produced.

(bb) **Structural Shielding.** In addition to the requirements of MHD 182 (a) (8) (bb):

(i) Dental rooms containing x-ray machines shall be provided with primary barriers at all areas struck by the useful beam. In many cases structural materials of ordinary walls suffice as a protective barrier without addition of special shielding material.

(ii) When dental x-ray units are installed in adjacent rooms or areas, protective barriers shall be provided between the rooms or areas.

(cc) **Operating Procedures**

(i) The exposure at the tip of the pointer cone shall be as low as practicable and shall not exceed 0.8 roentgen per film for intra-oral radiography.

(ii) Neither the dentist nor his assistant shall be permitted to hold patients or films during x-ray exposures, nor shall any individual be regularly used for this purpose.

(iii) During each x-ray exposure the operator shall stand at least 6 feet from the patient or behind a protective barrier.

(iv) Only the patient shall be in the useful beam.

(v) Neither the tube housing nor the pointer cone shall be hand held during x-ray exposures by anyone.

(vi) Fluoroscopy shall not be used in dental examinations.

(vii) Adults of reproductive age and children shall be provided with gonadal protection when a full mouth series of exposures are made with intra-oral radiography.

(dd) **Panoramic Installations.** This section applies to those installations which consist of a tube head with a collimator providing a narrow (1-2 mm) useful beam and an extra-oral film carrier which are interlocked in their motion about the patient. Such equipment shall meet the requirements of MHD 182 (a) (5) (aa) (i), (5) (aa) (ii), (5) (aa) (v), (5) (aa) (vii), and (5) (aa) (x). While the narrow useful beam and the shielding of the film carrier reduce the need for structural shielding and operator protection, the guidance of a qualified expert should be sought whenever high workloads are anticipated; for example, in x-ray surveys of large numbers of persons in succession.

(6) **Therapeutic X-Ray Installations**

(aa) **Equipment**

(i) The protective tube housing shall be of the therapeutic type.

(ii) Permanent diaphragms or cones used for collimating the useful beam shall afford the same degree of protection as the tube housing. Adjustable or removable beam-defining diaphragms or cones shall transmit not more than 5 percent of the useful beam obtained at the maximum kilovoltage and with maximum treatment filter.

(iii) Filters shall be secured in place to prevent them from dropping out during treatment. The filter slot shall be so constructed that the radiation escaping through it does not exceed 1 roentgen per hour at 1 meter, or, if the radiation from the slot is accessible to the patient, 30 roentgens per hour at 5 centimeters from the external opening.

(iv) A filter identification system shall be used on all therapy machines with changeable filters. The filter(s) shall be clearly visible for easy recognition by the operator from his position at the controls or the presence or absence of any filter shall be indicated at the control panel designed to permit easy recognition of the specific filter in place.

(v) The x-ray tube shall be so mounted that it cannot turn or slide with respect to the aperture.

(vi) Means shall be provided to immobilize the tube housing during stationary portal treatment.

(vii) A suitable exposure control device (e.g., an automatic timer, exposure meter or dose meter) shall be provided to terminate the exposure after a preset time interval or preset exposure or dose limit. Means shall also be provided for the operator to terminate the exposure at any time.

(viii) Equipment utilizing shutters to control the useful beam shall have a shutter position indicator on the control.

(ix) There shall be on the control panel an easily discernible indicator which will give positive information as to whether or not the x-ray tube is energized.

(x) Operating units shall not be left unattended at any time.

(bb) **Structural Shielding.** In addition to the requirements of MHD 181 (i)(2):

(i) All wall, floor, and ceiling areas that can be struck by the useful beam, plus a border of 1 foot, shall be provided with primary protective barriers based on use factors involved.

(ii) All wall, floor, and ceiling areas that, because of restrictions in the orientation of the useful beam, will not be struck by the useful beam shall be provided with secondary barriers.

(iii) With equipment operating above 125 kilovolts peak, the required barriers shall be an integral part of the building.

(iv) With equipment operating above 150 kilovolts peak, the control station shall be within a protective booth or outside the treatment room.

(v) Interlocks shall be provided for x-ray therapy equipment capable of operating above 150 kilovolts peak so that when any door of the treatment room is opened, either the machine will shut off automatically or the radiation level within the room will be reduced to an average of not more than 2 milliroentgens per hour and a maximum of 10 milliroentgens per hour at a distance of 1 meter in any direction from the target. After shut off or reduction in exposure rate, restoration of the machine to full operation shall be possible only from the control panel.

(vi) Provision shall be made to permit continuous observation of patients during irradiation.

(vii) Windows, mirror systems, or closed-circuit television viewing

screens used for observing the patient shall be so located that the operator may see the patient and the control panel from the same position.

(viii) Means for aural communication between the patient and control room shall be provided (e.g., voice, buzzer).

(cc) **Operating Procedures**

(i) All new installations, and existing installations not previously surveyed, shall have a protection survey conducted by, or under the direction of, a person who by training and experience is qualified to evaluate such installation. A protection survey shall also be conducted following any change in the installation which might produce a radiation hazard. The surveyor shall report his findings in writing to the person in charge of the installation, a copy of which shall be made available to the Board.

(ii) The installation shall be operated in compliance with any limitations indicated by the protection survey.

(iii) If any individual is required to be in the treatment room with the patient during exposure because of clinical necessity, he shall be protected as much as possible from scattered radiation and shall not be in the useful beam. The individual so required shall not be one who is occupationally exposed to radiation and no individual shall be used regularly for this service. The exposure of any individual used for this purpose shall be monitored.

(iv) The output of each therapeutic x-ray machine shall be calibrated by, or under the direction of, a person who by training and experience is qualified to evaluate such installations. The calibration shall be repeated after any change in or replacement of components of the x-ray generating equipment which could cause a change in x-ray output. Check calibration shall be made at least once a year thereafter. Records of calibration shall be maintained by the registrant.

(7) **Special Requirements for X-Ray Therapy Equipment Operated at Potentials of 60 Kilovolts and Below**

(aa) **Equipment.** All provisions of MHD 182 (a) (6) (aa) apply with the following exception: Such x-ray therapy units which are used for "contact therapy" shall meet the additional requirement that the leakage radiation measured at 2 inches (5 centimeters) from the housing shall not exceed 0.1 roentgen per hour.

(bb) **Structural Shielding.** All requirements of MHD 181 (i) (2) shall apply.

(cc) **Operating Procedures**

(i) Automatic timers shall be provided which will permit accurate presetting and determination of exposure as short as 1 second.

(ii) In the therapeutic application of apparatus constructed with beryllium or other low-filtration windows, the registrant shall insure that the unfiltered radiation reaches only the part intended and that the useful beam is blocked at all times except when actually being used.

(iii) If the tube is hand held during irradiation, the operator shall wear protective gloves of at least 0.25 millimeter lead equivalence.

(8) **Veterinary Medicine Radiographic Installations**

(aa) **Equipment**

(i) The protective tube housing shall be of the diagnostic type.

(ii) Diaphragms or cones shall be provided for collimating the useful beam to the area of clinical interest and shall provide the same degree of protection as is required of the housing.

(iii) Except when contraindicated for a particular radiographic purpose, the total filtration permanently in the useful beam shall not be less than 1.5 millimeters aluminum equivalent for equipment operating at or below 70 kilovolts peak and 2.0 millimeters aluminum equivalent for machines operated in excess of 70 kilovolts peak.

(iv) A device shall be provided to terminate the exposure after a preset time or exposure.

(v) A dead-man type of exposure switch shall be provided together with an electrical cord of sufficient length so that the operator can stand out of the useful beam and at least 6 feet from the animal or behind a protective barrier during all x-ray exposures.

(bb) **Structural Shielding.** All wall, ceiling, and floor areas shall be equivalent to, or provided with, appropriate protective barriers as required in MHD 182 (a) (2) (bb).

(cc) **Operating Procedures**

(i) The operator shall stand well away from the tube housing and the animal during radiographic exposures. Provisions shall be made so that the operator will not be required to stand in the useful beam. Hand held fluoroscopic screens shall not be used. The tube housing shall not be held by the operator. No individual other than the operator shall be in the x-ray room while exposures are being made unless such individual's assistance is required or he is a student receiving instruction and the recommended protective procedures are followed.

(ii) In any procedure in which the operator or other assisting individual is not located behind a protective barrier, clothing consisting of a protective apron having a lead equivalent of not less than 0.25 millimeter shall be worn by the operator and any other individuals in the room during x-ray exposures.

(iii) No individual shall be regularly employed to hold or support animals or hold film during radiation exposures. Occupationally exposed individuals shall not perform the service except in cases in which no other method is available. Any individual holding or supporting an animal during radiation exposure shall wear protective gloves and apron having a lead equivalence of not less than 0.25 millimeter. No individual assisting as the film cassette holder shall have any portion of his body in the useful beam, including the hand inside the protective glove.

(b) **Industrial.** Industrial x-ray installations shall be classified as either class A, class B, class C, class D, or special class as specified by the registrant at the time of registration.

Class A permits unlimited use of maximum capacity.

Class B permits unlimited use under limited operating conditions.

Class C permits limited use under specified conditions.

Class D permits limited use and temporary operation and includes portable or mobile industrial x-ray installations.

Special class covers those installations which use x-ray devices for thickness measurements or coating weight determinations on continuously moving webs.

(1) Class A Installation Requirements

(aa) The x-ray source and the objects exposed to x rays must be contained within a permanent enclosure except as provided in MHD 182 (b) (1) (ee). The enclosure construction shall attenuate the primary and secondary radiation so that the exposure rate at any accessible external point shall not exceed 2 milliroentgens per hour when:

(i) The x-ray beam is adjusted to give maximum exposure rate with the x-ray generator at maximum.

(ii) The x-ray tube is placed in the shortest tube-to-wall radiographically useable position.

(bb) Reliable interlocks shall be provided which will prevent entering of the enclosure while the x-ray generator is in operation or will terminate the generation of x rays should the enclosure be opened.

(cc) Persons shall at all times be able to escape from the enclosure.

(dd) The enclosure shall be equipped with visible and/or audible signals. Such signals shall be activated upon generation of x rays and shall remain activated continually while x rays are being generated.

(ee) If the ceiling barrier does not attenuate the exposure rate as set forth in MHD 182 (b) (1) (aa), a posted barrier such as a fence shall be used to restrict access to the ceiling area.

(ff) No person shall be permitted to remain within the enclosure while the x-ray generator is in operation.

(gg) No x-ray apparatus or other radiographic unit shall be left unattended without either the apparatus being locked in an inoperable condition or the room or building in which the apparatus is located being locked in a manner which will prevent its use by unauthorized personnel.

(hh) All protective enclosures and equipment shall be kept in good condition.

(2) Class A Operating and Emergency Procedures

(aa) A written manual of operating and emergency procedures shall be in the possession of the operator and the person responsible for each installation. The operating procedures shall be so designed that every practicable means have been employed to minimize exposure and that no person is likely to be exposed to radiation doses that exceed the maximum permissible doses specified in Table 1 of the Appendix.

(bb) The Board shall be notified in the event of an accident resulting in a possible or actual exposure of a person in excess of the design basis specified in MHD 182 (b) (2) (aa) above.

(cc) A radiation protection survey shall be performed when changes have been made in shielding, operation, or equipment. The installation shall be checked periodically for unknown changes and malfunctioning equipment.

(dd) Records shall be maintained of each radiation protection survey and such records shall be available to the Board or its authorized agents.

(ee) Utilization logs showing the voltage, current, and exposure time for each radiographic exposure shall be maintained.

(3) **Class B Installation Requirements and Operating and Emergency Procedures**

(aa) All requirements of MHD 182 (b) (1) and (2) apply.

(bb) The controls for the kilovoltage and milliamperage shall be limited by mechanical or electrical means so that the maximum normal operating conditions specified by the registrant at the time of registration cannot be exceeded.

(4) **Class C Installation Requirements and Operating and Emergency Procedures.** All requirements of MHD 182 (b) (1) and (2) apply except that:

(aa) An exposure rate of 50 milliroentgens per hour at accessible external points is allowable.

(bb) The workload of the machine shall be restricted so that the cumulative exposure at any accessible point outside the protective enclosure does not exceed 100 milliroentgens in any 7 consecutive days.

(cc) The number of hours per day or week for permissible operation shall be stated on the registration form.

(dd) Warning signs shall be posted in those areas outside the protection barriers in which the exposure rate at any accessible external point exceeds 2 milliroentgens per hour with the generator operating at its maximum capacity. A visible and/or audible signal shall be provided within the posted area which shall be activated during the generation of x rays.

(cc) Continuous personnel monitoring shall be enforced for all personnel in the posted area at all times.

(5) **Class D Installation Requirements and Operating and Emergency Procedures.** An x-ray installation not meeting the requirements for class A, class B, or class C installation may be operated for a period of 30 days provided the requirements listed below are met. When the 30-day period is impractical or when an undue and unnecessary hardship is involved, the period may be extended by the Board.

(aa) All provisions of MHD 182 (b) (2) apply.

(bb) No x-ray apparatus shall be left unattended without either the apparatus being locked in inoperable condition or the room or building in which the apparatus is located being locked in a manner which will prevent its use by unauthorized personnel.

(cc) All areas in which the exposure rates exceed 5 milliroentgens per hour shall be posted and barricaded by a fence, rope, or other suitable personnel barriers erected outside the 5 milliroentgens per hour iso line.

(dd) Continuous personnel monitoring shall be enforced for individuals in the posted areas and such other persons who may be specified by the Board.

(ee) A calibrated and operable survey instrument shall be available at each installation. The instrument shall have a range such that 2 milliroentgens per hour through 1 roentgen per hour can be measured.

(ff) The initial registration shall be in the possession of the Board 3 days before the unit is operated at any location.

(gg) If the unit has been previously registered and is moved to a new address, the Board shall be in possession of the notification of a change in work address prior to use of the source at any address other than that indicated on the registration form.

(6) **Special Class — X-Ray Thickness Gauge Installation Requirements**

(aa) The x-ray source and the materials exposed to x rays must be contained within a permanent enclosure. The enclosure construction shall attenuate the primary and secondary radiation so that the exposure rate through any portion of the shielding is less than 0.5 milliroentgen per hour and the exposure rate through openings in the shielding is less than 5 milliroentgens per hour at any accessible external point when the equipment is being operated at its maximum potential.

(bb) Reliable interlocks shall be provided on access doors in the primary and secondary shielding which will terminate the generation of x rays or attenuate the radiation exposure rate to 5 milliroentgens per hour should the enclosure be opened.

(cc) The enclosure shall be equipped with visible signals. Such signals shall be activated upon generation of x rays and shall remain activated continually while x rays are being generated. If the x-ray source has a shutter, the enclosure shall also be equipped with a visible signal indicating whether the shutter is open or closed.

(7) **Special Class Operating and Emergency Procedures.** All requirements of MHD 182 (b) (2) apply except MHD 182 (b) (2) (ee).

MHD 183 Radium Uses

(a) **Healing Arts.** The following special provisions of this part apply to all registrants who use radium in the healing arts and are in addition to, and not in substitution for, other applicable provisions of the regulations.

(1) **Source Custodian**

(aa) Every hospital, clinic, or physician's office in which a person owns or rents radium sources shall designate a source custodian.

(bb) The source custodian shall have the necessary training, experience, and inherent or delegated authority to exercise adequate control over the use and accountability of sources.

(cc) The name of the source custodian shall be submitted to the Board.

(2) **Accountability, Storage, and Transit**

(aa) The source custodian shall provide accountability of radium sources and shall keep a permanent record of the issue and return of all radium sources.

(bb) When not in use radium sources and applicators containing radium sources shall be kept in a protective enclosure of such material and wall thickness as is necessary to assure that the appropriate limits of radiation will not be exceeded.

(cc) For local transportation the container shall have sufficient shielding to assure that the appropriate limits of radiation are not exceeded.

(dd) Transportation of radium off the premises shall be in accordance with Title 49, Parts 71-78 of the Code of Federal Regulations or Title 14, Part 103, Chapter 1 of the Code of Federal Regulations, or with Post Office Department Regulations, whichever is applicable.

(3) **Use and Procedure**

(aa) The registrant shall demonstrate to the Board upon request that the proposed methods of use are consistent with the policy of minimization and are not likely to cause any individuals other than the patient receiving therapy to receive a dose in excess of the maximum permissible dose equivalents.

(bb) The registrant shall insure that:

(i) During each radiotherapeutic operation unauthorized entry into a radiation area shall be prevented.

(ii) The patient's room shall be identified as a radiation area and all individuals entering the room shall comply with the requirements of MHD 181 (c) (2).

(iii) The preparation and dismantling of radium applicators or similar procedures shall be performed behind adequate protective shields. Protective windows or mirror shall be provided for viewing purposes.

(iv) Remote handling equipment such as tongs and forceps shall be used for all radium sources. Under no circumstances shall a source be touched by the fingers.

(v) Loss of radium sources shall be reported to the Board in accordance with MHD 181 (g).

(4) **Testing Radium Sources for Leakage and Contamination**

(aa) The registrant shall provide for testing for leakage and contamination prior to initial use.

(bb) All radium sources shall be tested for leakage every 6 months.

(cc) If there is reason to suspect that a sealed source has been damaged, it shall be tested for leakage before further use.

(dd) Leak tests shall be capable of detecting the presence of 0.005 microcurie of contamination on the radium source.

(ee) Leakage of radium sources shall be reported within 24 hours of discovery to the Board.

(ff) Any test conducted pursuant to these regulations which indicates the presence of 0.005 microcurie or more of contamination shall be considered evidence that the radium source is leaking and the registrant shall immediately withdraw the source from use.

(gg) All leaking sources shall be decontaminated and re-encapsulated or disposed of in accordance with MHD 183 (c).

(b) **Industrial Radium Installation.** The regulations hereunder establish radiation safety requirements for sealed radium sources utilized for industrial radiography. Nothing in MHD 183 (b) shall apply to uses of radium sources in the healing arts.

(1) The registrant shall provide accountability of sealed sources and shall keep a permanent record of the issue and return of all sealed sources.

(2) The registrant shall assure adequate shielding and housing of the source.

(aa) When not in use, sealed sources shall be kept in a protective enclosure of such material and wall thickness as is necessary to limit doses to those permitted under these regulations.

(bb) Source housing shall provide the following:

(i) If the source is permanently mounted in a housing with a beam control device or extended from and retracted into a housing, this device shall be of positive design capable of acting regardless of the position of the housing.

(ii) It shall be possible to move the source to a shielded position manually with a minimum risk of exposure in the event of the failure of the automatic mechanism.

(iii) Warning devices on the housing and the control panel shall plainly indicate whether the apparatus is "on" or "off."

(cc) Transfer of the source shall be performed according to the following:

(i) If the apparatus is of a type in which the source is removed from the shield when in use, transfer shall be accomplished by a remote control mechanism.

(ii) Transfer mechanisms shall be designed to minimize the possibility of damage to the source in transit.

(dd) Each radiographic exposure device shall be provided with a lock within the enclosure. The enclosure shall also be provided with a lock and shall be kept locked at all times except when under the direct surveillance of the industrial radiographer or his assistant.

(ee) Sources shall have leak tests performed as follows:

(i) The registrant shall provide for testing for leakage and contamination prior to initial use.

(ii) All sealed radium sources shall be tested for leakage at least every 6 months.

(iii) If there is reason to suspect that a sealed source has been damaged, it shall be tested for leakage before further use.

(iv) Leak tests shall be capable of detecting the presence of 0.005 microcurie of contamination of radium and its decay products.

(v) Any tests conducted which reveal the presence of 0.005 microcurie or more of removable contamination shall be considered evidence that the sealed source is leaking and the registrant shall withdraw the source from use and shall cause it to be decontaminated and resealed or to be disposed of in accordance with MHD 183 (c).

(vi) Leaking or lost sources shall be reported to the Board in accordance with MHD 181 (g).

(ff) A radiation survey shall be made after each use to determine that the radium source has been returned to its shielded position. Records shall be kept of each survey for inspection by the Board.

(c) **Waste Disposal of Radium Sources**

(1) Radium sources considered to be waste shall be disposed of through one of the following:

(aa) A radium collection agency

(bb) A private radium collection company

(cc) An institution that has suitable waste disposal facilities.

(2) The delivery of radium waste to the receiver shall be in accordance with MHD 181 (f).

MHD 184 Special Uses of Electric Equipment

(a) **Accelerators, X-Ray Diffraction Units, and Electron Microscopes.** Accelerators, x-ray diffraction units, and electron microscopes shall be installed, shielded, and operated in such a manner that no one shall be exposed beyond the appropriate limits as defined in MHD 181 (c) (2).

(b) **Television Receivers.** No television receivers shall be manufactured, sold, demonstrated or otherwise distributed unless they are in conformity with the Code of Federal Regulations, Title 42, Part 78.

(c) **Research and Teaching Institutions.** The following special provisions of this part apply to all registrants who use ionizing radiation in research and teaching institutions and are in addition to, and not in substitution for, other applicable provisions of these regulations.

(1) The possession by secondary or elementary schools of radium-226 in excess of those quantities exempted in MHD 181 (d) (1) (Table 3) shall be prohibited.

(2) The use of registerable sources of ionizing radiation in secondary or elementary schools is limited to registrants specifically designated by the Board or licensed by the U. S. Atomic Energy Commission to use by-product materials. The Board may authorize a registrant to use sources of ionizing radiation if the registrant demonstrates sufficient knowledge of radiation protection and if applicable principles of radiation protection have been implemented in the physical construction and/or preparation of the source.

(3) Students under 18 years of age shall not receive in any period of one calendar quarter a whole body exposure exceeding 10 percent of the limits specified in Table 1 in the Appendix.

MHD 185 Nuclear Facilities. Regulation 11040(i) "Nuclear reactors and facilities," **Minnesota State Board of Health Regulations on Ionizing Radiation** adopted by Minnesota State Board of Health December 4, 1958 is renumbered here to be in accordance with the numbering system chosen for the revised regulations on ionizing radiation. The regulation is as follows:

1. The term "nuclear reactor" as used herein means any installation, machine, device, or assemblage or collection of installations, machines, or devices that does or is intended or designed to contain a controlled self-sustaining neutron chain reaction. The term "facility" as used herein includes nuclear reactors and also includes any plant, installation, or device for processing or reprocessing nuclear fuel, and any plant, installation, device, place, or location for disposal of radioactive wastes or for temporary or permanent disposal of radioactive materials, equipment, or nuclear fuel.

2. Before the construction of any nuclear reactor or facility is started within this State a general description thereof shall be submitted to the Board of Health containing such information as may be necessary or appro-

priate to a determination of any actual or potential hazard to or effect upon the public health, and specifying the following information: (aa) the name, address and corporate or individual character of the person who will own the facility, and, if different, of the person who will operate it; (bb) the name and address of the principal contractors who will construct the facility; (cc) a description of the general character of the means employed to utilize nuclear energy; (dd) a statement as to the character, quantity and source of the materials that will be utilized as a source of nuclear energy; (ee) a description of the precise location of the facility with reference to any relevant known topographical, subsurface, or meteorological features of the location, such as adjacent bodies of water; (ff) a statement as to plans for monitoring levels of radioactivity in the various phases of the environment; (gg) a statement as to the anticipated quantity and means of storage and disposition of any radioactive waste materials that will result from the operation; (hh) a preliminary statement as to the standards and measures that will be employed to ensure the safety of personnel employed in or near the proposed facility; (ii) a preliminary statement as to the standards and measures that will be employed to prevent radioactive contamination of air, water, and other elements of the environment; (jj) a preliminary statement specifying in standard scientific terms and quantitative units the nature and amount of radioactivity that will be permitted to pass into the environmental air, water, and other elements within a specified period of time, stating in what manner and form such radioactivity will be permitted to pass into the environment and describing the safety checks that will be employed to ensure that no larger quantity of radioactivity escapes into the environment, and (kk) a preliminary description of the maximum credible accident which might occur at the proposed facility and how it will be controlled, together with any information relevant to a complete hazard report.

3. No part of the construction of a nuclear reactor or facility shall be started within this State without the express approval of the Board of Health until 30 days after the submission to it of such description and information. Within 30 days after such submission the Board of Health, or its duly authorized agents, may require the submission of additional information relating to any specific matter referred to herein, and the Board of Health, or its duly authorized agents, may object to any part of the proposed design, description, plans, method of operation, standards or safety measures, upon the grounds that the public health is endangered, and may require such modification in such design, plans, method of operation, standards or safety measures as will eliminate the danger to the public health. In the event that within 30 days after the submission to it of the description, information, design and plans for a proposed nuclear reactor or facility the Board of Health does not object to any part thereof, the facility may be constructed in accordance with the description, design, and plans submitted to the Board of Health.

4. If there is any substantial deviation from or change in the description, design, or plans as submitted to the Board of Health, full information relating to such deviation or change shall be submitted to the Board of Health immediately.

5. The Board of Health shall be notified of the date when it is proposed that a nuclear reactor shall be put into operation. Such notification shall specify any deviations from, or changes in, the description, design, or plans as previously submitted to the Board of Health and the facility as actually

constructed. At least 30 days, and not more than 60 days, prior to this proposed date, the owner of the reactor shall apply to the Board of Health for its approval to operate the facility. No reactor shall be operated in this State until the owner has received, and is in the possession of, such an approval.

6. Whenever it is proposed to alter, enlarge, move, or substantially modify or change any existing nuclear reactor or facility, the description, design, and plans of such proposed alteration, enlargement, move, modification or change shall be submitted to the Board of Health at least 30 days prior to the time that it is proposed to initiate such work, and these regulations shall apply to any substantial alteration or enlargement as though such work were the construction of a new facility.

7. The operator of each nuclear reactor or facility within this State shall report to the Board of Health at least annually, stating the measures that have been taken during the preceding year to monitor and measure the nature and amount of radioactivity discharged or allowed to escape into the environment from such facility, and stating in standard scientific terms and quantitative units the nature and quantity of radioactivity that has been discharged or allowed to escape into the environment during the preceding year.

8. When an accident or other situation occurs in this State in the operation of a nuclear reactor or facility which results or threatens to result in the radioactive contamination of a person, animal, or the environment, or the exposure of a person to, or the escape into the environment of, ionizing radiation in a manner or to a degree or in a quantity different or greater than specified in the description and information last previously filed with the Board of Health, it shall be the duty of the owner and operator and of the person then in charge of such facility to have notification of such occurrence communicated to the Board of Health by telephone immediately upon the discovery of the facts, and to have all facts and circumstances of the occurrence reported in detail in writing to the Board of Health within seven days thereafter.

9. Any facility in design or under construction as of January 1, 1959, shall not be exempt from the provisions of these regulations.

APPENDIX

Table 1 .....Maximum Permissible Doses (Dose Equivalents)
Table 2 .....Neutron Flux Dose Equivalents
Table 3 .....Registration Exemption Possession Limits
Table 4 .....Exempt Concentrations

Table 1

MAXIMUM PERMISSIBLE DOSES (DOSE EQUIVALENTS)

	Average weekly dose[a]	Maximum 13-week dose	Maximum yearly dose	Maximum accumulated dose[c]
Occupational Personnel	rem[b]	rem[b]	rem[b]	rem[b]
Controlled areas—Occupational Dose				
Whole body, gonads, blood-forming organs, and lens of eye	0.1	1¼		5(N-18)
Skin of whole body		7½	30	
Hands and forearms, head, neck, feet, and ankles	1.5	18¾	75	
Public				
Environs (Non-controlled areas)				
Nonoccupational Dose	0.01		0.5	

Notes:

N = Age in years and is greater than 18.

[a]For design purposes only.

[b]The dose in rems may be assumed to be equal to the exposure in röentgens for x and gamma rays.

[c]Where an employee's accumulative dose is partly due to radiation from isotopes and partly to radiation from x-ray units, the limits established in Table 1, would apply to the sum of the radiation doses.

Table 2

NEUTRON FLUX DOSE EQUIVALENTS

Neutron Energy (MeV)	Number of neutrons per square centimeter equivalent to a dose of 1 rem (neutrons/cm²)	Average flux to deliver 100 millirem in 40 hrs. (neutrons/cm² per sec.)
Thermal	970×10^6	670
0.0001	720×10^6	500
0.005	820×10^6	570
0.02	400×10^6	280
0.1	120×10^6	80
0.5	43×10^6	30
1.0	26×10^6	18
2.5	29×10^6	20
5.0	26×10^6	18
7.5	24×10^6	17
10.0	24×10^6	17
10 to 30	14×10^6	10

Table 3

REGISTRATION EXEMPTION POSSESSION LIMITS

Material	Microcuries	Material	Microcuries
Americium 241	0.01	Cesium 136	10
Antimony 122	100	Cesium 137	10
Antimony 124	10	Chlorine 36	10
Antimony 125	10	Chlorine 38	10
Arsenic 73	100	Chromium 51	1,000
Arsenic 74	10	Cobalt 58m	10
Arsenic 76	10	Cobalt 58	10
Arsenic 77	100	Cobalt 60	1
Barium 131	10	Copper 64	100
Barium 140	10	Dysprosium 165	10
Bismuth 210	1	Dysprosium 166	100
Bromine 82	10	Erbium 169	100
Cadmium 109	10	Erbium 171	100
Cadmium 115m	10	Europium 152 9.2 h	100
Cadmium 115	100	Europium 152 13 yr	1
Calcium 45	10	Europium 154	1
Calcium 47	10	Europium 155	10
Carbon 14	100	Fluorine 18	1,000
Cerium 141	100	Gadolinium 153	10
Cerium 143	100	Gadolinium 159	100
Cerium 144	1	Gallium 72	10
Cesium 131	1,000	Germanium 71	100
Cesium 134m	100	Gold 198	100
Cesium 134	1	Gold 199	100
Cesium 135	10		

Table 3 (continued)

Material	Microcuries	Material	Microcuries
Hafnium 181	10	Phosphorus 32	10
Holmium 166	100	Platinum 191	100
Hydrogen 3	1,000	Platinum 193m	100
Indium 113m	100	Platinum 193	100
Indium 114m	10	Platinum 197m	100
Indium 115m	100	Platinum 197	100
Indium 115	10	Plutonium 239	0.01
Iodine 125	1	Polonium 210	0.1
Iodine 126	1	Potassium 42	10
Iodine 129	0.1	Praseodymium 142	100
Iodine 131	1	Praseodymium 143	100
Iodine 132	10	Promethium 147	10
Iodine 133	1	Promethium 149	10
Iodine 134	10	Radium 226	10
Iodine 135	10	Rhenium 186	100
Iridium 192	10	Rhenium 188	100
Iridium 194	100	Rhodium 103m	100
Iron 55	100	Rhodium 105	100
Iron 59	10	Rubidium 86	10
Krypton 85	100	Rubidium 87	10
Krypton 87	10	Ruthenium 97	100
Lanthanum 140	10	Ruthenium 103	10
Lutetium 177	100	Ruthenium 105	10
Manganese 52	10	Ruthenium 106	1
Manganese 54	10	Samarium 151	10
Manganese 56	10	Samarium 153	100
Mercury 197m	100	Scandium 46	10
Mercury 197	100	Scandium 47	100
Mercury 203	10	Scandium 48	10
Molybdenum 99	100	Selenium 75	10
Neodymium 147	100	Silicon 31	100
Neodymium 149	100	Silver 105	10
Nickel 59	100	Silver 110m	1
Nickel 63	10	Silver 111	100
Nickel 65	100	Sodium 24	10
Niobium 93m	10	Strontium 85	10
Niobium 95	10	Strontium 89	1
Niobium 97	10	Strontium 90	0.1
Osmium 185	10	Strontium 91	10
Osmium 191m	100	Strontium 92	10
Osmium 191	100	Sulphur 35	100
Osmium 193	100	Tantalum 182	10
Palladium 103	100	Technetium 96	10
Palladium 109	100	Technetium 97m	100
		Technetium 97	100
		Technetium 99m	100

Table 3 (continued)

Material	Microcuries	Material	Microcuries
Technetium 99	10	Xenon 131m	1,000
Tellurium 125m	10	Xenon 133	100
Tellurium 127m	10	Xenon 135	100
Tellurium 127	100	Ytterbium 175	100
Tellurium 129m	10	Yttrium 90	10
Tellurium 129	100	Yttrium 91	10
Tellurium 131m	10	Yttrium 92	100
Tellurium 132	10	Yttrium 93	100
Terbium 160	10	Zinc 65	10
Thallium 200	100	Zinc 69m	100
Thallium 201	100	Zinc 69	1,000
Thallium 202	100	Zirconium 93	10
Thallium 204	10	Zirconium 95	10
Thorium (natural)	50	Zirconium 97	10
Thulium 170	10	Any alpha emitting radionuclide not listed above or mixtures of alpha emitters of unknown composition	0.01
Thulium 171	10		
Tin 113	10		
Tin 125	10		
Tungsten 181	10		
Tungsten 185	10		
Tungsten 187	100	Any radionuclide other than alpha emitting radionuclides not listed above or mixtures of beta emitters of unknown composition	0.1
Uranium (natural)	50		
Uranium 233	0.01		
Uranium 234-Uranium 235	0.01		
Vanadium 48	10		

Note: Where there is a combination of isotopes in known amounts the limit for the combination shall be derived as follows: Determine, for each isotope in the combination, the ratio between the quantity present in the combination and the limit otherwise established for the specific isotope when not in combination. The sum of such ratios for all the isotopes in the combination may not exceed "1" (i.e., "unity").

Example: If a particular batch contains 20,000 μCi of Au^{198} and 50,000 μCi of C^{14}, it may also include not more than 300 μCi of I^{131}. This limit was determined as follows:

$$\frac{20{,}000\ \mu Ci\ Au^{198}}{100{,}000\ \mu Ci} + \frac{50{,}000\ \mu Ci\ C^{14}}{100{,}000\ \mu Ci} + \frac{300\ \mu Ci\ I^{131}}{1{,}000\ \mu Ci} = 1$$

The denominator in each of the above ratios was obtained by multiplying the figure in the table by 1,000.

Table 4

EXEMPT CONCENTRATIONS

Element (atomic number)	Isotope	Column I Gas concentration μCi/ml[1]	Column II Liquid and solid[2] concentration μCi/ml[2]
Antimony (51)	Sb 122		$3x10^{-4}$
	Sb 124		$2x10^{-4}$
	Sb 125		$1x10^{-3}$
Argon (18)	A 37	$1x10^{-3}$	
	A 41	$4x10^{-7}$	
Arsenic (33)	As 73		$5x10^{-3}$
	As 74		$5x10^{-4}$
	As 76		$2x10^{-4}$
	As 77		$8x10^{-3}$
Barium (56)	Ba 131		$2x10^{-3}$
	Ba 140		$3x10^{-4}$
Beryllium (4)	Be 7		$2x10^{-2}$
Bismuth (83)	Bi 206		$4x10^{-4}$
Bromine (35)	Br 82	$4x10^{-7}$	$3x10^{-3}$
Cadmium (48)	Cd 109		$2x10^{-3}$
	Cd 115m		$3x10^{-4}$
	Cd 115		$3x10^{-4}$
Calcium (20)	Ca 45		$9x10^{-5}$
	Ca 47		$5x10^{-4}$
Carbon (6)	C 14	$1x10^{-6}$	$8x10^{-3}$
Cerium (58)	Ce 141		$9x10^{-4}$
	Ce 143		$4x10^{-4}$
	Ce 144		$1x10^{-4}$
Cesium (55)	Cs 131		$2x10^{-2}$
	Cs 134m		$6x10^{-2}$
	Cs 134		$9x10^{-5}$
Chlorine (17)	Cl 38	$9x10^{-7}$	$4x10^{-3}$
Chromium (24)	Cr 51		$2x10^{-2}$
Cobalt (27)	Co 57		$5x10^{-3}$
	Co 58		$1x10^{-3}$
	Co 60		$5x10^{-4}$
Copper (29)	Cu 64		$3x10^{-3}$
Dysprosium (66)	Dy 165		$4x10^{-3}$
	Dy 166		$4x10^{-4}$
Erbium (68)	Er 169		$9x10^{-4}$
	Er 171		$1x10^{-3}$
Europium (63)	Eu 152 (T/2=9.2 Hrs.)		$6x10^{-4}$
	Eu 155		$2x10^{-2}$
Fluorine (9)	F 18	$2x10^{-6}$	$8x10^{-3}$
Gadolinium (64)	Gd 153		$2x10^{-3}$
	Gd 159		$8x10^{-4}$
Gallium (31)	Ga 72		$4x10^{-4}$
Germanium (32)	Ge 71		$2x10^{-2}$

Table 4 (continued)

EXEMPT CONCENTRATIONS

Element (atomic number)	Isotope	Column I Gas concentration $\mu Ci/ml^1$	Column II Liquid and solid concentration $\mu Ci/ml^2$
Gold (79)	Au 196		$2x10^{-3}$
	Au 198		$5x10^{-4}$
	Au 199		$2x10^{-3}$
Hafnium (72)	Hf 181		$7x10^{-4}$
Hydrogen (1)	H 3	$5x10^{-6}$	$3x10^{-2}$
Indium (49)	In 113m		$1x10^{-2}$
	In 114m		$2x10^{-4}$
Iodine (53)	I 126	$3x10^{-9}$	$2x10^{-5}$
	I 131	$3x10^{-9}$	$2x10^{-5}$
	I 132	$8x10^{-8}$	$6x10^{-4}$
	I 133	$1x10^{-8}$	$7x10^{-5}$
	I 134	$2x10^{-7}$	$1x10^{-3}$
Iridium (77)	Ir 190		$2x10^{-3}$
	Ir 192		$4x10^{-4}$
	Ir 194		$3x10^{-4}$
Iron (26)	Fe 55		$8x10^{-3}$
	Fe 59		$6x10^{-4}$
Krypton (36)	Kr 85m	$1x10^{-6}$	
	Kr 85	$3x10^{-6}$	
Lanthanum (57)	La 140		$2x10^{-4}$
Lead (82)	Pb 203		$4x10^{-3}$
Lutetium (71)	Lu 177		$1x10^{-3}$
Manganese (25)	Mn 52		$3x10^{-4}$
	Mn 54		$1x10^{-3}$
	Mn 56		$1x10^{-3}$
Mercury (80)	Hg 197m		$2x10^{-3}$
	Hg 197		$3x10^{-3}$
	Hg 203		$2x10^{-4}$
Molybdenum (42)	Mo 99		$2x10^{-3}$
Neodymium (60)	Nd 147		$6x10^{-4}$
	Nd 149		$3x10^{-3}$
Nickel (28)	Ni 65		$1x10^{-3}$
Niobium (Columbium) (41)	Nb 95		$1x10^{-3}$
	Nb 97		$9x10^{-3}$
Osmium (76)	Os 185		$7x10^{-4}$
	Os 191m		$3x10^{-2}$
	Os 191		$2x10^{-3}$
	Os 193		$6x10^{-4}$
Palladium (46)	Pd 103		$3x10^{-3}$
	Pd 109		$9x10^{-4}$
Phosphorus (15)	P 32		$2x10^{-4}$
Platinum (78)	Pt 191		$1x10^{-3}$
	Pt 193m		$1x10^{-2}$
	Pt 197m		$1x10^{-2}$
	Pt 197		$1x10^{-3}$

Table 4 (continued)

EXEMPT CONCENTRATIONS

Element (atomic number)	Isotope	Column I Gas concentration μCi/ml[1]	Column II Liquid and solid concentration μCi/ml[2]
Potassium (19)	K 42		$3x10^{-3}$
Praseodymium (59)	Pr 142		$3x10^{-4}$
	Pr 143		$5x10^{-4}$
Promethium (61)	Pm 147		$2x10^{-3}$
	Pm 149		$4x10^{-4}$
Rhenium (75)	Re 183		$6x10^{-3}$
	Re 186		$9x10^{-4}$
	Re 188		$6x10^{-4}$
Rhodium (45)	Rh 103m		$1x10^{-1}$
	Rh 105		$1x10^{-3}$
Rubidium (37)	Rb 86		$7x10^{-4}$
Ruthenium (44)	Ru 97		$4x10^{-3}$
	Ru 103		$8x10^{-4}$
	Ru 105		$1x10^{-3}$
	Ru 106		$1x10^{-4}$
Samarium (62)	Sm 153		$8x10^{-4}$
Scandium (21)	Sc 46		$4x10^{-4}$
	Sc 47		$9x10^{-4}$
	Sc 48		$3x10^{-4}$
Selenium (34)	Se 75		$3x10^{-3}$
Silicon (14)	Si 31		$9x10^{-3}$
Silver (47)	Ag 105		$1x10^{-3}$
	Ag 110m		$3x10^{-4}$
	Ag 111		$4x10^{-4}$
Sodium (11)	Na 24		$2x10^{-3}$
Strontium (38)	Sr 89		$1x10^{-4}$
	Sr 91		$7x10^{-4}$
	Sr 92		$7x10^{-4}$
Sulfur (16)	S 35	$9x10^{-6}$	$6x10^{-4}$
Tantalum (73)	Ta 182		$4x10^{-4}$
Technetium (43)	Tc 96m		$1x10^{-1}$
	Tc 96		$1x10^{-3}$
Tellurium (52)	Te 125m		$2x10^{-3}$
	Te 127m		$6x10^{-4}$
	Te 127		$3x10^{-3}$
	Te 129m		$3x10^{-4}$
	Te 131m		$6x10^{-4}$
	Te 132		$3x10^{-4}$
Terbium (65)	Tb 160		$4x10^{-4}$
Thallium (81)	Tl 200		$4x10^{-3}$
	Tl 201		$3x10^{-3}$
	Tl 202		$1x10^{-3}$
	Tl 204		$1x10^{-3}$
Thulium (69)	Tm 170		$5x10^{-4}$
	Tm 171		$5x10^{-3}$
Tin (50)	Sn 113		$9x10^{-4}$
	Sn 125		$2x10^{-4}$

Table 4 (continued)

EXEMPT CONCENTRATIONS

Element (atomic number)	Isotope	Column I Gas concentration μCi/ml[1]	Column II Liquid and solid concentration μCi/ml[2]
Tungsten (Wolfram) (74)	W 181		$4x10^{-3}$
	W 187		$7x10^{-4}$
Vanadium (23)	V 48		$3x10^{-4}$
Xenon (54)	Xe 131m	$4x10^{-6}$	
	Xe 133	$3x10^{-6}$	
	Xe 135	$1x10^{-6}$	$1x10^{-8}$
Ytterbium (70)	Yb 175		$1x10^{-3}$
Yttrium (39)	Y 90		$2x10^{-4}$
	Y 91m		$3x10^{-2}$
	Y 91		$3x10^{-4}$
	Y 92		$6x10^{-4}$
	Y 93		$3x10^{-4}$
Zinc (30)	Zn 65		$1x10^{-3}$
	Zn 69m		$7x10^{-4}$
	Zn 69		$2x10^{-2}$
Zirconium (40)	Zr 95		$6x10^{-4}$
	Zr 97		$2x10^{-4}$
Beta and/or gamma emitting byproduct material not listed above with half-life less than 3 years.		$1x10^{-10}$	$1x10^{-7}$

NOTE a: Exempt concentrations refer to *products* or *materials* containing byproduct materials in concentrations not in excess of those specified in Table 4. Such products or materials may be received, possessed, used, transferred, owned or acquired without registration.

NOTE b: Many radioisotopes disintegrate into isotopes which are also radioactive. In expressing the concentrations in Table 4, the activity stated is that of the parent isotope and takes into account the daughters.

NOTE c: Where a combination of isotopes is involved, the limit for the combination should be derived as follows:
Determine for each isotope in the product the ratio between the concentration present in the product and the exempt concentration established in Table 4 for the specific isotope when not in combination. The sum of such ratio may not exceed "1" (i.e., unity).

Example:

$$\frac{\text{Concentration of Isotope A in Product}}{\text{Exempt concentration of Isotope A}} + \frac{\text{Concentration of Isotope B in Product}}{\text{Exempt concentration of Isotope B}} \leq 1$$

[1]Microcuries/milliliter. Values are given only for those materials normally used as gases.
[2]Microcuries/milliliter. Solids measured in microcuries/gram.

Filed with the Secretary of State Sept. 28, 1971 and the Commissioner of Administration Sept. 29, 1971.

MINNESOTA DEPARTMENT OF HEALTH

Rules and Regulations

CHAPTER THIRTEEN: MHD 187-194

REGULATIONS GOVERNING MOBILE HOME PARKS AND RECREATIONAL CAMPING AREAS

MHD 187 MOBILE HOME PARKS AND RECREATIONAL CAMPING AREAS

(a) **Mobile Home Park and Recreational Camping Area Location.** No mobile home park or recreational camping area shall be so located that drainage from the park or camp area will endanger any water supply. All such parks and camps shall be well drained and no portion of the park or camp shall be located in an area subject to flooding. No waste water from mobile homes or recreational camping vehicles shall be deposited on the surface of the ground.

(b) **Caretaker.** A responsible attendant or caretaker shall be in charge of every mobile home park or recreational camping area at all times and the duty of said attendant or caretaker shall be to maintain the park, its facilities and equipment in a clean, orderly and sanitary condition. The caretaker or attendant shall be the owner or operator of the park or camping area, or his appointed representative.

(c) **Mobile Home and Recreational Camping Vehicle Spacing.** No mobile home shall be parked closer than three feet to the side lot lines of a mobile home park if the abutting property is improved property or closer than ten feet to a public street or alley. Each individual mobile home site shall abut or face on a driveway or clear unoccupied space of not less than 16 feet in width, which space shall have unobstructed access to a public highway or alley. There shall be an open space of at least 10 feet between the sides of adjacent mobile homes including their attachments, and at least three feet between mobile homes when parked end to end. The space between mobile homes may be used for parking of motor vehicles or other property provided such vehicle or other property be parked at least 10 feet from the nearest adjacent mobile home position. All new mobile home parks constructed after July 1, 1970 and additions to existing mobile home parks constructed after July 1, 1970 shall allot the following minimum site sizes for each mobile home: 4,000 square feet if sewage from the park is discharged into a soil absorption system; 2,800 square feet if any other acceptable method of sewage disposal is used. In recreational camping areas, recreational camping vehicles shall be separated from each other and from other structures by at least 10 feet. Any accessory structure such as attached awnings, car ports or individual storage facilities, shall, for the purpose of this separation requirement, be considered to be part of the recreational camping vehicle. A minimum site size of 2,000 square feet shall be provided for each recreational camping vehicle in camping areas constructed after July 1, 1970. All recreational camping vehicles shall be located at least 25 feet from any camping area property boundary line abutting upon a public

street or highway and at least 10 feet from other park property boundary lines.

(d) **Domestic Animals.** No domestic animals or house pets shall be allowed to run at large or commit any nuisances within the limits of a mobile home park or recreational camping area. Any kennels, pens or other facilities provided for such pets shall be maintained in a sanitary condition at all times.

(e) **Water Supply.** An adequate supply of water of safe, sanitary, potable quality shall be provided in each mobile home park and recreational camping area. When a satisfactory public water supply is not available, an individual water supply system may be developed and used, but such source of supply shall first be approved by the State Board of Health.

In mobile home parks, the water supply shall be capable of supplying a minimum of 150 gallons per day per mobile home, and in recreational camping areas, the water supply shall be capable of supplying 50 gallons per site per day for all sites lacking individual water connections, and 100 gallons per site per day for all spaces provided with individual water connections. In recreational camping areas water from the drinking water supply shall be available within at least 400 feet of every campsite. Every well or suction line of the water supply system shall be located and constructed in such a manner that neither underground nor surface contamination shall reach the water supply from any source. The following minimum distances between wells and various sources of contamination shall be required:

Contamination Source	Distance in Feet Separating Well or Suction Line from Contamination Source
Building Sewer	50
Septic Tank	50
Disposal Field	50
Seepage or Leaching Pit	75

No well casings, pumps, pumping machinery or suction pipes shall be placed in any pit, room or space extending below ground level. All water storage reservoirs shall be covered, water-tight and constructed of impervious material. Overflows and vents of such reservoirs shall be effectively screened. Manholes shall be constructed with covers which will prevent the entrance of foreign material. The water piping system shall not be connected with non-potable or questionable water supplies and shall be protected against the hazards of backflow and back siphonage. The system shall be so designed and maintained as to provide a pressure of not less than 20 pounds per square inch under normal operating conditions at service buildings and other locations requiring a potable water supply. In mobile home parks and on recreational camping sites provided with individual water service connections, riser pipes shall be so located and constructed that they will not be damaged by the parking of mobile homes or recreational camping vehicles. Water riser pipes shall extend at least 4 inches above the

ground elevation and the minimum pipe size shall be ¾ inch. Adequate provisions shall be made to prevent freezing of service lines, valves and riser pipes. If underground stop and waste valves are installed, they shall be at least 10 feet from the nearest buried portion of the sewage system. Water risers on unoccupied sites shall be valved off. There shall be a horizontal distance of at least ten feet between water and sewer riser pipes: provided, that where the sewer riser is constructed of cast iron pipe and the water riser is constructed of copper pipe the distance between may be less than ten feet. When strict compliance with the provisions specified in this section is impractical, the Board may waive any of the requirements subject to such conditions as may be deemed desirable in the individual case.

(f) **Pumbing.** All systems of plumbing in mobile home parks and recreational camping areas shall be installed in accordance with the regulations of the State Board of Health and the provisions of the Minnesota Plumbing Code.

(g) **Sewage Disposal.** All sewage and other water carried wastes shall be discharged into a municipal sewage system which is being operated under a permit issued by the Minnesota Pollution Control Agency whenever such a system is available. When such a system is not available a sewage disposal system acceptable to the State Board of Health and the Minnesota Pollution Control Agency shall be provided. All sewer lines shall be located in trenches of sufficient depth to be free of breakage from traffic, or other movements and shall be separated from the park water supply system by at least 10 feet, unless special acceptable construction of sewer lines is provided. All sewer lines shall be constructed of materials approved by the State Board of Health and shall be adequately vented and shall have water tight joints. Individual site sewer connections shall be at least a 4 inch diameter sewer riser pipe. The sewer connections shall consist of one pipe line only without any branch fittings. All joints shall be water tight. All materials used for sewer connections shall be corrosive resistant, non-absorbent and durable. The inner surface shall be smooth. Provisions shall be made for capping the sewer riser pipe when a mobile home or recreational camping vehicle does not occupy the site. Surface drainage shall be directed away from the riser, the rim of the riser pipe shall extend at least 4 inches above ground elevation. Systems of sewage disposal utilizing the discharge of effluents to bodies of surface water must receive the approval and comply with the water quality and effluent standards and system design criteria established by the Minnesota Pollution Control Agency. All systems utilizing soil absorption for final disposal of effluent shall comply with and receive the approval of the State Board of Health. No soil absorption system shall be installed in soil which has a percolation rate of less than one inch in 60 minutes, or where the ground water table rises to within four feet of the bottom of a proposed absorption pit or trench or where such system shall adversely affect the ground water used for potable water supplies. All buried portions of a sewage disposal system shall be located at least 50 feet horizontally from the ordinary high water level of any body of surface water.

(h) **Toilet, Bathing and Laundry Facilities.** In dependent mobile home parks and recreational camping areas which harbor mobile homes and recreational camping vehicles which are not equipped with toilet and bathing facilities, one or more central buildings shall be provided equipped with

such facilities. The number of fixtures shall be in accordance with the following schedule:

Number of Dependent Sites	Toilets		Urinals	Lavatories		Showers	
	Men	Women	Men	Men	Women	Men	Women
1-15	1	1	1	1	1	1	1
16-30	1	2	1	2	2	1	1
31-45	2	2	1	3	3	1	1
46-60	2	3	2	3	3	2	2
61-80	3	4	2	4	4	2	2
81-100	3	4	2	4	4	2	2
101-130	4	5	3	5	5	3	3
131-160	5	6	3	6	6	4	4
161-190	6	7	3	7	7	4	4
191-220	7	8	4	8	8	5	5
221-250	8	9	4	9	9	5	5
251-280	9	10	4	10	10	6	6
281-310	10	11	5	11	11	6	6
311-340	11	12	5	12	12	7	7
341-370	12	13	5	13	13	7	7
371-400	13	14	6	14	14	8	8

Provided, that in primitive recreational camping areas only the toilet facilities shall be required in the above ratio.

Privies and other toilets not connected to water-carried systems may be used in recreational camping areas when approved by the State Board of Health. In recreational camping areas or dependent mobile home parks where laundry and bathing facilities are provided, such facilities shall be in buildings which are well constructed with adequate heating and ventilation, good lighting and floors of impervious material sloped to drain. Walls shall be of washable material. There shall be no exposed studs or rafters. Toilet facilities shall not be more than 400 feet from the furthest site to be served and shall be plainly marked according to sex. In conjunction with bathing facilities, there shall be provided a dressing area or dressing compartment, the floor of which shall be impervious and well drained. Mats, grids and walkways made of cloth or other absorbent material shall not be used, provided that single service mats may be used. Where clothes drying lines are provided, they shall be located in areas out of regular pedestrian traffic patterns and where they will generally not be a hazard to the safety to the occupants of the camping area. No laundry trays, washing machines, dryers, or extractors shall be located in any toilet, bath, or dressing room. Recreational camping areas accommodating recreational camping vehicles having a self contained liquid waste system with a waste reservoir, shall provide a sanitary station for the disposal of waste water. Such sanitary stations shall be equipped with a four inch sewer riser pipe, surrounded at the inlet by a concrete apron sloped towards the inlet drain, and provided with a suitable hinged cover. A water outlet, with the necessary appurtenances connected to the camp water supply system shall be provided to permit periodic washdown of the immediate adjacent areas. Each recreational camping area accommodating self contained recreational camping vehicles shall provide sanitary stations in the ratio of one for every 100 recreational camping vehicle sites or fraction thereof. Sanitary dumping stations shall be screened from other activities by visual barriers such as fences, walls or

natural growth, and shall be separated from any recreational camping vehicle site by a distance of at least 50 feet. Final disposal of sewage from such dumping stations shall be by a method acceptable to the State Board of Health and Minnesota Pollution Control Agency.

(i) **Barbecue Pits, Fireplaces, Stoves and Incinerators.** In mobile home parks and recreational camping areas, cooking shelter, barbecue pits, fireplaces, wood burning stoves and incinerators shall be so located, constructed and maintained and used as to minimize fire hazards and smoke nuisance both on the property on which used and on neighboring property. Incinerators shall be of a type acceptable to the Minnesota Pollution Control Agency. No open fire shall be permitted except in facilities provided. No open fire shall be left unattended. No fuel shall be used or no material burned which emits dense smoke or objectionable odors.

(j) **Garbage and Refuse — Handling and Disposal.** The storage, collection and disposal of refuse and garbage in the mobile home parks and recreational camping areas shall be so conducted as to create no health hazards, rodent harborage, insect breeding areas, accident or fire hazards or air pollution. All refuse and garbage shall be stored in fly-tight, water-tight, rodent proof containers which shall be located convenient to any mobile home site. In recreational camping areas, garbage and refuse containers shall be provided on the ratio of at least one for every four sites.

Refuse and garbage collection shall be made at least twice each week and more often where necessary to prevent nuisance conditions. Final disposal of refuse and garbage by landfill methods shall be accomplished in accordance with the criteria and standards established by the Minnesota Pollution Control Agency.

(k) **Insect and Rodent Harborage and Infestation Control.** Mobile home parks and recreational camping areas shall be maintained free of accumulations of debris which may provide rodent harborage or breeding places for flies, mosquitoes and other pests. Storage areas shall be so maintained as to prevent rodent harborage. Lumber, pipe and other building materials shall be stored at least one foot above the ground. Areas shall be so maintained as to prevent the growth of ragweed, poison ivy, poison oak, poison sumac and other noxious weeds considered detrimental to health.

(l) **Night Lighting.** The walkways, drives and other used portions of mobile home parks shall be lighted during the hours of darkness.

(m) **Community Kitchen and Dining Rooms.** When community kitchens and dining rooms are provided, such facilities and equipment shall be maintained in a clean and sanitary condition at all times, and shall be constructed and equipped in compliance with State Laws and Regulations applicable to food handling establishments.

(n) **Bottled Gas.** Where bottled gas is used, the container shall be firmly connected to the appliance by tubing of copper or other suitable metallic material. Cylinders containing bottled gas shall not be located within five feet of any mobile home or recreational camping vehicle door. The container shall not be installed or stored even temporarily inside any mobile home or recreational camping vehicle. No container may be permitted to stand free, but must be firmly mounted in an upright position.

(o) **Fuel Oil Supply Systems.** All piping from outside fuel storage tanks or cylinders to mobile homes or recreational camping vehicles shall be per-

manently installed and securely fastened in place. All fuel oil storage tanks or cylinders shall be securely fastened in place and shall not be located inside or beneath any mobile home or recreational camping vehicle or less than five feet from any mobile home or recreational camping vehicle exit. All fuel oil containers shall be mounted upon a stand or rack constructed of a non-combustible material.

(p) **Fire Protection.** Fire protection shall be provided in accordance with the requirements of the State Fire Marshal.

(q) **Variance.** In any case where, upon application of responsible persons, the State Board of Health finds that by reason of exceptional circumstances the strict enforcement of any provision of this regulation would cause undue hardship and would be unreasonable, impractical or not feasible, the Board in its discretion may permit a variance therefrom upon such conditions as it may prescribe. Such variances may not conflict with statute provisions.

MHD 188-194 Reserved for future use.

Filed June, 1970.

MHD 188 Initial and Renewal License Fees; License Expiration Dates.

(a) **Definitions.** The following definitions shall apply to MHD 188:

(1) "Primary License" shall mean the initial license issued to the first person, firm, partnership, corporation or other business association to establish and maintain, conduct or operate a mobile home park or recreational camping area at any one location.

(2) "Renewal License" shall mean a license issued to the person, firm, partnership, corporation or other business association operating a previously licensed mobile home park or recreational camping area.

(b) **Fee Schedule.** The application for a primary license, or a renewal thereof, to operate a mobile home park or recreational camping area, as defined in Minn. Stat. Sec. 327.14 shall be accompanied by the following fees:

(1) Primary (Initial) License Fee: $50.00 for each 50 sites or fraction thereof. The fee for additional sites proposed after a primary license has been issued shall be $50.00 for each 50 sites or fraction thereof.

(2) Renewal Fee for Year-Round Establishments: $10.00 for each ten sites or fraction thereof with a maximum fee of $300.00 except as provided for in MHD 188 (a)(4).

(3) Renewal Fee for Seasonal Establishments: The renewal fee for any mobile home park or recreational camping area which operates for a continuous period of six (6) months (183 days) or less during a calendar year shall pay seventy-five (75) percent of the fee as computed pursuant to MHD 188 (a)(2) with a maximum fee of $225.00 except as provided for in MHD 188 (a)(4).

(4) Increased Fee: For year-round operations the fee will be increased by $10.00 if the renewal application and fee are not submitted by January 15 of the year for which application for license is made. For seasonal operations the fee will be increased $10.00 if the renewal application and fee are not submitted within 15 calendar days after the establishment opens.

(c) **Expiration Dates.**

(1) Primary License: Primary mobile home park and recreational camping area licenses shall be issued for the calendar year for which application is made and shall expire on December 31 of such year.

(2) Renewal License for Year-Round Establishments: Renewal Licenses for mobile home parks and recreational camping areas which operate on a year-round basis (in excess of six months (183 days a year)) shall be issued for the calendar year for which application is made and shall expire on December 31 of such year.

(3) Renewal License for Seasonal Establishments: Renewal licenses for mobile home parks and recreational camping areas which operate for a continuous period of six (6) months (183 days) or less shall be issued effective the first day of the establishment's operation in the calendar year for which the license is issued. Such renewal license shall expire after the 183rd day from the effective date of the license or on December 31 of the year in which the license was issued, whichever occurs first.

(d) License Renewals. License renewals shall be obtained on an annual or semiannual basis. All license renewal applications shall be submitted to the State Board of Health on forms provided by it no later than December 31 of the year preceding the year for which application is made.

(e) Effective Date. The fees prescribed in regulation MHD 188 shall apply to all licenses which become effective on or after January 1, 1975.

(Filed December 4, 1974)

MINNESOTA DEPARTMENT OF HEALTH

Rules and Regulations

CHAPTER FOURTEEN: MHD 195-209

REGULATIONS GOVERNING CHILDREN'S CAMPS AND MIGRANT LABOR CAMPS

MHD 195-200 Reserved for future use.

MHD 201 CHILDREN'S CAMPS

(a) **Camp Site.** The camp site shall be reasonably distant from any environment detrimental to the health and safety of the children in attendance at the camp. Adequate area shall be available for the development of satisfactory water supply and waste disposal systems. In order to protect against all hazards which cannot be eliminated, suitable guards shall be installed and maintained.

(b) **Buildings.** All buildings used for food preparation and storage, sleeping and other occupancy shall have roofs which do not leak, tight floors, and walls free of holes. They shall be so constructed as to provide broad and easy exit in case of fire or other emergency, and shall be adequately equipped with fire extinguishers and other fire-fighting equipment. Doors shall be tight fitting, and both door and window openings shall be sufficiently screened with a screen of not less than 16 meshes to the inch. All windows shall be so constructed as to be easily opened and closed, or shall be equipped with storm shields.

(c) **Sleeping Quarters.** Each camper shall have an individual bed. There shall be at least three feet between beds when placed side by side, and at least one foot when placed end to end. The beds shall be arranged for head-to-foot or foot-to-foot sleeping in such a manner as to provide a seven-foot horizontal separation between the heads of the sleepers.

Any room containing a double-deck bunk shall have at least one window which can be easily opened. The top of the window shall be higher than the top rail of the upper bunk. The minimum space between the floor and the lower bunk rail shall be twelve inches, and the minimum space between the lower and upper bunk rails shall be thirty-six inches. No bunk shall be more than six feet above the floor. There shall be at least thirty-six inches between the upper bunk and the ceiling.

Every sleeping room shall be ventilated. The area of direct opening to the outside shall be equivalent to at least five per cent of the floor area. Where this condition cannot be met, adequate mechanical ventilation shall be provided.

(d) **Kitchen.** The kitchen shall be separated from the dining room by a partition. The walls, ceiling, floor and partitions shall be so constructed as to be easily cleaned. The kitchen shall be used for no other purpose than the storage or preparation of food and the washing and storage of dishes

and other food service equipment. No person other than kitchen personnel shall be permitted to enter the food preparation area. The kitchen shall be well ventilated. Illumination to afford a minimum of twenty foot-candles of light at all working surfaces and at least ten foot-candles on other surfaces and equipment during periods of food preparation and service shall be provided.

(e) **Food Procurement and Storage.** All food shall be of good quality. No hermetically sealed, non-acid, and low-acid food which has been processed in a place other than a commercial food-processing establishment shall be used. Meat shall be obtained from officially approved sources. Perishable food, including milk, shall be stored in clean refrigerators of adequate capacity at a temperature of 45° Fahrenheit or below. Each refrigerator shall be equipped with an accurate thermometer. Non-perishable food shall be stored off the floor in clean, well ventilated rooms which are reasonably insect- and rodent-proof. Storage areas shall be illuminated at not less than five foot-candles of light measured at thirty inches from the floor.

All milk shall be pasteurized. Milk for drinking shall be received in two-quart, quart, pint, or half-pint containers and shall be served from the original container, but where a milk dispenser of a design acceptable to the State Board of Health is used, cups and glasses may be filled directly from the dispenser. Pitchers or other non-drinking vessels shall not be filled from a dispenser and used for serving milk.

When concentrated or powdered milk is used, it shall be mixed and handled in a sanitary manner. It shall be prepared immediately prior to the time it is to be consumed and only in the quantity needed for that one period of serving.

Insecticides, germicides, other poisonous substances, and cleaning materials shall not be stored in the same room with foods.

(f) **Food Service.** The kitchen shall be kept clean. All food service equipment and utensils shall be so designed and of such material and workmanship as to be smooth, easily cleanable, and durable, and shall be in good repair. The food contact surfaces of such equipment and utensils shall be non-toxic, corrosion-resistant, relatively non-absorbent, and easily accessible for cleaning. Equipment which meets the National Sanitation Foundation standards will comply with these provisions. All equipment shall be so installed and maintained as to facilitate the cleaning thereof, and of all adjacent areas. Food-handling procedures which will minimize the possibility of food contamination shall be practiced.

(g) **Food Service Personnel Health and Cleanliness.** All persons shall wear clean outer garments and shall keep their hands clean at all times while engaged in handling food, drink, utensils or equipment. No person shall resume work after visiting the toilet without first thoroughly washing his hands. Separate hand-washing facilities with hot and cold water, soap, and approved sanitary towels or other approved hand-drying devices shall be provided for use of the kitchen and food service personnel in the food service area. No person shall expectorate or use tobacco in any form in rooms in which food is prepared. No person who has, or is a carrier of, a communicable disease, or who has infected sores or wounds, shall engage in the handling, preparation or serving of food and drink, nor shall any person so affected be delegated duties that could cause his disease to be communicated to other camp occupants or visitors.

(h) **Dishwashing Facilities.** One of the following methods shall be employed in dishwashing:

(1) Manual. A three-compartment sink or equivalent shall be provided, with compartments of adequate length, width and depth to permit the complete immersion of the largest utensils to be washed and wire baskets or racks of dishes, and each compartment shall be supplied with hot and cold running water. There shall be a sufficient number of baskets to hold the dishes and utensils used during the peak load. The utensils and dishes shall be thoroughly washed in hot water containing a suitable soap or detergent in the first compartment, rinsed in clean water in the second compartment, and immersed completely in clean water at a temperature of not lower than 170° Fahrenheit for at least two minutes in the third compartment. The third compartment shall be properly equipped with a heating unit or other means to maintain the specified temperature while in use. A thermometer which will accurately measure the temperature of the water in the third compartment shall also be provided. Drain racks shall be a part of the three-compartment sink and adequate space shall be available for drainage. Dishes and utensils shall be air-dried.

(2) Mechanical. Water pressure in the lines supplying the wash and rinse sections of the dishwashing machine shall be maintained at a flow pressure of not less than 15 pounds per square inch, but not to exceed 25 pounds per square inch, and the water shall be at a manifold temperature not lower than 180° Fahrenheit. The machines shall be equipped with thermometers which will accurately indicate the temperature of the wash and rinse water. New dishwashing machines shall conform to Standard Number 3 of the National Sanitation Foundation dated September 1956. Dishes and utensils shall be air-dried.

(3) Where equipment or utensils must be cleaned in place or where for other reasons the methods described in (1) and (2) are not feasible, other procedures that will provide equivalent cleaning and sanitizing shall be used.

In order to protect the clean dishes and utensils from contamination, proper storage space shall be provided.

(i) **Water Supply.** Every camp shall be provided with a safe supply of water acceptable to the State Board of Health and adequate to supply all needs of the occupants for culinary, drinking, and bathing purposes. Water, except that served at meals, shall be dispensed either by means of satisfactorily designed drinking fountains or individual paper cups.

(j) **Bathing and Handwashing Facilities.** Suitable handwashing facilities shall be conveniently located at or near each toilet. Separate handwashing facilities with hot and cold water, soap, and approved sanitary towels or other approved hand-drying devices shall be provided for the use of kitchen and food service personnel in the food service area. Shower facilities, if provided, should be on the basis of one shower head for every twenty-five persons.

(k) **Plumbing.** All new plumbing shall be installed according to the regulations of the State Board of Health and the provisions of the Minnesota Plumbing Code as adopted by the State Board of Health. Alterations to existing plumbing, when undertaken, shall conform to the provisions of the Minnesota Plumbing Code. Where existing plumbing defects are found to create a serious public health hazard, correction shall be undertaken immediately.

(l) **Toilet Facilities.** Toilet facilities shall be provided on the basis of one seat for every twelve campers. In camps or sections of camps used by boys, urinals may be substituted for one-third of the toilet seats. Toilet facilities shall be convenient to sleeping quarters and shall be adequately ventilated and equipped with artificial lighting. Toilet facilities shall be provided at the water front where physically feasible but the sewage disposal system serving the facilities shall not be located within fifty feet of the water's edge. Toilet tissue shall be provided at each unit. Toilet facilities, including rooms and fixtures, shall be kept in a clean condition and in good repair.

(m) **Sewage and Excreta Disposal.** Where water flush toilets are used, a sewage disposal system acceptable to the State Board of Health shall be provided. Where water flush toilets are not provided, privies of the pit type, which conform to a standard of construction acceptable to the State Board of Health, shall be used. Such privies shall be placed separate and apart from the sleeping, living, and kitchen quarters. Toilets of the privy or pit type hereinafter constructed shall be located at least 100 feet from the kitchen and dining quarters.

(n) **Liquid Wastes.** Liquid wastes from the kitchen, laundry, shower rooms, and other sources shall be combined with the liquid toilet wastes or shall be disposed of separately by soil absorption in a manner which will not endanger a water supply, pollute any surface water, or create nuisances, or otherwise constitute a hazard to the public health and safety.

(o) **Plan Submission.** Plans and specifications covering the installation of new systems of plumbing, water supply and sewage disposal, or the material alteration or extension of existing systems of plumbing, water supply and sewage disposal shall be submitted to the State Board of Health for review and approval in accordance with Regulations MHD 136 and MHD 139 of the Board.

(p) **Garbage; Refuse.** All garbage shall be collected in leak-proof, non-absorbent containers provided with tight-fitting lids or covers, and shall be disposed of in a sanitary manner with sufficient frequency as to prevent a nuisance. Disposal of garbage and other refuse shall be accomplished by burning in an approved incinerator, or burying, or by other means acceptable to the State Board of Health. All containers for the collection of garbage and refuse shall be kept in a sanitary condition.

(q) **Swimming Beach.** Natural swimming places shall be located only on lakes and streams which are relatively free of human, animal, and industrial pollution, and where such bathing and swimming will not endanger the quality of a domestic water supply, or interfere with other uses of the water by riparian owners. The area designated for swimming shall be properly marked, shall be kept free of weeds, sharp stones, sunken logs, and other debris and shall preferably have a gradual slope. Swimming pools shall be constructed and operated in accordance with standards acceptable to the State Board of Health. All water-front activities involving campers, staff members, or visitors shall be adequately supervised.

(r) **Designation of Responsible Persons by Camper.** Each camper and staff member shall file with the camp operator the name, address, and telephone number of one or more duly licensed practitioners of the healing arts or other responsible persons who are to be notified in case of illness or injury.

(s) **Practitioner to be Designated.** The camp operator shall designate one or more duly licensed practitioners of the healing arts to be called in an emergency.

(t) **Infirmary and First Aid.** The camp operator shall provide an infirmary for the isolation of sick or injured campers and staff members. First-aid equipment and supplies shall be available, and a person qualified in first-aid care shall be in charge at all times. When the existence of a communicable disease is suspected, the operator shall isolate the individual immediately and promptly arrange for medical attention. Transportation shall be provided for the immediate removal from the camp of the sick or injured campers or camp personnel in emergency cases.

(u) **Physical Examination.** A certificate of health shall be presented to the camp operator by each staff member and by each camper at the time of admission to the camp. The certificate shall be based on a physical examination performed not more than 90 days prior to admission to the camp by a duly licensed practitioner of the healing arts and shall be signed by such practitioner. It shall include a health history, an immunization record, a statement as to the existence of or freedom from communicable diseases, and instructions relative to the limitation of the camper's participation in camp activities necessitated by physical disability or impairment.

A physical check-up shall be given on arrival at the camp to reveal any communicable condition which may have developed since the physical examination.

(v) **Health Records.** A health record of every camper and staff member shall be kept by the camp operator. In addition to the certificate of health, it shall include the detailed records of the individual's illnesses and injuries occurring, and the first-aid treatments given, during the period of attendance at camp.

(w) **Hazardous Weapons.** Firearms and other hazardous weapons shall be kept in locked compartments and shall be used only under supervision.

(x) **Livestock and Pets.** Livestock shall be quartered not less than 500 feet from the cooking, dining, and sleeping quarters. Unless special facilities are provided, pets shall not be permitted in the camp.

(y) **Duty of Camp Operator.** It shall be the duty of every operator of a children's camp to carry out the provisions of this regulation.

MHD 202-203 Reserved for future use.

Filed June, 1964.

MHD 204 MIGRANT LABOR CAMP REGULATIONS

(a) Definitions.

(1) A "migrant labor camp" shall be one or more buildings or structures, tents, or vehicles, together with the tract of land on which they are situated, used as living quarters by seasonal or temporary migrant agricultural workers.

(2) A "barracks-type camp" shall be one in which sleeping quarters are arranged on the dormitory plan.

(3) A "family-type camp" shall be a camp that provides individual dwelling quarters for single family units.

(b) Permits.

(1) At least 10 days before the opening of camp, anyone seeking to operate a migrant labor camp shall make written application to the State Board of Health for a permit. This application shall contain information in a form that shall permit the Board to determine whether the migrant labor camp shall be operated and maintained in a manner that protects the health and the safety of the persons using the camp. When anyone operates or is seeking to operate more than one migrant labor camp, he shall make a separate permit application for each camp.

(2) When the Board determines from the application that the health and the safety of the persons using the camp shall be properly safeguarded, it may issue a written permit before the actual inspection of the camp. This shall be an annual permit, expiring at the end of the calendar year. No fee shall be charged for this permit. This permit and a copy of these regulations shall be readily available for inspection.

(3) The State Board of Health shall make an annual inspection of each migrant labor camp, and where, from inspection it ascertains a failure to protect the health and the safety of the persons using the camp, the Board shall inform the camp operator, specifying precisely the areas in which he is remiss.

(4) The camp operator shall have a reasonable time after receiving notification from the Board in which to remedy faults and comply with the regulations of the Board. If the camp operator shall fail to rectify the faults stipulated in this notice within the reasonable time, the Board may revoke his permit to operate a migrant labor camp, after a hearing by the Board or a representative of the Board.

(5) The camp operator shall be given at least 5 days' written notice of the time and the place designated by the Board for the hearing. This notice may be served by registered mail. The camp operator may be represented by legal counsel and may produce evidence and give testimony at the hearing to refute the revocation. The Board may appoint in writing any qualified person to preside at this hearing. This person shall take testimony and transmit the record of the hearing to the Board. The decision of the Board shall be based on the evidence and the testimony recorded at this hearing.

(6) After a permit has been revoked, it shall be reinstated when faults on which the revocation hinged have been rectified.

(c) **Housing site.**

(1) Housing sites shall be well-drained and free from depressions in which water may collect and stagnate. They shall be located where the sewage is disposed of in a manner that does not create a nuisance or a hazard to health.

(2) Housing shall be situated away from heavy traffic or similar hazards, excessive noise, flies, or offensive odors. Housing units and facilities in which food is prepared or served shall be located at least 100 feet from accumulations of refuse and from structures for farm animals, and poultry.

(3) Grounds within the housing site shall be free from harmful plants, e.g., poison ivy, and uncontrolled vegetation, and uncluttered by debris.

(4) Each housing structure, except existing buildings on a permanent foundation, shall be located at least 10 feet from any other building.

(5) Within the boundaries of the housing site, space shall be allocated for recreation. The size of the area provided shall vary with the designed capacity of the facility and the character of its occupants.

(d) **Water supply.**

(1) An adequate supply of water that meets the standards of the Board shall be provided.

(2) Water hauling and storage facilities shall be constructed and maintained in accordance with the standards of the Board. When water hauling tanks are filled, sufficient chlorine shall be added to yield a chlorine residual of at least 3 parts per million.

(3) Before the camp is occupied, all parts of the camp water supply system subject to seasonal use only shall be thoroughly disinfected in accordance with the recommended practices of the Board.

(4) A cold water tap within 100 feet of each living unit shall be available. Adequate drainage facilities shall be provided at each water tap for overflow and for spillage.

(5) The use of common drinking cups shall be prohibited.

(e) **Excreta and Liquid Waste Disposal.**

(1) Facilities shall be maintained for the effective disposal of excreta and liquid waste. Raw or treated liquid waste shall not be discharged or allowed to accumulate on the ground surface.

(2) Where public sewerage systems are available, facilities for excreta and liquid waste disposal shall be connected to them.

(3) Where public sewage systems are unavailable, a soil-absorption system or other type of liquid waste treatment and disposal system, privies or portable toilets shall be provided. The construction and maintenance of these disposal systems shall comply with requirements of both the State Board of Health and the Minnesota Pollution Control Agency.

(f) Housing.

(1) Housing shall be structurally sound, in good repair, in a sanitary condition, and shall shelter its occupants from the elements.

(2) Housing shall have flooring constructed of rigid materials, smoothly finished, and readily cleanable. It shall be sufficiently raised above the ground to avoid ground and surface water.

(3) Minimum floor space requirements, in whose computation each person 12 years of age, and under, shall be considered as one-half occupant.

(aa) A minimum of 50 square feet of floor space for sleeping purposes per occupant shall be available.

(bb) A minimum of 60 square feet of floor space for combined cooking, eating, and sleeping purposes per occupant shall be available.

(4) Separate sleeping accommodations shall be provided for individuals of each sex or for each family.

(5) Adequate and separate arrangements for hanging clothing and for storing personal property shall be apportioned to each person or to each family.

(6) At least one-half of the floor area in each living unit shall have a minimum ceiling height of 7 feet. No floor space above which the ceiling height measures less than 5 feet shall be recognized toward satisfying minimum requirements.

(7) Each habitable room, not including partitioned areas, shall have at least one window or skylight opening directly to the out-of-doors. The minimum total window or skylight area of each housing unit, including windows in doors, shall be equivalent to 10 percent of the usable floor area. Except when comparable mechanical ventilating is supplied, the total openable area shall be equivalent to 45 percent of the minimum window or skylight area required.

(g) Screening.

(1) Outside openings shall be covered with screening whose mesh is at least 16 openings per linear inch.

(2) Screen doors shall be tight fitting, in good repair, and self-closing.

(h) Heating.

(1) When the camp is occupied before June 1 or after September 20, living quarters and service rooms shall contain heating equipment, capable of maintaining a temperature of 68°F.

(2) Any stoves, or other heating equipment utilizing the combustion of fuel shall be installed and vented in a manner that minimizes fire hazards and the accumulation of dangerous gases. Portable heaters shall be permitted only if electrically operated. If a solid or a liquid fuel stove is used in a room having wood or other combustible flooring, there shall be a concrete slab, insulated metal sheet, or other fireproof material on the floor under each stove, extending at least 18 inches beyond the perimeter of the base of the stove.

(3) In a heating system with automatic controls, the controls shall be the type that cuts off the fuel supply when the flame or ignition fails or is interrupted, or whenever a predetermined safe temperature or pressure is exceeded.

(4) Any wall or any ceiling within 18 inches of a solid or a liquid fuel stove or of a stovepipe shall be fireproofed. A vented metal collar shall be installed around a stovepipe or vent where it passes through a wall, a ceiling, a floor or a roof.

(i) Electricity and Lighting.

(1) Housing sites shall have electric service.

(2) Each habitable room and each common use room or area, such as hallways; stairways; bathing and laundry rooms; toilets, including privies shared by members of 2 or more families, shall contain adequate ceiling or wall-type light fixtures.

(3) Each habitable room shall have at least one wall-type electric convenience outlet. In barracks-type accomodations, there shall be a minimum of one electric outlet per 5 occupants.

(4) Adequate lighting shall be provided for the yard area and for pathways to common use facilities.

(5) Wiring and lighting fixtures shall be installed and maintained in accordance with the Minnesota State Electric Code.

(j) Toilets.

(1) Toilets shall be constructed, located, and maintained to prevent any nuisance or public health hazard.

(2) The number of toilet seats for each sex shall be in the ratio of one seat for each 12 occupants, with a minimum of one seat for each sex in common use facilities.

(3) Urinals, constructed of nonabsorbent materials, may be substituted for men's toilet seats on the basis of one urinal, or 24 inches of trough-type urinal, for one toilet seat, up to a maximum of one-third of the required toilet seats.

(4) Except for individual family units, separate toilet accommodations for men and for women shall be provided. If toilet facilites for men and for women are juxtapositioned in the same building, they shall be separated by a solid wall from the floor to the roof, or the ceiling. Toilets shall be clearly marked with "men" and "women" and with their equivalents in the native language of the intended occupants.

(5) In common use toilet facilities, an adequate supply of toilet tissue shall be furnished.

(6) Common use toilets and privies shall be well-lighted, ventilated, clean, and sanitary.

(7) Toilet facilities shall be situated within 200 feet of each living unit.

(8) Privies shall be located 50 feet or farther from any living unit or any facility where food is prepared or is served.

(9) Privy structures and pits shall be fly-tight and shall conform to construction standards acceptable to the Board.

(k) Bathing, Laundry, and Handwashing.

(1) Bathing and handwashing facilities, supplied with hot and with cold water under pressure, shall be provided for the use of all occupants. These facilities shall be clean and sanitary, and located within 400 feet of each living unit.

(2) There shall be a minimum of 1 shower head per 15 persons. Shower heads shall be spaced at least 3 feet apart, with a minimum of 9 square feet of floor space per unit. Adequate, dry dressing space shall be provided in common use facilities. Shower floors shall be constructed of nonabsorbent, nonslip materials. They shall be sloped to direct water to properly constructed floor drains. Except for individual family units, separate shower facilities shall be provided for each sex. When common use shower facilities for both sexes are juxtapositioned in the same building, they shall be separated by a solid nonabsorbent wall extending from the floor to the roof, or the ceiling, and shall be clearly marked with "men" and "women" and with their equivalents in the native language of the intended occupants.

(3) Lavatories or their equivalent units, in a ratio of 1 per 15 persons, shall be provided.

(4) Laundry facilities, supplied with hot and with cold water under pressure for the use of all occupants shall be provided. Laundry trays or tubs in the ratio of 1 per 25 persons shall be provided. Mechanical washers in the ratio of 1 per 50 persons may be provided in lieu of laundry trays. However, a minimum of 1 laundry tray per 100 persons shall be provided in addition to the mechanical washers.

(l) Cooking and Eating Facilities.

(1) When workers or their families shall be cooking in their individual units, a space shall be provided and furnished for cooking and for eating. This space shall have a cookstove or a hot plate with a minimum of 2 burners; adequate food storage shelves and a counter for food preparation; mechanical refrigeration of food to a temperature of not more than 45°F.; a table and chairs, or equivalent seating and eating arrangements commensurate with the capacity of the unit; and adequate lighting and ventilation.

(2) When workers or their families shall be cooking and eating in a common facility, this room or building shall be separate from the sleeping facilities. It shall have stoves or hot plates with a minimum equivalent of 2 burners, in a ratio of 1 stove or 1 hot plate to 10 persons, or 1 stove or 1 hot plate to 2 families; adequate food storage shelves and a counter for food preparation; mechanical refrigeration for food to a temperature of not more than 45°F.; tables and chairs, or equivalent seating and eating arrangements adequate for the intended use of the facility; an adequate sink, having hot and cold water under pressure; adequate lighting and ventilation; and floors shall be of nonabsorbent, easily cleanable materials.

(3) When central dining facilities are provided, the size of its kitchen and its dining hall shall be commensurate with the capacity of the housing and shall be separate from the sleeping quarters. The physical facilities,

equipment, and operation shall accord with applicable regulations of the State Board of Health.

(4) Wall surfaces adjacent to all food preparation and cooking areas shall be of a nonabsorbent, easily cleanable material. In addition, the wall surfaces adjacent to cooking areas shall be fire-resistant.

(m) **Refuse Disposal.**

(1) Containers for the storage of refuse shall be durable, fly-tight, clean and in good condition. These containers shall be situated adjacent to each housing unit. They must be at least a 20 gallon capacity. The number of containers shall be in a minimum ratio of 1 per 15 persons.

(2) Refuse shall be collected at least twice a week, or more often when necessary. The disposal of refuse shall be accomplished by burying, by the sanitary land-fill method, or by other means acceptable to the State Board of Health and the Minnesota Pollution Control Agency.

(n) **Insect and Rodent Control.** Housing and facilities shall be uninfested by insects, rodents, and other vermin.

(o) **Sleeping Facilities.**

(1) Sleeping facilities shall be provided for each person. These facilities shall consist of comfortable beds, cots, or bunks, having clean mattresses in good condition and mattress covers.

(2) Any bedding provided by the camp operator shall be clean and sanitary.

(3) The use of triple deck bunks shall be unacceptable to the Board.

(4) The unoccupied space between the top of the lower mattress of a double deck bunk and the bottom of the upper bunk shall measure a minimum of 27 inches. The distance from the top of the upper mattress to the ceiling shall measure a minimum of 36 inches.

(5) The clear space between the bottom of each bed, cot, or bunk and the floor shall measure a minimum of 12 inches.

(6) Beds for double occupancy shall be provided only in family accommodations.

(7) In barracks-type accommodations there shall be at least 3 feet between beds when placed side by side, and 1 foot when placed end-to-end. The beds shall be arranged for head-to-foot, or foot-to-foot sleeping in a manner that provides a 7 foot horizontal separation between the heads of sleepers.

(p) **Fire, Safety, and First Aid.**

(1) Buildings in which people sleep or eat shall be constructed and maintained to accord with recommendations of the State Fire Marshal.

(2) Partitioned housing units, sleeping quarters intended for 10 or more persons, central dining facilities, and common assembly rooms shall have at least 2 doors located at an appreciable distance from one another as alternate avenues of escape to the outside or to an interior hall.

(3) In unpartitioned housing units of one story construction for families or for less than 10 persons, two remotely separated avenues of escape shall be provided. One of the two required avenues may be a readily accessible window, whose opening measures not less than 24 by 24 inches.

(4) Sleeping quarters and common assembly rooms on the second story shall have two approved means of egress from each floor.

(5) In a wood frame building, cooking facilities shall be permitted above the first floor only with written permission of the State Health Department and the State Fire Marshal.

(6) Fire extinguishing equipment shall be provided. It shall be located not more than 100 feet from each housing unit. This equipment shall provide an extinguishing capability equivalent to that furnished by one 2½-gallon stored pressure or one 5-gallon pump-type water extinguisher. A minimum of 1 Class A unit shall be provided for each cabin or building of less than 2500 square feet of floor area.

(7) First aid facilities shall be provided in the ratio of 1 per 50 persons. They shall be readily accessible at all times. These facilities shall be considered equivalent to the 16-unit first aid kit recommended by the American Red Cross.

(8) Except for those used in usual housekeeping, no flammable or volatile materials shall be stored in buildings used for living purposes.

(9) Agricultural pesticides and toxic chemicals shall be stored outside the housing area.

(q) **Responsibility of Occupants.** Each employee and occupant of a camp shall use facilities furnished for his convenience and shall comply with all applicable camp regulations which concern his conduct. Each occupant of a camp shall keep that part of the premises which he occupies in a clean and a sanitary condition. Each occupant of a camp shall dispose of his refuse in containers provided for this purpose.

(r) **Responsibility of Camp Operator and Owner.**

(1) He shall comply with these regulations.

(2) He shall clearly explain to camp occupants their responsibilities under MHD 204 (q).

(3) He shall inspect the camp grounds, and its facilities at least once a week to ensure that they are clean and orderly. He shall ensure that broken or damaged elements are promptly restored.

MHD 205-209 Reserved for future use.

Filed March, 1969.

See new (ARO 3-951) →

Minnesota Water Well Construction Code

7 MCAR § § 1.210-1.224
(Effective Date, October 27, 1979)

7 MCAR § 1.210 Definitions and policies.

A. For the purposes of these rules promulgated pursuant to Minn. Stat., ch. 156A, as amended, the terms defined in this section have the meanings given them, except where the context clearly indicates otherwise.

B. The following terms apply primarily to the licensing rules 7 MCAR § 1.211-1.216, but are also applicable to the Water Well Construction Code, 7 MCAR § 1.217-1.230 when used therein.

1. "Commissioner" means the commissioner of health or his or her authorized representative.

4427-4441

2. "Council" means the Water Well Contractors' and Exploratory Borers' Advisory Council created pursuant to the provisions of Minnesota Statutes, section 156A.06.

3. "Act" means Minn. Stat. § § 156A.01-156A.08, as amended, under which these rules are promulgated.

4. "APA" means the Administrative Procedure Act, Minn. Stat. ch. 15.

5. "Person" means any natural person, corporation, partnership, or other business association.

6. "Applicant" means any person who applies for a water well contractor's license pursuant to the Act.

7. "Application for examination" means the application submitted by an applicant from which the commissioner determines whether the applicant is eligible to take the examination.

8. "Application for licensure" means the application submitted by an applicant upon his successful completion of the examination, or at the end of each calendar year for licensure renewal.

4427-4441

9. "Year of experience" for a water well contractor means a year during which the applicant personally drilled five (5) water wells and was actively working in the trade for a period of 1,000 hours under the supervision of a licensed water well contractor. An applicant drilling 1,000 hours per year and completing fewer than five wells per year may qualify, if the experience is gained in constructing one or more large diameter wells (casing outer diameter is ten inches or more) which are more than 500 feet deep. An applicant who seeks to qualify under this provision shall have his license limited to construction of such deep and large diameter wells.

a. Supervision of a drilling operation shall not be considered as an equivalent to personally drilling a well.

b. The experience must have been gained in Minnesota except that an applicant may provide the commissioner with information demonstrating that his experience was gained in an area with the same or similar geological and other well drilling conditions as in the applicant's proposed well drilling operations territory in Minnesota. Such experience may be considered as meeting the experience requirement of these rules. Applicants from states having no standards or licensing programs, or standards less strict than those adopted pursuant to ch. 156A shall have obtained at least one year of experience in Minnesota under the supervision of a licensed water well contractor, in addition to that which is required under 7 MCAR § 1.211.

10. "Licensee" means a person who is licensed as a water well contractor pursuant to the provisions of the Act and these rules.

11. "Representative" means an individual who is in charge of the water well drilling and contracting operation and qualifies for licensure on behalf of a partnership, corporation, or other business association rather than on his own behalf.

12. "Upper termination of the well casing" means a point twelve (12) inches above the established ground surface.

13. "A water well drilling machine" means any machine or device such as a cable tool, hollow rod, or auger used for construction of a water well including drive point wells or a hoist or machine used in the well repair service which involves the modification to the well casing, screen depth or diameter below the upper termination of the well casing.

C. The following terms apply to the Water Well Construction Code, 7 MCAR §§ 1.217-1.230.

1. "Abandoned water well" means a well whose use has been permanently discontinued, or which is in such disrepair that its continued use for the purpose of obtaining ground water is impracticable or may be a health hazard.

2. "Administrative authority" means the commissioner. When this code, 7 MCAR §§ 1.217-1.230, is adopted by any municipality of the State, such municipality may apply to the commissioner for authorization to act as an inspection agent of the administrative authority to enforce the provisions of the act and these rules.

The inspection agent's authority shall be limited to inspections to determine compliance with the provisions of these rules and to exercise any other powers specifically given the administrative authority by these rules. The commissioner may grant such authority if the municipality demonstrates that at least one of its employees is qualified and familiar with the well drilling

operations in that municipality. Such authorization may be revoked without cause by the commissioner or released by the municipality on ten days written notice. This section shall not preclude the commissioner or any municipality from reaching an agreement authorized by Minn. Stat. § 471.59.

3. "Annular space" means the space between two cylindrical objects one of which surrounds the other, such as the space between a drillhole and a casing pipe, or between a casing pipe and liner pipe.

4. "Approved basement" means a private home basement with walls and floor constructed of concrete or equivalent which is not subject to flooding and not located within a flood plain.

5. "Aquifer" means a water-bearing formation (soil or rock horizon) that transmits water in sufficient quantities to supply a well.

6. "Casing" means an impervious durable pipe placed in a well to prevent the walls from caving and to seal off surface drainage or undesirable water, gas or other fluids to prevent their entering the well and includes specifically but not limited to:

a. "Temporary casing" means a temporary casing placed in soft, sandy or caving surface formation to prevent the hole from caving during drilling.

b. "Protective casing" means the permanent casing of the well.

7. "Coliform group" means all of the aerobic and facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35° centigrade.

8. "Director" means the director of the Division of Environmental Health of the department, or his authorized representative, who shall carry out the administrative functions of these rules on behalf of the commissioner.

9. "Drawdown" means the extent of lowering of the water surface in a well and aquifer resulting from the discharge of water from the well.

10. "Dug well" means a well in which the side walls may be supported by material other than standard weight steel casing. Water enters a dug well through the side walls and bottom.

11. "Established ground surface" means the intended or actual finished grade (elevation) of the surface of the ground at the site of the well.

12. "Geological material" means all materials penetrated in drilling a well.

a. The following table lists materials other than consolidated rock classified according to average particle size (Wentworth 1922).

Material	Particle Diameters		Screen Slot No.	
	Millimeters	Inches	From	To
Clay	Up to 0.005	Up to 0.0002	–	–
Silt	0.005-0.062	0.0002-0.0025	–	–
Fine Sand	0.062-0.250	0.0025-0.010	2	10
Medium Sand	0.250-0.50	0.010-0.020	10	20
Coarse Sand	0.50-1.00	0.020-0.040	20	40
Very Coarse Sand	1.00-2.00	0.040-0.080	40	80
Fine Gravel	2.00-4.00	0.080-0.160	80	160
Coarse Gravel	4.00-62.5	0.160-2.50	160 and larger	
Cobbles	62.5-250.0	2.50-10.0	–	–
Boulders	250.0 and larger	10.0 and larger		

b. "Alluvium" is a general term for clay, silt, sand, gravel or similar unconsolidated material deposited during comparative recent geologic time by a stream or other body of running water as a sorted or semi-sorted sediment.

c. "Glacial drift (unconsolidated)" means a general term applied to all rock material (clay, sand, gravel and boulders) transported by a glacier and deposited directly by or from the ice or by running water emanating from the glacier.

d. "Glacial outwash" means a stratified sand and gravel removed or washed out from a glacier by meltwater streams and deposited in front of or beyond the terminal moraine or the margin of an active glacier.

e. "Hardpan" is a term to be avoided if possible, but when used means a hard impervious layer composed chiefly of clay, cemented by relatively insoluble materials, which does not become plastic when mixed with water and definitely limits the downward movement of water and roots.

f. "Shale" means rock consisting of hardened silts and clays.

g. "Sandstone" means cemented or otherwise compacted sediment composed predominately of sand.

h. "Limestone" means rock which contains at least 80% of carbonates of calcium and has strong reaction with HCl (muriatic acid).

i. "Dolomite" means rock which contains at least 80% of carbonates of magnesium and has a weak reaction with HCl (muriatic acid).

j. "Gypsum" means a soft light colored formation of calcium sulfate crystals and may be found as streaks in a shale formation.

13. "Grout" means neat cement, concrete, heavy drilling mud or heavy bentonite water slurry. Heavy drilling mud or heavy bentonite water slurry when used as grout shall be of sufficient viscosity to require a time of at least

70 seconds to discharge 1 quart of the material through an API (American Petroleum Institute) marsh funnel viscometer.

14. "Municipality" means a city, village, township, borough, county, district or other political subdivision of the State created by or pursuant to State law or any combination of such units acting cooperatively or jointly.

15. "Pitless adapter and unit":

a. "Pitless adapter" means a device for above or below ground discharge designed for attachment to one or more openings through a well casing, and constructed so as to prevent the entrance of contaminants into the well.

b. "Pitless unit" means an assembly with cap which extends the upper end of the well casing to above grade, and constructed so as to prevent the entrance of contaminants into the well.

16. "Pollution" or "contamination" means the presence or addition of any substance to water which is or may become injurious to the health, safety or welfare of the general public or private individuals using the well; which is or may become injurious to domestic, commercial, industrial, agricultural or other uses which are being made of such water.

17. "Potable water" means water which is safe for human consumption in that it is free from impurities in amounts sufficient to cause disease or harmful physiological effects.

18. "Pressure tank" or "hydropneumatic tank" means a closed water storage container constructed to operate under a designed pressure rating to modulate the water system pressure within a selected pressure range.

19. "Priming" means the first filling of a pump with water and the action of starting the flow in a pump.

20. "Pump house" means a building constructed over a well exclusively to protect the well, pump, and water treatment equipment.

21. "Pump room" or "well room" means an enclosed structure, either above or in a below grade approved basement housing the pump, top of the well, a suction line or any combination thereof.

22. "Pumping water level" means the distance measured from the established ground surface to the water surface in a well being pumped at a specified rate for a specified period of time.

23. "Pumps and pumping equipment" means materials used or intended for use in withdrawing or obtaining ground water for any use, including without limitation, seals and other safeguards to protect the water from pollution and together with fittings, and controls to provide sanitary water storage

facilities. "Installation of pumps and pumping equipment" means the selection of, and procedure employed in the placement and preparation for operation of, pumps and pumping equipment, including construction involved in making entrance to the well and establishing proper seals and other safeguards to protect ground water from pollution, including repairs to existing installations.

24. "Sewage" means the water carried waste products from residences, public buildings, including the excrementious or other discharges from the bodies of human beings or animals together with such ground water infiltration and surface water as may be present.

25. "Cesspool" means an underground pit into which raw household sewage or other untreated liquid waste is discharged and from which the liquid seeps into the surrounding soil or is otherwise removed.

26. "Seepage pit" or "dry well" means an underground pit into which a septic tank discharges household sewage or other liquid waste and from which the liquid seeps into the surrounding soil through the bottom and openings in the side of the pit.

27. "Septic tank" means a watertight tank of durable materials through which sewage flows very slowly and in which solids separate from the liquid to be decomposed or broken down by bacterial action.

28. "Sewer" means a pipe or conduit carrying sewage or into which sewage may back up.

29. "Subsurface disposal field," "seepage bed," "drainfield," "percolation system," or "tile absorption field" means a system composed of open jointed tile lines buried in stones and shallow trenches or beds for final disposal into the ground of sewage effluent from a septic tank. The septic tank effluent is applied to land by distribution beneath the surface through the open jointed lines.

30. "Static water level" means the distance measured from the established ground surface to the water surface in a well neither being pumped, nor under the influence of pumping nor flowing under artesian pressure.

31. "Subterranean gas" means a gas occurring below the land surface. It may be flammable such as methane or highly toxic as hydrogen sulfide and may be associated with ground water.

32. "Suction line" means a pipe or line connected to the inlet side of a pump or pumping equipment or any connection to a well casing that may conduct non-system water into the well because of negative pressures.

33. Water varieties mean:

a. "Ground water" means the water in the zone of saturation in

which all of the pore spaces of the subsurface material are filled with water. The water that supplies springs and wells is ground water.

b. "Near surface water" means water in the zone immediately below the ground surface. It may include seepage from barnyards, disposal beds or leakage from sewers, drains, and similar sources of pollution.

c. "Surface water" means water that rests or flows on the surface of the ground.

34. "Well" means water well as defined in Minn. Stat., § 156A.02, subd. 1.

35. "Well seal" means a device or method used to protect a well casing or water system from the entrance of any external pollutant at the point of entrance into the casing of a pipe, electric conduit or water level measuring device.

36. "Well vent" means an outlet at the upper terminal of a well casing to allow equalization of air pressure in the well and escape of toxic or flammable gases when present.

37. "Yield" or "production" means the quantity of water per unit of time which may flow or be pumped from a well under specified conditions.

D. Policies.

1. The rules shall apply to all water wells in the State of Minnesota except those specifically exempted by the act. Those aspects covered are the construction of new wells, the repair and maintenance of wells where specified, the proper abandonment of wells, and the proper isolation of possible sources of contamination from existing wells to protect the quality of ground water aquifers for providing safe drinking water supplies.

2. Public water supply. In accordance with 7 MCAR § 1.136, no system of water supply, where such system is for public use, shall be installed by any public agency or by any person or corporation, nor shall any such existing system be materially altered or extended, until complete plans and specifications for the installation, alteration, or extension, together with such information as the commissioner may require shall have been submitted in duplicate and approved by the director insofar as any features thereof affect or tend to affect the public health. No construction shall take place except in accordance with the approved plans. The plans for the well shall conform as specified by this well code. No municipal well may be drilled without approval of the site by the director.

3. Modification by the commissioner.

a. When the strict applicability of any provision of these rules presents practical difficulties or unusual hardships, the commissioner, in a

specific instance, may modify the application of such provisions consistent with the general purpose of these rules and the act and upon such conditions as are necessary, in the opinion of the commissioner, to protect the ground water of the state and the health, safety, and general well-being of persons using or potential users of the ground water supply.

b. Any request for modification shall be submitted to the administrative authority in writing and shall be signed by both the owner and the licensee. In addition any persons involved in providing documentary evidence in support of the request shall sign the request submitted by the owner. Such request shall specify in detail the nature of the modification being sought, the reasons therefor, and the special precautions to be taken to avoid contamination of the well. The request shall also include: the proposed well depth, casing type and depth, method of construction and grouting, geological conditions likely to be encountered, and location of the well and of possible sources of contamination. Whether or not the requests are granted, the commissioner shall state in detail the reasons for the decision.

c. The owner of a water well is bound by all the provisions of 7 MCAR §§ 1.210-1.230 which relate to location, construction, maintenance and abandonment of wells.

7 MCAR § 1.211 Licensing.

A. Qualifications.

1. All applicants shall meet the following requirements:

a. A minimum of three (3) years' experience in water well drilling.

b. Honesty, integrity, and an ability to perform the work of a water well drilling contractor.

c. Submission to the commissioner of properly completed applications.

2. All applicants must successfully complete the examination provided for in the act and in these rules.

B. Applications and fees.

1. All applicants shall submit two (2) applications. The first one shall be an application for examination. If the applicant qualifies, then he shall submit an application for licensure.

2. Application for examination.

a. An application for examination shall be submitted to the commissioner on forms provided by him. The application shall be accompanied by the filing fee of $50.00. The fee shall be paid using only a money order, bank draft, or certified check made payable to the Minnesota State Treasurer.

b. The commissioner shall not act upon the application until he has received reference letters from individuals who are familiar with the applicant's work experience, honesty, integrity, and ability to perform the work of a water well drilling contractor.

c. The filing fee for an application for examination shall not be refunded for any reason except when an applicant is not found to be qualified to take the written examination.

3. Application for licensure.

a. Upon satisfactory completion of the examination, the applicant must apply for a license within one year of the date on which he is notified of passing the exam, upon forms provided by the commissioner.

b. The application shall be accompanied by a license fee of $50.00. The fee shall be paid using only a money order, bank draft, or certified check made payable to the Minnesota State Treasurer. This fee shall not be refunded for any reason.

4. If an applicant passes the examination or qualifies for licensure but the commissioner does not receive his application for licensure within one year from the date of the letter from the commissioner notifying him of his eligibility for licensure, then no license may be issued. Such an applicant, in order to become licensed at some later date, shall requalify by submitting a new application for examination and the prescribed fee.

5. An individual may apply for examination as many times as he desires. Each application must be accompanied by the filing fee as prescribed by the act.

C. Council evaluation of applicants.

1. The council shall evaluate each applicant and forward its recommendations to the commissioner.

2. The commissioner or council may conduct oral interviews and require sworn affidavits and other supporting evidence to determine qualifications of the applicant.

D. Examination.

1. No applicant shall be permitted to take the examination unless he has submitted an application for examination, the accompanying filing fee, and been determined to be qualified by the council.

2. The applicant shall take an examination which may be any combination of written, oral, or practical work as determined by the commissioner with the advice of the council. Satisfactory completion of the examination is a mandatory prerequisite for licensure.

3. An applicant which is a partnership, corporation, or other business association, shall designate one partner, officer, or other responsible full-time employee who shall be its representative to take the examination on its behalf. Upon licensure of the applicant, the representative shall be responsible for the supervision of all operations required of water well contractors by the act and the rules adopted thereunder.

E. Denial of application. An application for examination or license may be denied for any of the following reasons:

1. Failure of the applicant to complete the application.

2. Failure of the applicant to submit the application with the prescribed fee.

3. Failure of the applicant to meet the experience, reference, examination, and other qualifications required by the act and these rules.

4. Other sufficient causes as determined after notice and hearing in accordance with APA.

F. License and renewal.

1. No person shall drill, construct, or repair a water well within this state unless in possession of a valid license to do so issued by the commissioner; provided, however, that persons installing or repairing pumps on a well shall not be licensed as water well contractors provided their work does not involve modifications to the well casing, screen, depth, or diameter below the upper termination of the well casing.

2. The initial and renewal license shall not be transferable and expires on January 31 of the year after that for which it was issued. The initial license shall contain the name of the licensee; the licensee's representative, if applicable; the date of issue; and the license number.

3. Each licensee shall submit an application for license renewal on forms provided by the commissioner no later than January 31 of the year for which application is made. The license renewal application shall be accompanied by a fee of $50. A penalty fee of $10 shall also be paid if the renewal is submitted after the January 31 deadline. Upon receipt of the application answered in a manner acceptable to the commissioner, a licensee shall be sent a renewal license. The renewal license shall consist of a card in duplicate and contain the name of the licensee; the licensee's representative, if applicable; expiration date; and license number. One card shall be kept posted with the original license. The other shall be carried by the licensee or his representative.

4. Any licensee who does not renew his license within one year may have his license renewed only upon the recommendation of the council and only after showing sufficient cause for not renewing. Until such showing is

made and the renewal license issued, the licensee shall not work as a water well contractor.

5. A person who acts as a representative may not be in the employ of any water well contractor other than the one he represents.

6. In the case of those applicants who are subject to 7 MCAR § 1.211 D. 3. the licensee shall be the partnership, corporation, or other business association who that individual represents and not the representative.

a. When the representative leaves the licensee or is otherwise incapable of performing his responsibilities, the licensee shall inform the commissioner within five (5) days of such fact and give the name of a qualified individual acceptable to the commissioner, who shall be responsible for the acts of the licensee during the interim period while a new representative is being qualified. Although the licensee shall retain the same numbered license upon the licensing of the new representative, all applications, examinations, fees, and other requirements must be satisfied in order to qualify the new representative who must qualify within ninety (90) days. If he does not do so, the water well contractor shall be without a license and must cease operations.

b. If an individual has his own license and desires to act as a representative, or if a representative desires to obtain a license in his own name, the business association or the individual, as the case may be, need only submit an application for licensure and fee. The examination need not be retaken.

G. Suspension or revocation of license; reinstatement.

1. Suspension or revocation.

a. The commissioner may suspend or revoke the license of a water well contractor upon finding that the licensee has violated the provisions of the act or the rules adopted thereunder. The commissioner may initiate such proceedings upon his own motion or upon recommendation of the council.

b. The commissioner or council may cause an investigation to be made in any case in order to determine whether there has been a violation of the act or of these rules and, in so doing, may request the licensee to appear before them to determine the merits of the situation in question. In each case the council shall make a recommendation to the commissioner as to whether proceedings under the act and the APA would be appropriate.

c. Any disciplinary action taken under this section shall comply with the provisions of the APA.

d. A license may be suspended until certain conditions are fulfilled and/or for a specified period of time as determined to be most appropriate by the commissioner. The suspended or revoked license along with the current renewal certificates shall be returned to the commissioner by the licensee.

e. When the license of a water well contractor who is subject to the provisions of 7 MCAR § 1.211 D. 3. is revoked or suspended, the disciplinary action shall apply to both the licensee and its representative.

2. Reinstatement.

a. A revoked license may not be reinstated. The licensee who has had his license revoked may be relicensed by filing the usual applications and fees, and by taking the examination. The commissioner shall require an investigation or hearing to determine whether the person should be issued a new license; provided, however, that in no case shall a new license be issued prior to one (1) year after the revocation has taken effect.

b. A licensee suspended for a specified period of time shall be automatically reinstated at the end of that time. Nothing herein shall be interpreted to prevent the making of such reinstatement conditional upon terms established by the commissioner in his order of suspension.

c. A licensee suspended for an indefinite period of time may be reinstated at the commissioner's own motion after due investigation to determine that the conditions upon which the suspension was based have been corrected or upon the commissioner receiving reasonable assurance to his satisfaction that such conditions will not reoccur.

d. The person whose license has been revoked or indefinitely suspended may petition the commissioner for a hearing for reinstatement of his license. Such hearing shall be granted only upon a showing by the petitioner that reasonable grounds exist for such hearing.

H. Placement of decals and license number.

1. A licensee shall place in a conspicuous location on both sides of each well drilling machine his license number in figures not less than three (3) inches high and one and a half (1½) inches wide. The number shall be in a contrasting color to the background.

2. Decals designating the year for which the license was issued or renewed and the words, "MINNESOTA LICENSED WATER WELL CONTRACTOR," shall be affixed directly adjacent to and below the license number on each well drilling machine. Water well contractors using a rope spool or other devices for well installation shall attach their decal on a portable display to be shown at the well site. The decals shall be issued by the commissioner upon licensure and renewal.

I. Well drilling machine registration.

1. An initial or renewal license issued pursuant to Minn. Stat. ch. 156A and the water well contractors rules, 7 MCAR §§ 1.210-1.230, shall include the registration of one drilling machine. Each water well contractor shall pay an annual fee of $5 for the registration with the commissioner of each addi-

tional drilling machine. Upon receipt of the required fee and information, a water well drilling machine registration card shall be issued for identification purposes for each drilling machine registered by the well drilling contractor. The card shall be carried on the water well drilling machine at all times where it may be inspected by the director. The card expires on January 31 of the year after that for which it was issued.

2. The registration card and duplicate decals furnished for a water well drilling machine are not transferable. The card and decals shall be returned to the director when a water well drilling machine is sold, traded, or otherwise disposed of. A registration card and two (2) new decals for a drilling machine so transferred will be provided upon receipt of the water well drilling machine registration fee, the old card, the two (2) old decals and application for the new drilling machine.

New: 7 MCAR §§ 1.212; 1.216 (adopted 3/9/81) →

7 MCAR § 1.217 Location of wells.

A. General considerations. A well shall be located consistent with the general layout and surrounding area giving due consideration of the size of the lot, contour of the land, slope of the water table, rock formation, porosity and absorbency of the soil, local ground water conditions, and other factors necessary to implement the basic policies that follow.

B. A well shall be:

1. Located on a site which has good surface drainage, at a higher elevation than, and at a sufficient distance from, cesspools, buried sewers, septic tanks, privies, barnyards and feedlots, or other possible sources of contamination so that the supply cannot be affected thereby, either underground or from the surface of the ground.

2. Located so that the well and its surrounding area can be kept in a sanitary condition.

3. Adequate in size, design and development for the intended use.

4. Constructed so as to maintain existing natural protection against pollution of water bearing formations and to exclude all known sources of pollution from entering the well.

5. Located at least 5 feet from a property line. A well constructed to produce water for a community public water supply[1] shall be located at least 50 feet from a property line. In locating any well, consideration shall be given to the sources of contamination from adjacent property.

[1]Community public water supply as prescribed in 7 MCAR § 1.145 A. 12. means a system providing piped water for human consumption, which serves 15 service connections or living units or regularly serves at least 25 persons residing in the area for more than six months of the year.

C. Distance from pollution or contamination sources.

1. A well shall be at least:

a. One hundred fifty feet (150 ft.) from a preparation area or storage area of spray materials, commercial fertilizers or chemicals that may result in pollution of the soil or ground water.

b. One hundred feet (100 ft.) from a below grade manure storage area if in conformance with Minnesota Pollution Control rule SW 52(2)(e).[2]

c. Seventy-five feet (75 ft.) from cesspools, leaching pits and dry wells.

d. Fifty feet (50 ft.) from a buried sewer, septic tank, subsurface disposal field, grave, animal or poultry yard or building, privy, or other contaminants that may drain into the soil.

e. Twenty feet (20 ft.) from a buried sewer constructed of cast iron pipe or plastic pipe (ASTM 2665 for polyvinyl chloride pipe or ASTM 2661 for acrylonitrile-butadiene-styrene pipe, as prescribed in the Minnesota Plumbing Code, 7 MCAR § 1.123 C. 3.) with tested watertight joints, a pit or unfilled space below ground surface, a sump[3] or a petroleum storage tank except that a well may be drilled closer than 20 feet to an approved basement, but no closer than as provided in 7 MCAR § 1.217 D. 1. A community public water supply well shall be isolated at least 50 feet from any source of contamination.

f. Wells with casings less than 50 feet in depth and not encountering at least 10 feet of impervious material shall be located at least 150 feet from cesspools, leaching pits, or dry wells and at least 100 feet from a subsurface disposal field, manure storage pile or similar source of contamination.[4]

2. The safe distance that a well should be located from a waste landfill or waste stabilization pond (lagoon) cannot be assigned a fixed number because of the varieties of hydrologic and geologic parameters associated with the undetermined types and amounts of materials that may be carried by

[2]A below grade manure storage area may present a special hazard to ground water quality which may require a greater isolation distance than provided for in this rule depending upon hydrologic and geologic conditions.

[3]Sump means a water tight tank which receives sewage or liquid waste and which is located below the normal grade of the gravity system and must be emptied by mechanical means.

[4]For example, a manure storage pile would be considered as a potential source of contamination to the well; however, the presence of animals in open pasture in an area would not necessarily concentrate contaminants to the degree that would cause contamination to enter the ground water.

ground water from leachates discharged from the waste landfill or waste stabilization ponds (lagoons). It is recommended that wells not be located in an area between the landfill or waste stabilization ponds (lagoons) sites and the point of ground water discharge to a surface water source.

3. Any well that may intercept leachates from a waste landfill or waste stabilization pond (lagoon) by water withdrawal from the well shall not be used for potable water.

C. 4. Repealed, 8 SR 1625 1-2-84

~~4.~~ Wells installed for ground water quality monitoring purposes are exempt from provisions related to safe depths and isolation distances from sources of contamination; however, their construction shall otherwise be in accordance with Minn. Stat. ch. 156A and rules adopted thereunder. All observation wells shall be protected from damage.

a. Temporary observation wells (as defined in 7 MCAR § 1.218 D. 1.) shall be protected with a 6 foot high steel post and flag marker or sign.

b. Permanent observation wells (as defined in 7 MCAR § 1.218 D. 2.) shall be protected with 4 steel posts as prescribed in 7 MCAR § 1.224 F. 4. b.

5. The administrative authority may modify the isolation distances in this rule for individual well installations. The request for modifications shall be made according to the provisions of 7 MCAR § 1.210 D. 3. A request for modification of the isolation distance from existing wells shall be submitted and signed by the owner. In addition any experts or persons involved in providing documentary evidence in support of the request shall sign the request submitted by the owner. The request shall also include: the well depth, geological formations encountered, casing type and depth, method of construction and grouting, and location of the well on the property in relation to possible sources of contamination.

D. Wells adjacent to buildings, gas lines or overhead electric power lines.

1. A well shall be located:

a. At least 3 feet horizontally from a building or any projection thereof, except for a pumphouse, unless modified in writing by the administrative authority.

b. Accessible for cleaning, treatment, repair, test inspection, and other attention as may be necessary.

2. No well shall be located within the footing of any building or room beneath the floor under which there are buried sewers.

3. A well shall not be located within fifteen feet (15 ft.) of a gas line or overhead electric distribution line or twenty-five feet (25 ft.) from an electric transmission line which is in excess of 50 kV except for the underground

electrical service line to the well. These distances should be observed when locating a gas line or overhead electric line in the vicinity of an existing well or known proposed well. Where there is a question of the voltage in an electrical line the 25 foot distance should be observed or where less distance is required the utility company should be consulted for their recommendation for safe distances.

E. Areas subject to flooding.

1. A well shall not be located in areas subject to flooding unless the casing extends at least 2 feet above the level of the highest known flood of record or otherwise protected as prescribed in writing by the administrative authority.

2. The ground surface immediately adjacent to the well casing shall be graded so that surface water is diverted away from the casing.

3. The well shall be located at least 50 feet horizontally from the normal high water mark of a stream, river or lake and at a higher established ground surface elevation than the soil absorption system, septic tank, or other source of contamination.

4. For a community public water supply:

a. The surface of the ground at the well site shall be at least two feet above the highest known water level of any lake, pond, river, stream or any other body of surface water, the waters of which at the highest level would approach to within 50 feet measured horizontally of the well.

b. The earth surfaces shall be sloped to drain away from the well and be so graded as to prevent the accumulation and retention of surface water within 50 feet of the well.

c. Filling shall be protected from erosion by rip-rap or other suitable means.

5. Radial water collector. Projection of collectors shall be in areas and at depths approved by the director. The exact location of all caisson construction joints and porthole assemblies shall be indicated. The caisson wall shall be substantially reinforced. Procedures shall be employed which will assure minimum vertical rise of the collectors. The top of the caisson shall be covered with a watertight floor and pump openings shall be curbed. Pump discharge piping shall not be placed through the caisson walls. There shall be no construction joint within 10 feet of the original ground surface.

7 MCAR § 1.218 General protection of ground water quality and resources.

A. Re-use of water, disposal, recharge or gas storage wells.

1. A well for the storage of gas or liquid under pressure may not be

drilled without first having secured a permit therefor from the Commissioner of Natural Resources in accordance with Minn. Stat., § § 84.57-58.

2. Water used for cooling parts of engines, air compressors, or other equipment or water used for air conditioning, shall not be returned to any part of the potable water system.

3. A well shall not be used for disposal of surface water, near surface water, or ground water or any other liquid gas or chemical.

B. Maintenance and repair of wells.

1. Every well shall be maintained in a condition whereby it will conserve and protect the ground water resources, and whereby it will not be a source or channel of contamination or pollution to the water supply of that well or any aquifer.

2. All materials used in maintenance, replacement or repair of any well shall meet the requirement of these rules for new installation.

3. Broken, punctured, or otherwise defective or unserviceable casing, screens, fixtures, seals, or any part of the well head shall be repaired or replaced. The well shall be abandoned in accordance with the requirements of these rules if such repair or replacement is not performed.

4. Repairs to wells completed with the well head terminating below ground (buried seal) where practicable, should include extending the well casing, pitless adapter, or pitless unit above the land surface. Extension of the casing above grade shall be accomplished in accordance with rules for new wells.

5. Before acid treating a well, 7 MCAR § 1.218 B. 4. shall be complied with to prevent a hazardous condition caused by release of H_2S (hydrogen sulfide) or other toxic gases in a pit or confined space. All confined spaces shall be blown out with fresh air before entry and a supply of fresh air provided during occupancy. Pits or chambers should not be entered without a lifeline and adequate lifting power on the surface to quickly haul up a worker. Where there is any question whether the air supply procedure has provided a safe atmosphere, a self-contained breathing apparatus shall be worn (ordinarily canister-type gas masks do not protect against atmospheres low in oxygen).

C. Abandonment of wells. Any water well which is to be abandoned must be abandoned in accordance with these rules. The owner of a well which is no longer being used will be ordered to sample the well and to disinfect or otherwise pump or remove the contamination before the well is plugged. If a well provides a potential or actual source of contamination for the aquifer, the commissioner may order that the well be permanently plugged and abandoned.

1. Temporary.

a. Prior to placement into service or when temporarily removed from service, the well shall be sealed with a water-tight steel cap. A well removed from service and not permanently abandoned may be temporarily abandoned if approved in writing by the commissioner. The licensee and the owner shall submit a request for temporary abandonment on forms provided by the department.

b. The well shall be maintained whereby it is not a source or channel of contamination when not in service.

c. Until a well is permanently abandoned by sealing procedures, all provisions for protection of the water against contamination and pollution and for maintaining satisfactory sanitary conditions around the well shall be carried out to the same extent as though the well were in routine use.

2. Permanent.

a. General. A well that is to be permanently abandoned shall be disconnected from the system and the hole filled to prevent contaminating materials from entering the water-bearing ground formations. Concrete or cement grout shall be used for sealing material; however, if the well is so large that the use of these materials is not practical, the filling materials should be selected so as to restore natural conditions as nearly as possible. Neat cement grout or concrete as defined in 7 MCAR § 1.220 C. (grouting) and 7 MCAR § 1.210 C. 13. are satisfactory for filling parts of wells in rock formations. Sand and heavy drilling fluid may be used in sand and gravel sections of wells.

b. All materials, debris and obstructions that may interfere with sealing operations shall be removed from the well. Liner pipe shall be removed or perforated when necessary to assure placement of an effective seal. The administrative authority will be consulted for instruction in case of abandonment of a contaminated well or where there is a question of proper procedure.

c. All casing and screen may be salvaged except casing that has been cemented in place. The well shall be filled with appropriate sealing materials as described in 7 MCAR § 1.218 C. 2. prior to removal of the casing.

d. The top of the hole shall be filled with 10 feet of cement or concrete grout to within 2 feet of the land surface. Casing remaining in the hole shall be cut off at least 2 feet below land surface. The remaining top 2 feet of hole shall be filled with native top soil.

e. An abandoned well shall be filled and sealed by one of the following methods in accordance with the materials penetrated, in such a manner as to prevent it from acting as a channel for pollution. A report of the method of sealing shall be filed with the commissioner on water well record forms provided:

(1) A well in unconsolidated deposits shall be filled with clean sand and puddled clay, neat cement grout or concrete grout to provide a permeability no greater than the natural condition.

(2) The section of a well in a cavernous or creviced rock (such as cavernous limestone or basalt lava rock, creviced granite, etc.) shall be filled with concrete or neat cement grout or alternate layers of concrete or neat cement grout, gravel or stone aggregate. The filling shall be completed at the top by a layer of neat cement grout or concrete grout extending at least ten feet (10 ft.) into the above overlying formation and finished as provided in 7 MCAR § 1.218 C. 2.

(3) When concrete, cement grout, puddled clay or heavy drilling fluid is used for sealing an abandoned well, it shall be inserted in the well through a grout pipe from the bottom of the well upward to the surface under pressure and in one continuous operation.

(4) Test wells shall be sealed to prevent the well from being a channel for the vertical movement of water and a source of contamination to the ground water supply in accordance with well abandonment provisions of 7 MCAR § 1.218 C.

(5) The flow in a flowing well shall be confined, if possible,[5] and the well filled in accordance with well abandonment provisions of 7 MCAR § 1.218 C.

f. The owner shall be responsible for the permanent sealing of an abandoned well except:

(1) As mutually agreed upon in a written contract between the owner and licensee and in accordance with these rules to protect the ground water aquifer.

(2) When the licensee improperly locates, constructs, or completes the well or fails to meet the conditions of his contract; in which case the licensee shall be responsible for the sealing of the well.

g. A licensee shall permanently abandon any well that he removes from service in accordance with 7 MCAR § 1.218 C. and shall report such abandonment to the commissioner. A licensee shall report to the commissioner any unsealed abandoned water wells.

D. Repealed SR 1625 1-2-84

D. Observation wells.

[5]Proper judgment shall be exercised in the feasibility and practicability of sealing flowing wells. In some cases the confining formation may have been so badly disturbed that sealing may only cause the flow to discharge in a less appropriate location. In other situations, the flow may have eroded so much material that the landscape has taken on the appearance of a natural spring. The sealing in this case may be impracticable, if not impossible.

1. Observation wells installed for a temporary (not to exceed a period of six (6) months) purpose of obtaining hydrologic or other data shall be constructed by such methods and of such materials that they are not a source or channel of pollution or contamination to any ground water supply or aquifer. All observation wells shall be abandoned in accordance with procedure described in rule 7 MCAR § 1.218 C.

2. Permanent observation wells (exceeding a period of six (6) months) constructed for the purpose of obtaining hydrologic or other data shall meet the standards of construction for water supply wells except when prior permission has been obtained in writing from the commissioner exempting the well from meeting specified standards established by these rules.

E. Test holes and borings. Test holes shall be permanently abandoned and sealed by the well contractor after the drilling, logging and testing have been completed unless:

1. The owner or his agent has submitted a request to the director and obtained his written permission to extend the time limit, or

2. The well is being completed as a water supply or other approved type well.

F. Dewatering and depressurizing wells.

1. Dewatering and depressurizing wells shall be constructed in a manner and with such materials to prevent the contamination of the ground water system. Discharges from the dewatering system shall not be cross connected to a potable water supply.

2. Temporary water supply. There may be incidents during construction where nearby residences with private water supplies will lose their source of supply during dewatering operations. If such a situation occurs, the licensee shall cooperate with the homeowner as may be required to provide a temporary supply of water during construction operations, including, but not necessarily limited to, supplying bottled water for drinking and cooking purposes and potable bulk water for other uses.

3. The commissioner shall be notified prior to commencement of a ground water dewatering operation by the licensee. The licensee shall report the approximate area to be dewatered, the maximum depth to be dewatered, the number of wells to be affected, and the measures that will be taken to provide potable water to persons adversely affected by the dewatering operation. This may be reported by phone. The licensee shall retain the name of the commissioner's staff member taking the information and shall report this information in writing to the commissioner within three days of commencement of the ground water dewatering operation.

4. The licensee shall comply with any orders issued by the commissioner which may include but not be limited to the collection of water samples

from wells in the dewatered area for analysis to determine any health hazards prior to the commissioner relieving the licensee of responsibility for furnishing a safe water supply to well owners in the area affected by the dewatering operation. If the licensee has been released of his responsibility but thereafter difficulties develop in the water supply of well owners in the area affected by the dewatering operation as a result of such operation, the licensee may again be required to comply with 7 MCAR § 1.218 F. 2.

G. Elevator shafts. Wells constructed or holes drilled for the installation of elevator shafts or hydraulic cylinders shall be cased, sealed, and maintained in a manner to prevent the vertical movement of water as a source of contamination to the ground water or any aquifer and as approved by the commissioner.

H. All other wells. All wells except those specifically exempted by the act shall be constructed and maintained in accordance with standards for water supply wells except when prior exemption has been obtained from the commissioner.

7 MCAR § 1.219 Other water sources, cross connections and storage reservoirs.

A. Storage reservoirs. If a storage reservoir, excluding a pressure tank, is used, plans shall be submitted to the administrative authority for approval. The plans shall meet the standards specified in the Manual of Water Supply Sanitation, Section VII, paragraph 715, published in 1969 by the department.

B. Other water sources. In cases where a potable water supply cannot be obtained by well drilling, permission may be granted by the administrative authority to use springs, infiltration tile lines, or other similar sources as a water supply or to install water treatment facilities. Plans and specifications for such facilities, together with operating procedures, shall be approved by the administrative authority. The plans shall meet the standards of the Manual of Water Supply Sanitation, Section VI, published in 1962 by the department.

C. Cross connections. Cross connections between water wells and other systems or equipment containing water or other substances of unknown or questionable safety, including pesticides and fertilizers, are prohibited, except where equipped with a suitable protective device such as a break tank or backflow preventer which is approved by the commissioner and which the owner agrees to install, test and maintain to assure proper operation.

7 MCAR § 1.220 Standards for construction of wells.

A. Casing for permanent wells.

1. A permanent well casing used for the protective or outside casing shall be of at least standard weight (schedule 40) steel or iron pipe through 8 inches inside diameter. Larger diameter casing shall have minimum weights

and thicknesses as specified in Table 1. Dimensions and weights of schedule 40 pipe are given in Standard B36.10-1959 of the American Standards Association, 29 West 39th Street, New York, New York and Standards A53-69a or A120-69 of the American Society for Testing Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103. Casing for permanent wells shall be of ferrous material or, where permitted by statute, plastic material. For ferrous pipe, the specifications and installation procedures are prescribed below. For plastic pipe, the specifications and installation procedures are prescribed in 7 MCAR § 1.224.

2. A protective well casing shall be watertight throughout its length, with threaded or welded joints or other types of joints given written approval by the director. Recessed or reamed and drifted couplings shall be used on threaded casing, or, as an alternate, other couplings can be used but the design, taper and type of thread of the coupling shall match that of the pipe. No thread shall be exposed on the pipe when the pipe is joined to the coupling. Other casing design or materials shall be approved only by official written order of the commissioner.

3. Pipe used as the protective casing in the permanent construction of a well shall be new pipe produced to recognized standards of the American Society for Testing Materials, No. 5L (1970) of the American Petroleum Institute, 1271 Avenue of the Americas, New York, New York, or NM. C201-66 and C202-64 of the American Water Works Association, 2 Park Avenue, New York, New York, or other grade weldable new pipe having a quality equal to or greater than those heretofore specified.

4. New pipe, when salvaged within 30 days of the drilling of a water well test hole or dry hole only, may be used as new pipe if still in new condition.

5. Pipe shall be marked with the specification designation or marked "Meets Minnesota Well Construction Code Standards." Such markings shall include wall thickness, weight per foot and identification of supplier. The commissioner may require that such pipe be submitted to an independent testing laboratory for evaluation and verification that the pipe will equal or exceed minimum standards. Failure of the pipe supplier to submit the pipe for evaluation and verification or failure of the pipe to meet minimum standdards specified in 7 MCAR § 1.220 A. 1. and 3. shall be sufficient cause for automatic rejection of such pipe for use in well construction in Minnesota.

6. Pipe intended for water well use that is sold within this state, regardless of specification designation, is subject to random examination by the administrative authority who may require any lot of pipe or part thereof containing defective lengths to be rejected. Defective lengths or lots shall include, but not be limited to:

a. Pipe with girth welded joints

b. Pipe with welded patches, and

Table 1
Casing Pipe Weight and Dimensions

Size in Inches	Wgt. Lbs. Per Ft. Plain End	Thrds. & Cplgs.*	Thrds. R&D Cplgs.	Thickness in Inches	Diameter—Inches External	Internal	Thrds. per Inch	Couplings Minimum External Diameter Inches	Minimum Length Inches
1	1.68	1.68	1.70	.133	1.315	1.049	11½	1.576	2-5/8
1¼	2.27	2.28	2.30	.140	1.660	1.380	11½	1.900	2-3/4
1½	2.72	2.73	2.75	.145	1.900	1.610	11½	2.200	2-3/4
2	3.65	3.68	3.75	.154	2.375	2.067	11½	2.750	2-7/8
2½	5.79	5.82	5.90	.203	2.875	2.469	8	3.250	3-15/16
3	7.58	7.62	7.70	.216	3.500	3.068	8	4.000	4-1/16
3½	9.11	9.20	9.25	.226	4.000	3.548	8	4.625	4-3/16
4	10.79	10.89	11.00	.237	4.500	4.026	8	5.200	4-5/16
5	14.62	14.81	15.00	.258	5.563	5.047	8	6.296	4-1/2
6	18.97	19.18	19.45	.280	6.625	6.065	8	7.390	4-11/16
8	28.55	29.35		.322	8.625	7.981	8	9.625	5-1/16
10	40.48	41.85		.365	10.750	10.020	8	11.750	5-9/16
12	49.56	51.15		.375	12.750	12.000	8	14.000	5-15/16
14	54.57	57.00		.375	14.000	13.250	8	15.000	6-3/8
16	62.58	65.30		.375	16.000	15.250	8	17.000	6-3/4
18	70.59	73.00		.375	18.000	17.250	8	19.000	7-1/8
20	78.60	81.00		.375	20.000	19.250	8	21.000	7-5/8
22	86.61			.375	22.000	21.250			
24	94.62			.375	24.000	23.376			
26	102.63			.375	26.000	25.250			
30	118.65			.375	30.000	29.250			
32	126.66			.375	32.000	31.250			
34	134.67			.375	34.000	33.250			
36	142.68			.375	36.000	35.250			

*Nominal weight based on length of 20 feet including coupling.

c. Lots having more than 5% of the pipe with lengths less than 5 feet.

7. Temporary, inner, and protective casing; liner.

a. Temporary casing may be standard weight pipe or lighter pipe, but lightweight material shall be of such minimum thickness as is required to withstand the structural load imposed by conditions both inside and outside the well.

b. In no case shall the casing have a wall thickness of less than specified in Table 1. An inner casing shall be surrounded by at least 2 nominal inches of neat cement grout when welded joints are used. Table 2 lists inner and outer pipe size combinations which would be appropriate to fulfill the requirements of this rule. If couplings are used the annular space shall be at least 4 inches in diameter larger than the outer diameter of the coupling. The annular space between the casing and open hole shall be grouted with neat cement, concrete grout, or as provided in 7 MCAR § 1.220 C., D., E. or F.

c. An inner casing shall be grouted for its entire length with the grout material being added from the bottom upward in one continuous operation or as provided in 7 MCAR § 1.220 F.

Table 2
Inner and Outer Casing Combinations
Providing the Minimum Annular Space
When Welded Joints Are Used

Inner Casing in nominal inches	Outer Casing in nominal inches
2	6
4	8
5	10
6	12
8	14
10	16
12	18
14	20
16	22
18	24
20	26
22	30
24	30
26	32
30	36

d. Casings to be grouted shall be provided with sufficient centering guides, welded to the casing, to permit unobstructed flow and deposition of the grout.

8. A well drilled for irrigation purposes in shallow continuous glacial outwash material penetrating non-artesian water may be constructed of pipe as specified in Table 3. The annular space shall be closed by washing the fine grained caving material around the casing.

Table 3
Gauges for Steel or Galvanized Steel Casing Irrigation Wells in Shallow Continuous Glacial Outwash Material Penetrating Non-artesian Water

Diameter of Plain and Perforated Casing (inches)				Diameter of Corrugated Metal Pipe (inches)		
12	14	16	18	12	15	18
. . . Gauge . . .				. . . Gauge . . .		
12	10	10	10	12	12	12

Well casing in Table 3 shall be new pipe, however, salvaged pipe may be used if the condition of the salvaged pipe is yet of new pipe quality.

9. Under no conditions shall the casing inside diameter be less than 2 inches except for a driven well point which shall be equipped with a casing pipe of at least 1¼ inches inside diameter. The well shall also be of sufficient diameter to receive a pump or pumping apparatus of sufficient size to discharge the design capacity including anticipated decline in water levels.

10. Minimum protective depths of wells.

a. All wells shall be watertight to such depth as may be necessary to exclude pollution. A well shall be constructed so as to seal off formations that are, or may be contaminated or undesireable.

Requirements will be fulfilled to the minimum extent when the protective casing has been installed in conformity with the applicable construction set forth in 7 MCAR § 1.220. Where it is not feasible to follow the standards contained in this section, the licensee shall obtain approval of the administrative authority as to the design of the well before proceeding. The acceptability of the formation for well development shall be based on the satisfactory results of analysis of the water. Any water-bearing formation yielding water which is contaminated, as evidenced by the presence of chemicals or bacteria of sewage origin, shall be regarded as unsatisfactory for use as a potable supply unless adequate treatment is provided. The Minnesota Department of Health shall be consulted for measures that may be feasible to adequately treat the water to provide a potable supply.

b. Any potable water supply well constructed entirely in glacial outwash or alluvium earth formations in which the casing does not extend to a depth of 50 feet below established ground level or through at least 10 feet of impervious soil formation shall be located in accordance with 7 MCAR § 1.217 C. 1. f.

11. A well casing or extension thereof shall extend vertically at least 12 inches above ground surface or above the floor of an approved basement offset, pump room or well room. However, in an above grade installation the casing shall extend at least 6 inches above the floor or slab.

12. Well casing offsets are prohibited.

B. Upper casing. A well casing used for a potable water supply shall not be used as a suction line unless protected by a standard weight outer casing to a depth of at least 10 feet. The top of the both casings shall be finished in accordance with 7 MCAR § 1.222.

C. Grouting.

1. A well having an open annular space around the casing, or between the surface casing and protective casing, or between an inner casing surrounded by an outer casing, shall be grouted from the lower termination of the casing to the ground surface or to the base of the pitless unit. Grouting shall be commenced without delay upon completion of drilling of the well or any portion of a well which must be grouted. Grouting shall be performed by adding the mixture through the casing or a grout pipe from the bottom of the space to be grouted upward to the surface in one continuous operation. Concrete grout may be used in the dry portion of a hole. Neat cement grout or concrete grout shall be allowed to set a minimum of 12 hours when hi-early cement is used or a minimum of 48 hours when regular cement is used, before drilling operations are resumed. Heavy drilling mud or heavy bentonite water slurry may be used as grout in wells developed in glacial drift.

2. Concrete grout is a mixture of cement, sand and water, in the same proportion of 1 bag of Portland cement (94 pounds) (ASTM C150-69a) and an equal volume of dry sand to not more than 6 gallons of clean water. Where large volumes are required to fill annular openings, gravel not larger than ½ inch size may be added. Concrete grout shall not be used as grout below the water level in the well.

3. Neat cement grout is a mixture of 1 bag (94 pounds) of Portland cement (ASTM C150-69a) to not more than 6 gallons of clean water. Bentonite up to 2% by weight of cement to reduce shrinkage or other admixtures (ASTM C494-68) to reduce permeability and/or control time of set may be used.

4. Heavy drilling fluid when used as grout in a rotary drilled well shall contain a high percentage of clay or bentonite to minimize shrinkage of the slurry within the annular space. Heavy bentonite water slurry is a mixture of 10% by weight of bentonite added to clean water or approximately 5% bentonite added to drilling mud. Bentonite shall contain 85% of the mineral montmorillinite and shall meet American Petroleum Institute specification standard 13A (March 1966). Saline, acid or alkaline substances or other additives to cause a temporary increase in viscosity of the bentonite slurry are not permitted.

D. Rotary, bored or augered wells.

1. Rotary, bored or augered wells shall have the annular space around the casing tightly sealed in accordance with the materials and procedures which are appropriate to the particular geological and hydrologic conditions at the well site, as prescribed in 7 MCAR § 1.220 C., F., G., H., and O.

2. Drilling mud additives shall be stored in clean containers and shall be free of material that may adversely affect the well, aquifer or quality of the water to be pumped from the well.

E. Driven casing wells.

1. Where the upper drillhole is clay or similar material of 10 feet or more in thickness, the annular space between the drillhole and casing shall be kept filled with clay slurry or equivalent material when driving the protective casing. In lieu of this, a starting casing should be used and sealed with 20 feet of concrete grout. (When a pitless adapter or pitless unit is used, see 7 MCAR § 1.221 C. 1.).

2. The bottom of the protective well casing shall be equipped with a drive shoe or otherwise protected from damage during construction of the well as dictated by drilling procedures and conditions of each particular well.

F. Unconsolidated glacial drift wells. A well drilled into unconsolidated glacial drift may be completed with a tight seal made around the protective casing if the annular space is closed by washing the fine-grained caving material around the casing prior to disinfection of the well. Wells shall be pumped promptly after setting the casing until clear, and native materials shall be washed immediately into the annular space. Any annular space remaining unfilled shall be grouted with neat cement or concrete using a tremie pipe to pump the grout under pressure from the bottom up in one continuous operation.

G. Rock wells.

1. Where rock is encountered, i.e., consolidated as opposed to unconsolidated geological material, at a depth greater than 25 feet from the surface the protective casing shall be equipped with a drive shoe which shall be driven firmly into stable rock to provide a tight joint that will prevent pollution or sand from entering the well.

2. Where rock is encountered within 25 feet of the surface, an oversized hole shall be drilled. Such hole shall be 4 inches larger than the nominal casing size when welded construction is used, and 4 inches larger in diameter than the coupling if threaded joints are used. The annular space shall be pressure grouted with neat cement or concrete grout as prescribed in 7 MCAR § 1.220 C. to a depth sufficient to exclude water which is or may be contaminated.

3. In an area where a well can be developed only in fractured, jointed, but noncavernous rock, the casing may terminate in the formation if there is at least 25 feet of sand or clay material above the rock, there is no record of this rock containing contaminated or polluted water, and geologic conditions offer no natural direct surface or near survace water inlets into the rock aquifer. Where there is less overburden or deeper strata will not produce potable water, the administrative authority shall be consulted and its written approval obtained by the well owner for water treatment and well construction features necessary to provide a safe water supply.

H. Cavernous rock wells.

1. Geological formations which are creviced or cavernous (limestone or dolomite) shall not be used as a potable source of ground water unless overlain by at least 50 feet of drift material and/or by a firm insoluble rock material (sandstone) extending for at least one mile horizontal distance from the well in all directions to render the movement of contaminated water in the formation to the well improbable. The casing shall be equipped with a drive shoe and seated into the top of the limestone or dolomite formation.

a. Where the pumping level is determined to be at least 10 feet above the top of the cavernous formation the well shall be cased at least 10 feet below the pumping level. Any unfilled annular space shall be sealed according to the procedure prescribed in either 7 MCAR § 1.220 C. or F.

b. Where the pumping level is determined to be less than 10 feet above the top of the limestone or dolomite formation the drill hole shall be at least 4 inches larger in diameter than the nominal casing size if welded construction is used, and 4 inches larger than the couplings if threaded joints are used. The annular space shall be filled with neat cement or concrete grout as prescribed in 7 MCAR § 1.220 C.

2. Wells underlying cavernous rock. Where an adequate and safe water supply is available in a geological formation overlain by one or more faulty rock formations, all faulty rock formations should be completely cased off. The casing should extend at least 15 feet into the safe aquifer if such exists, or at least 15 feet into a stable, insoluble, noncavernous or noncreviced geological formation beneath the lowest faulty rock formation and above the aquifer and at least 10 feet below the pumping level. The drill hole extending through the creviced rock formation and 15 feet into the firm rock formation or aquifer should be at least 4 nominal inches larger in diameter than the casing if welded construction is used, and 4 nominal inches larger in diameter than the couplings if threaded joints are used. The annular space shall be filled with cement grout as provided in 7 MCAR § 1.220 C.

3. Protective mantle over cavernous and noncavernous aquifer. Where any faulty rock formation which overlies a safe aquifer is itself overlain by a protective mantle of drift, or by a firm insoluble consolidated formation of sufficient depth and for a sufficient radius as described herein above (7 MCAR § 1.220 H. 1.), the casing need not extend through the protected

faulty rock formation. The casing shall also extend 10 feet below the pumping level. The acceptability of water taken from a well so constructed will be dependent upon treatment of the water, if the need for treatment is indicated by analytical studies of the water.

4. A well shall not provide water entry from more than one aquifer.

I. Flowing artesian wells.

1. Flowing artesian wells should be constructed to prevent erosion of the aquifer or the overlying confining mantle.[6]

2. Flow control from a flowing artesian well shall be provided, consisting of valved pipe connections, water-tight pump connections or a receiving tank set at an altitude corresponding to that of the artesian head. A direct connection between the discharge pipe and a receiving tank or a sewer or other source of pollution or contamination shall be prohibited.

J. Well screens. A well installed in unconsolidated sand and gravel aquifers shall ordinarily be fitted with a screen properly sized so the aquifer can be properly developed to produce sand-free water at the pumping rate of the permanent pump. Wells shall provide sand-free water to the extent that the sand will not interfere with the intended use and operation of the water supply system.

K. Capping. Temporary capping of a well until the pumping equipment is installed shall be such that no pollution or foreign objects can enter the well.

L. Yield test. Every well shall be test pumped to produce a minimum initial supply of 600 gallons of sand-free water per hour if geological conditions permit. A well in which a pump of a capacity of 20 gallons per minute or more is to be installed shall be tested for yield and drawdown with periodic water level measurements being made where possible, during the drawdown and subsequent recovery periods. The well shall be test pumped at rates greater than is expected from the well during its normal usage as follows: up to 400 gpm—1.5 times; 400 to 600 gpm—1.4 times; 600 to 800 gpm—1.3 times; 800 to 1,000 gpm—1.2 times; 1,000 gpm and over—1.1 times. Shallow nonartesian wells used for irrigation purposes may be test pumped at a rate equivalent to the yield of the aquifer and for a period of at least 12 hours. Wells shall be test pumped for a minimum of one hour or more if more is required by the well owner or as prescribed by the consulting engineer or hydrologist.

M. Alignment. A well shall not vary from the vertical or alignment so as to interfere with installation and operation of the pump.

[6]This provision will not be interpreted so as to preclude licensees from attempting to drill a well in a flowing artesian area, when it is likely that a water well can be safely installed if proper precautionary measures are followed.

N. Drilling water. Water used for drilling, development or rehabilitation purposes, other than from the well itself, shall be chlorinated clear water containing a free chlorine residual at the time of use and be conveyed in clean sanitary containers or water lines.

O. Dug or bored wells.

1. A dug or bored well constructed with materials other than those authorized in 7 MCAR § 1.220 A. may be constructed only in glacial drift formations and shall:

a. be cased with material of sufficient strength to withstand the pressures of the formation;

b. be installed in an oversized hole at least 6 inches in diameter larger than the casing, with the annular space between the casing and the formation filled 3 inches thick with neat cement or concrete grout placed in one operation to a depth sufficient to exclude water which is or may be contaminated, or to a depth of 10 feet, whichever is greater, or

c. be installed with a watertight concrete curbing or casing at least four inches thick poured in one operation to a depth sufficient to exclude water which is or may be contaminated, or 10 feet, whichever is greater. The annular space between the casing and the formation shall be filled as provided in 7 MCAR § 1.220 D. or F.;

d. be protected with a heavy pre-cast overlapping steel reinforced concrete cover or a heavy locked overlapping metal cover not less than 3/16 inch in thickness. The cover shall be tight fitting so as to exclude vermin, dust, or other contaminants from the well.

e. have pump openings and any below grade connection sealed with concrete or cement as prescribed in c. above.

2. Prior to constructing a dug or bored well, the licensee shall obtain from the owner an agreement to the following conditions:

a. the owner will maintain the isolation distances prescribed in 7 MCAR § 1.217 C. 1.;

b. once per year, or as otherwise prescribed by the Minnesota Department of Health, the owner will have the water from the dug or bored well analyzed for nitrate and for bacteria. This agreement shall be documented on forms provided by the Minnesota Department of Health and shall be returned to the department along with the water well record.

P. Well development. The well shall be developed to remove: 1. native silts and clays deposited on the aquifer face during the drilling, 2. drilling fluid and 3. the predetermined finer fraction of the gravel pack, all of which shall be done to insure that the maximum practical specific capacity will be obtained from the completed well.

Q. Disposal of material. Drilling mud, cuttings and discharged water shall not be disposed in a manner so as to create damage to public or private property. During the test pumping discharged water shall be piped to a point of overland drainage.

7 MCAR § 1.221 Well casing seals and connections.

A. Water level measurement design. Provisions shall be made in the well seal with a minimum ½-inch diameter threaded plug for future measurements of static and pumping water levels. A minimum 1-inch diameter threaded plug is preferred where feasible.

B. Above-grade connections. An above-grade connection into the top or side of a well casing shall be at least 12 inches above the established ground surface or 2 feet above the regional flood level whichever is higher, and constructed so as to exclude dirt or other foreign matter by one or more of the following methods, as may be applicable:

1. Threaded connection.

2. Welded connection.

3. Rubber expansion sealer.

4. Bolted flanges with rubber gaskets.

5. Overlapping well cap.

6. Extension of the casing at least 1 inch into the base of a power pump mounted and sealed on a concrete pedestal and at least 12 inches above the established ground surface or the floor of an approved basement, pump room, or well room.

C. Below-grade connection.

1. A connection to a well casing made below ground, or less than 12 inches above the established ground surface, shall be protected by a pitless adapter or pitless unit. The pitless adapter or pitless unit shall be approved by the commissioner on the basis of design and materials. A below-ground connection shall not be submerged in water at the time of installation. The director will furnish a list of approved pitless adapters and pitless units that meet the requirements of these rules. Native materials shall be packed tightly around the casing and pitless adapter or pitless unit after installation.

2. A connection to a well casing located at least 12 inches above the floor of an approved basement offset is considered equal to an above-grade installation for residential use only. An approved basement offset shall be a room with a floor 12 inches above the floor of an approved basement, shall extend beyond the footings of the building. The well shall extend 3 feet beyond any roof projection. Any basement located in a regional flood zone

shall not be considered an approved basement. Water from a well located within a basement offset of a farm home may be piped for use in other farm buildings.

D. Other methods. Any other method of connection to a well casing shall be specifically approved in writing by the director before installation.

7 MCAR § 1.222 Pump installation.

A. Pump and well rooms. A room housing pumping equipment or the top of a well casing shall be constructed above the established ground surface permitting access to the pump and well for maintenance or repair, or may be located below-grade if the containing room is located in or attached to an approved basement.

B. Slabs, platform and floors. A well, except where an approved pitless adapter or pitless unit is used, shall be protected by a durable watertight concrete or equal slab, platform or floor, at least 4 inches thick, extending horizontally at least 1 foot in every direction from the well casing, and sloped to divert water away from the casing. A watertight seal, which may be asphalt or similar material to provide resiliency, shall be provided between the casing and the platform, pump room or approved basement floor or slab.

C. Pumps and pumping equipment.

1. A pump shall be constructed so that no unprotected openings into the interior of the pump or well casing exist.

2. A hand pump, hand pump head, stand or similar device shall have a closed spout, directed downward, and a pump rod that operates through a stuffing box.

3. A power driven pump shall be attached to the casing or approved suction or discharge line by a watertight connection, including flange connections, hose clamp type connections, or other flexible couplings, or shall have a base plate meeting the requirements of 7 MCAR § 1.221 A.

4. A pump shall be designed, installed and maintained so that priming is not required for ordinary use. Pumps installed for use only on a well water irrigation system are exempted but priming water shall be clear water free of contamination and carrying a chlorine residual. An irrigation well equipped with a centrifugal pump may be primed without chlorination when the pump is filled with water taken directly from the well.

D. Water suction lines.

1. A water suction line shall be constructed of copper, galvanized iron or steel, cast iron, or plastic pipe as approved by the director, or other material given written approval by the director. Aluminum pipe is acceptable for well water irrigation systems in addition to the above materials.

2. A water suction line extending outside the well casing shall not be used unless protected by one or more of the following methods:

a. Fully exposed in an approved basement offset, pump room or well room and at least 12 inches above the floor of an approved below-grade structure.

b. Fully exposed above grade.

c. Lying within an outer casing with the annular space filled with water from the system and maintained at system pressure.

3. An unprotected suction line may be installed below grade only for nonpotable irrigation wells located in agricultural fields and installed in shallow glacial outwash material penetrating nonartesian aquifers for manifold collection systems under negative pressures provided the area is sufficiently isolated from potable water wells.

E. Pump discharge lines. A buried discharge line between the well casing and the pressure tank in any installation, including a deepwell turbine or a submersible pump, shall not be under negative pressure at any time. If a check valve is installed in a buried water line between the well casing and the pressure tank, the water line between the well casing and the check valve shall meet the requirements for a suction line unless equipped with an air release valve. Pump discharge lines shall be materials as approved for suction lines in 7 MCAR § 1.222 D. 1. A frost proof yard hydrant shall be located at least 10 feet from the well.

F. Pressure tanks. It is recommended that a pressure tank be installed in an approved pump room or well room. However, partially buried pressure tanks shall project horizontally above the ground or into an approved basement. A totally buried pressure tank may be used if the manufacturer's unit has been approved in writing by the commissioner as to its design, type of material and specification for its installation. A pressure relief or air release valve on a pressure tank which may contain subterranean gases and which is located within a building shall be vented to the outside.

G. Vents.

1. All wells shall be vented. A casing vent shall be of materials complying with 7 MCAR § 1.222 D. 1. with watertight joints terminating at least 2 feet above the regional flood level or one foot above the established ground surface or the floor of a pump room, well room or approved basement, whichever is higher. The casing vent shall be screened and point downward. Vents may be offset provided they meet the provision of this rule. Any submersible pump shall be installed with a vented cap on the top of the well casing or pitless unit to prevent drawing near surface water, mud, sand, etc., into the well through shielding around the electric cable. Flowing artesian wells may be exempted if protected by a specially designed pitless unit or if the casing is protected as provided in 7 MCAR § 1.220 B. Where the well

casing on small diameter wells (one and one-half inch or less) is used as a suction pipe, the casing need not be equipped with a vented cap, provided the casing is protected in accordance with 7 MCAR § 1.220 B.

2. If toxic or flammable gases are present, they shall be vented from the well. The vent shall extend to the outside atmosphere above the roof level at a point where the gases will not produce a hazard. Openings in pump bases shall be sealed watertight. If the type of gas is not known and is to be carried through the water supply, the administrative authority shall be consulted for proper identification and treatment.

H. Sampling faucet. In a pressure water system provision shall be made for collection of water samples by installation of a faucet or sampling device in a convenient location as near to the well as possible.

I. Disinfection.

1. A new, repaired, or reconditioned well or pump installation shall be thoroughly pumped to waste until the water is as clear as is reasonably possible, dependent upon ground water conditions in the area. Thereafter the well and pumping equipment shall be disinfected with chlorine so applied that a concentration of at least 50 parts per million of chlorine shall be obtained in all parts of the well. The chlorine solution shall be introduced into the well in a manner to flush the well surfaces above the static level with chlorine solution. A minimum contact period of 2 hours shall be provided before pumping the well to waste and flushing the chlorine solution from the distribution system.

2. A licensee shall be responsible for chlorinating the work he performs on the well, pump or pumping equipment.

3. Disinfection in a well repair operation may be accomplished at the beginning of the operation with chlorine applied to obtain a concentration of 200 parts per million for the period of the well repair operation. The water shall be pumped to waste prior to taking of water samples or use being made of the water.

7 MCAR § 1.223 Records and samples.

A. Water sample.

1. Prior to placing the well into service, the licensee will be responsible for collecting one or more water samples from the installation for water quality analysis. Such samples shall be submitted to the Minnesota Department of Health in containers and in accordance with procedures issued by the director. The results of the data will be stored in a ground water quality information system. The sample must be received within 30 hours of collection. Results of water sample analysis for a domestic supply not acceptable for drinking water will be reported to the well owner and the licensee along with recommendations for corrective actions. The results of the sample analysis

is not intended to provide a basis of water quality for a transaction involving the sale or purchase of property.

2. If the licensee chooses to submit the water sample to a laboratory other than that of the Minnesota Department of Health, that laboratory must be certified by the Minnesota Department of Health for determination of the presence of coliform bacteria. The sample must be collected in containers approved by the director and must be received by the certified laboratory within 30 hours of the time of collection. The costs of such analysis shall be paid by the licensee. Results of the analysis shall be submitted to the Minnesota Department of Health.

B. Water well records.

1. A water well record shall be completed and submitted to the commissioner by the licensee within 30 days after completion of any well. The licensee shall furnish the well owner one copy, the director three copies and retain one copy in his files, of a well record containing such available information as required on the form furnished by the director. Terms when used for describing formations on the well log form shall conform to definitions set forth in these rules.

2. A water well record shall be submitted for a dry hole. Information on several dry holes within a small area may be submitted on a single well record form if the geologic materials are similar.

3. A well record shall be submitted after an abandoned well has been sealed showing the method of sealing.

C. Water well cutting formation samples. In order to improve the state's water information system, more detailed geologic and hydrologic information is needed about the rocks and sediments which contain the state's groundwater resources. Water well cuttings provide the least expensive source of this kind of information. The information derived from such a program is essential to the better understanding and protection of the state's groundwater resources. The following rules and procedures set forth the means by which such information shall be obtained.

1. The commissioner in consultation with the Minnesota Geological Survey (hereinafter referred to as the survey) shall determine areas where water well cutting samples are needed to provide subsurface geological and hydrological information required by the commissioner, the survey, and other state agencies for development of the state water information system. The general standards to be used in making such a determination are:

a. To obtain the minimum amount of detailed geologic and hydrologic information needed for the state water information system, at least one set of water well cutting samples per township in rural areas and at least one set of water well cutting samples per section in urban areas are required. The latest State Planning Agency Land-Use Map will be used for determining rural and urban areas for collection of well cutting formation samples.

b. The commissioner in consultation with the survey may determine that more information is required from specific areas for accuracy and detail in the state water information system.

c. Water well cutting samples will be required only where there is reason to believe that a well will encounter bedrock materials below glacial sediments or from a well which the licensee estimates will reach a depth of at least 200 feet. The commissioner may require water well cutting samples from areas other than as specified in this subsection where needed for accuracy and detail in the state water information system.*

2. The commissioner through the survey shall notify licensees of the general areas from which water well cutting samples are required and provide the licensees most frequently operating within such areas with maps or lists indicating counties, townships, section, or other designated areas where cutting samples are required. In addition, the commissioner shall specify the approximate number and depths of wells from which cutting samples are needed in the designated areas.

3. The survey shall furnish all licensees so notified with well-cutting sample bags, labels, and return postage cards for collecting and reporting water well cutting samples.

4. Licensees so notified and supplied with sample collecting materials shall collect cutting samples during the course of drilling wells in the designated areas according to the requirements specified in the notification. Licensees not supplied with sample collecting materials but who shall have occasion to drill a well in an area designated for sampling shall notify the survey.

5. Licensees shall collect the cutting samples in an accurate manner so as to insure that they are representative of the materials encountered. Samples shall be taken at 5-foot intervals and at every change in rock or sediment type. The cuttings shall be placed in the sample bags provided by the survey which shall have an attached tag on which the commissioner's recording form well-record number of the well, the well owner's name, the well location, and the sample depth (example: 5 ft.) must be written.

6. Licensees shall notify the survey within 30 days after the well's completion so that the cutting samples can be collected. Pending collection, the contractor shall store the samples in a proper manner, so that they are protected from weather and disturbance and segregated in such a way that all samples may be properly identified with respect to the commissioner's recording form well-record number and depth interval.

7. The survey, upon notification by the licensee, shall collect the sam-

*Any licensee who has reason to believe that a well may be of exceptional geologic or hydrologic interest is encouraged to call collect the survey to inform that agency of the opportunity to obtain samples, even if the well is not within the area currently designated for collection of samples.

ples from the contractor. The cutting samples shall be described and a geologic log prepared. The geologic log will be retained in the files of the Minnesota Geological Survey, with a copy being sent to the contractor.

7 MCAR § 1.224 Plastic well casing. In addition to complying with 7 MCAR §§ 1.210-1.223, an installer who uses plastic well casing* must comply with the provisions of this rule with regard to construction and installation.

A. Definitions: The following terms shall have the meanings given them.

1. Installer means any person who constructs a well using plastic casing, whether or not such person is a driller or contractor who is licensed pursuant to Minn. Stat. ch. 156A.

2. Plastic, when used in 7 MCAR §§ 1.210-1.224, means a thermoplastic pipe or casing material composed of either polyvinyl chloride (PVC) or acrylonitrile-butadiene-styrene (ABS).

B. Standards:

1. Any plastic pipe used for water well casing shall meet the standards of the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania, 19103, which are referenced as Standard Specification for Thermoplastic Water Well Casing Pipe and Couplings Made in Standard Dimension Ratios (SDR), ASTM F-480. Such pipe shall be capable of withstanding pressures equal to or greater than 200 pounds per square inch (p.s.i.). Table 4 lists the pipe included in ASTM F-480 which meets the 200 p.s.i. rating.

Table 4
Standard Thermoplastic Dimension Ratios (SDR) and Water Pressure Ratings (PR) at 23°C (73°F) for Non-Threaded PVC and ABS Plastic Pipe Equal to or Greater Than 200 p.s.i.

	Pressure Rating of PVC Pipe Materials		
	PVC 1120 PVC 1220 PVC 2120	PVC 2116	PVC 2112
SDR	p.s.i.	p.s.i.	p.s.i.
13.5	315	250	200
17	250	200	
21	200		
	Pressure Rating of ABS Pipe Materials		
	ABS 1316		ABS 2112
SDR	p.s.i.		p.s.i.
13.5	250		200
17	200		

*Laws of 1977, ch. 398, and Laws of 1979, ch. 312 permit the use of plastic well casing in certain Minnesota counties. A list of these counties is appended at the end of this rule.

2. Any plastic pipe, couplings, or components used in water well casing construction shall have the approval of a testing laboratory which has demonstrated the use of unbiased, reliable and appropriate testing methods, as determined by the Commissioner of Health. Such laboratory must approve the material as being intended for use in the transport of potable water. This approval shall be stamped on the pipe as prescribed below.

3. Pipe markings:

a. Well casing pipe—The plastic well casing pipe shall be marked at least every 1.5 m (5 ft.), in letters not less than 5 mm (3/16 in.) high in a contrasting color with the following information:

(1) Nominal well casing pipe size (for example, 5 in.), as specified in ASTM-F-480,

(2) Well casing pipe standard dimension ratio, in accordance with designation code given in Table 1 (for example, SDR 17, 1316),

(3) Type of plastic casing pipe material (for example, ABS or PVC),

(4) The wording—"well casing"—followed by the impact classification (for example, IC-3),

(5) Designation "ASTM F-480" including the year of issue of the standard with which the well casing pipe complies,

(6) Manufacturer's name or trademark,

(7) Manufacturer's code for resin manufacture, lot number, and date of manufacture,

(8) The seal or mark of the laboratory making the evaluation of the plastic for potable water use spaced at intervals specified by the laboratory, and

(9) Pressure rating (must be 200 p.s.i. or more).

b. Well casing pipe coupling—Plastic well casing pipe couplings shall be marked in letters not less than 5 mm (3/16 in.) high, with the following information:

(1) Nominal well casing pipe coupling size (for example, 5 in.), as specified in ASTM-F-480,

(2) Type of plastic well casing pipe coupling material (for example, ABS or PVC),

(3) Designation "ASTM F-480," including year of issue of the standard with which the well casing pipe coupling complies,

(4) Manufacturer's name or trademark, and

(5) The seal or mark of the laboratory making the evaluation of the plastic for potable water use spaced at intervals specified by the laboratory.

C. Plastic well casing pipe size: Where a submersible pump is to be installed inside a plastic casing, the casing diameter shall be no less than five-inch nominal pipe size, as specified in ASTM-F-480.

D. Storage, handling and components: The installer shall:

1. Not use pipe and couplings that have been stored in direct sunlight. Pipe must be stored in such a manner so as to prevent sagging or bending.

2. Inspect pipe and couplings carefully for cuts, gouges, deep scratches, damaged ends and other major imperfections and shall not use any plastic pipe or coupling which has such defects or imperfections.

3. Use solvent cement meeting the requirements of the specifications for the particular plastic used. The cement used shall provide sufficient open time for making good joints but the installer shall complete joints immediately upon applying the solvent cement.

4. Use only pipe and coupling combinations that give close and satisfactory interference fits which will readily mate when the solvent cement is applied and the pieces are joined. The pipe shall enter the socket to between 1/2 or 2/3 of the socket depth when inserted and turned.

5. An installer may use plastic pipe couplings with molded or formed threads but he must use only the thread lubricant which is suitable for the particular type of plastic being used.

6. When the installer connects plastic pipe to a non-plastic well screen, he shall use a coupling appropriate for the specific transition intended.

E. Technique for joining plastic well casing:

1. Cutting. The installer shall use fine tooth blades with little or no set for cutting the pipe. Pipe ends shall be cut square using a miter box. A plastic pipe cutter equipped with extra-wide rollers and thin cutting wheels may be used. Standard steel pipe or tubing cutters shall not be used for cutting plastic pipe.

2. Cleaning. The installer shall clean all dirt, dust, moisture and burrs from pipe ends and couplings. The installer may use only chemical or mechanical cleaners which are suitable for the particular plastic material being used. All burrs shall be removed.

3. Primer. The installer shall use a primer:

a. when, because of the type of plastic material being used, the pipe and coupling surfaces must be softened and dissolved in order to form a continuous bond between the mating surfaces, and/or

b. when the particular type of solvent cement being used requires one.

4. Cement application. The installer shall apply a moderate and even coat of cement[7] to the inside of the coupling to cover the distance of the joining surface only. The installer shall then quickly apply an even coat of cement to the outside of the pipe being joined to a distance which is equal to the depth of the pipe coupling socket.

5. Assembly. The installer shall:

a. make the joint as quickly as possible after application of the cement, and before it dries;

b. reapply cement before assembling if the cement dries partially;

c. insert the pipe into the coupling socket, turning the pipe to insure even distribution of cement.

d. make sure that the pipe is inserted to the full depth of the coupling socket, and assemble pipe by using pipe joiners;

e. remove excess solvent cement from the exterior of the joint with a clean, dry cloth;

f. tighten a threaded joint by no more than one full turn using a strap wrench;

g. not disturb the coupling joint until after the cement has set, in order to avoid damage to the joint and loss of fit;

h. allow sufficient time for the joint to develop good handling strength based on the setting times given in Table 5.

Table 5
Initial Set Time

Temperature Range During Initial Set Time °C (°F)	Set Time for Pipe Sizes 2 to 3 in.	Set Time for Pipe Sizes 3½ to 12 in.
15 to 40 (60 to 100)	30 min.	1 hr.
5 to 15 (40 to 60)	2 hrs.	4 hrs.
-20 to +5 (0 to 40)	6 hrs.	12 hrs.

[7]Caution should be used when handling solvent cement to avoid skin contact or inhalation of vapors.

i. allow sufficient time for the joint to cure before the joined pipe can be dropped into the drilled hole. This additional cure time is specified in Table 6.

Table 6
Joint Cure Schedule

Ambient Temperature, °C	Nominal Pipe Sizes 2 to 3 in. SDR 26 and above	2 to 3 in. SDR 21, 17, 13.5	3½ to 12 in. SDR 26 and above	3½ to 12 in. SDR 21, 17, 13.5
15 to 40	2 h *	12 h	6 h	24 h
5 to 15	4 h	24 h	12 h	48 h
-20 to +5	16 h	96 h	48 h	8 days

*When the relative humidity is above 60%, increase all of the above times by 50%.

F. Installation of plastic well casing:

1. The installer shall drill an open hole which is 4 inches larger than the nominal casing size.

2. An installer may not insert the drill stem inside the plastic casing when drilling any kind of well.

3. Grouting:

a. The installer shall fill the annular space between the drill hole wall and the casing pipe with grout (defined in 7 MCAR § 1.210 C. 3.) to assure equal loading around the casing in order to prevent collapse or deformation of the casing and to prevent any contamination from entering the well. Native sand may be used in non-artesian wells drilled in outwash material having no clay lense or lenses (a geological stratum composed of clay). The upper 30 feet in any type of well shall be grouted with neat cement grout (defined in 7 MCAR § 1.220 C. 3.) using a tremie pipe. A tremie pipe is one which is small enough to fit in the annular space and which carries the grout to the bottom of a hole. The grout shall be fed under pressure from the bottom to the top in one continuous operation.

b. When drilling a rock well, the installer shall seal the casing pipe into the bedrock using neat cement grout (defined in 7 MCAR § 1.220 C. 3.).

c. Because of its high heat of hydration, grout made of rapid-setting cement is not permitted for use in wells which are cased with PVC pipe.[8]

[8]This table shows the strength of PVC at various temperatures based on 73.4°F being 100% of its tested strength.

50°F	60°F	70°F	80°F	90°F	100°F	110°F	120°F	130°F	140°F	150°F
114%	107%	101%	95%	88%	83%	77%	72%	65%	40%	10%

4. All plastic-cased wells must terminate above grade as prescribed in 7 MCAR § 1.217 and 7 MCAR § 1.220 A. 11. The installer may equip a plastic-cased well with a steel casing or steel pitless unit which is satisfactory for use in plastic-cased wells, to a depth equal to or greater than the frost line. Where a steel casing or steel pitless unit is not used, the plastic casing shall be extended above grade to a distance prescribed in 7 MCAR § 1.217 and 7 MCAR § 1.220 A. 11., and must be protected with any one of the following:

a. an oversize steel casing which extends from the top of the plastic casing down to a depth below the frost line, or

b. at least 3 posts (schedule 40 steel pipe) of at least 4 inch diameter at equal distances from each other and which are placed 2 feet from the center of the plastic casing. Such posts shall be installed to a depth of 4 feet into solid ground, or to a depth of 2 feet if each post is surrounded with 1 foot of concrete to a depth of 2 feet, or

c. a well house which is constructed so as to provide a degree of protection which is equivalent to that provided in b. above.

5. The installer shall plug and abandon a bore hole as prescribed in 7 MCAR § 1.218 C. 2.:

a. whenever the plastic casing cannot be installed without exerting pressure, or

b. whenever a screen or pump cannot be installed without force, or

c. whenever the casing fails during the construction or pumping stages.

4427-4491

7 MCAR S 1.225 Rule relating to explorers and exploratory borings.

A. Policies.

1. This rule shall apply to all exploratory borings constructed in the state of Minnesota except those specifically exempted by Minnesota Statutes, section 156A.02, subdivision 5. Those aspects covered are the licensing of explorers, the examination of responsible individuals, and the proper abandonment of exploratory borings to protect the quality of ground water aquifers. The explorer shall be responsible for the construction and abandonment of all exploratory borings completed under his license.

2. Modification by the commissioner.

a. When the strict application of any provision of this rule presents practical difficulties or unusual hardships, the commissioner, in a specific instance, may modify the application of such provision consistent with the general purpose of this rule and the act and upon such conditions as are necessary, in the opinion of the commissioner, to protect the ground water of the state and the health, safety, and general well-being of persons using or potential users of ground water.

b. Any request for modification shall be submitted to the commissioner in writing and shall be signed by the licensed explorer and the designated responsible individual. Such request shall specify in detail the nature of the modification being sought, the reasons therefor, and the special precautions to be taken to avoid contamination of the ground water. The request shall also include: the proposed boring depth, casing type and depth, method of construction and grouting, geological conditions likely to be encountered, and location of the boring and of possible sources of contamination. Whether or not the request is granted, the commissioner shall state in detail the reasons for the decision.

B. Definitions.

For the purpose of this rule, the following terms or phrases shall have the meaning given them, except where the context clearly indicates otherwise.

1. "Aquifer" means a water-bearing formation (soil or rock horizon).

2. "Act" means Minnesota Statutes, sections 156A.01 to 156A.08, as amended, under which this rule is promulgated.

3. "Annular space" means the space between two cylindrical objects one of which surrounds the other, such as the space between a drillhole and a casing pipe, or between a casing pipe and liner pipe.

4. "APA" means the Administrative Procedure Act, chapter 15, Minnesota Statutes.

5. "Casing" means an impervious durable pipe placed in a boring to prevent the walls from caving and to seal off surface drainage or undesirable water, gas or other fluids to prevent their entering the boring and the ground water.

6. "Commissioner" means the commissioner of health or his or her authorized representative.

7. "Council" means the Water Well Contractors and Exploratory Borers Advisory Council, created pursuant to the provisions of Minnesota Statutes, section 156A.06.

8. "Established ground surface" means the intended or actual finished grade (elevation) of the surface of the ground at the site of the exploratory boring.

9. "Exploratory boring" means any surface drilling done for the exploration of oil, natural gas or metallic minerals as defined in Minnesota Statutes, section 156A.02, subdivision 5.

10. "Explorer" means a person who has the right to drill any exploratory boring.

11. "Geological material" means all materials penetrated in drilling an exploratory boring.

a. The following table lists materials other than consolidated rock classified according to average particle size (Wentworth 1922):

	Particle Diameters		Screen Slot No.	
Material	Millimeters	Inches	From	To
Clay	Up to 0.005	Up to 0.0002	--	--
Silt	0.005 - 0.062	0.0002 - 0.0025	--	--
Fine Sand	0.062 - 0.250	0.0025 - 0.010	2	10
Medium Sand	0.250 - 0.50	0.010 - 0.020	10	20
Coarse Sand	0.50 - 1.00	0.020 - 0.040	20	40
Very Coarse Sand	1.00 - 2.00	0.040 - 0.08	40	80
Fine Gravel	2.00 - 4.00	0.080 - 0.160	80	160
Coarse Gravel	4.00 - 62.50	0.160 - 2.50	160 and larger	
Cobbles	62.5 - 250.0	2.50 - 10.0		
Boulders	250.0 and larger	10.0 and larger		

b. "Limestone" means rock which contains at least 80 percent of carbonates of calcium and has strong reaction with HCl (muriatic acid).

12. "Ground water" means the water in the zone of saturation in which all of the pore spaces of the subsurface material are filled with water.

13. "Grout" means neat cement, concrete, heavy drilling fluid or heavy bentonite slurry.

a. "Neat cement" means a mixture of one bag (94 pounds) of Portland cement meeting the standard specifications of ASTM C150-69a, and not more than six gallons of clean water. Bentonite up to 2 percent by weight of cement may be used to reduce shrinkage. Other admixtures meeting the standard specifications of ASTM C494-68 may be used to reduce permeability and/or control time of set.

b. "Concrete" means a mixture of Portland cement, sand and water in the proportion of one bag (94 pounds) of Portland cement meeting the standard specifications of ASTM C150-69a, and an equal volume of dry sand and not more than six gallons of clean water. Where large volumes are required to fill annular openings, gravel not larger than 1/2 inch size may be added.

c. "Heavy drilling fluid" or "heavy bentonite slurry" shall contain a high percentage of clay or bentonite to minimize shrinkage of the slurry. Bentonite shall contain at least 85 percent of the mineral monmorillinite and shall meet American Petroleum Institute specification standard 13A (March 1966). Heavy drilling fluid or heavy bentonite slurry shall be of sufficient viscosity to require a time of at least 70 seconds to discharge one quart of the material through an API Marsh funnel viscometer. Saline, acid, or alkaline substances or other additives that cause a temporary increase in viscosity of the bentonite slurry are not permitted.

14. "Person" means any natural person, corporation, partnership, or other business association.

15. "Pollution" or "contamination" means the presence or addition of any substance to water which is or may become injurious to the health, safety or welfare of the general public or private individuals and which is or may become injurious to domestic, commercial, industrial, agricultural or other uses which are being made of such water.

16. "Responsible individual" means a person who has met the qualifications prescribed in part C.4.a. and has been approved for designation by the commissioner in accordance with the terms of part C.4.c.

C. Licensing.

1. No person shall drill, construct or otherwise cause to be made, an exploratory boring unless he possesses, or is employed by one who possesses, a valid explorer's license issued by the commissioner.

2. An explorer engaging in exploratory boring shall obtain a license in accordance with this rule.

3. A person shall annually apply for an explorer's

license by submitting to the commissioner a properly completed application accompanied by a $50 license fee, payable to the Treasurer, State of Minnesota. An explorer's license shall be effective for the calendar year for which it is issued.

a. The person applying for an explorer's license shall include the name of the responsible individual who will supervise or oversee the location, construction, and abandonment of exploratory borings on behalf of the explorer.

b. If the person applying for the explorer's license does not designate a responsible individual, the commissioner shall issue a conditional license. Such a license is not considered valid for the purpose of engaging in the construction of exploratory borings until a responsible individual has been designated and the commissioner has been notified of such designation. The notification of designation shall be made at least ten days prior to the commencement of exploratory boring.

4. Qualification as a responsible individual.

a. A person who seeks to qualify for designation as a responsible individual shall

(1) complete and submit an application for qualification to the commissioner, along with a $50 fee which is payable to the Treasurer, State of Minnesota.

(2) take and pass an examination on the portions of this rule which relate to mineral exploration activities, or document the fact that he or she is a registered professional engineer or certified professional geologist, in accordance with Minnesota Statutes, section 156A.071, subdivision 2.

(a) A person may take the examination as many times as he desires. Each new application for qualification shall be accompanied by a new fee.

(b) All applicants in any one examination session will be given the same combination of written, oral, or practical work based on the substance of this rule.

b. The commissioner shall not act upon the application for qualification until he has received all the information required by this rule.

c. When the commissioner determines that an individual has met all the qualifications prescribed in part C.4 (above), the commissioner shall notify the person and shall enter that person's name on a list of persons who qualify for designation as responsible individuals.

5. Revocation of license; disqualification.

a. The commissioner or council may cause an investigation to be made in any case in order to determine

whether there has been a violation of the act or this rule, and, in so doing may request the explorer and/or the designated responsible individual to appear before them to determine the merits of the situation in question. The council may make a recommendation to the commissioner as to whether proceedings under the act and the APA would be appropriate.

b. Any disciplinary action taken under this rule shall comply with the APA.

c. The commissioner may revoke the license of an explorer and may disqualify a responsible individual upon finding that the explorer or the designated responsible individual has violated the act or this rule. The commissioner may initiate such proceedings upon his own motion or upon recommendation of the council.

d. A license may be revoked and a responsible individual may be disqualified until certain conditions specifically related to the violations giving rise to the revocation are fulfilled and/or for a specified period of time as determined to be most appropriate by the commissioner and as specified in the commissioner's order of revocation. A revoked license shall be returned to the commissioner.

e. Reinstatement:

(1) An explorer who has had his license revoked may be relicensed by submitting the usual application and fee.

(2) A responsible individual who has been disqualified may be requalified by following the procedure prescribed in C.4.a.

(3) The commissioner shall require an investigation or hearing to determine whether an explorer should be issued a new license or a responsible individual should be requalified provided, however, that in no case shall a new license be issued or a responsible individual be requalified prior to one year after revocation or disqualification has taken effect.

D. Abandonment of exploratory borings.

1. Abandonment of all exploratory borings shall be carried out in accordance with the provisions of chapter 156A and this rule. Abandonment, whether temporary or permanent, shall be undertaken immediately upon completion of drilling activities. The commissioner may order that an exploratory boring be sampled and any contamination be removed prior to abandonment. If an exploratory boring provides a potential or actual source or channel of contamination for an aquifer, the commissioner may order that the boring be permanently abandoned.

2. Temporary abandonment.

a. A temporarily abandoned exploratory boring shall be

maintained whereby it is not a source or channel of contamination for any aquifer.

b. Until a boring is permanently abandoned, all provisions for protection of the ground water against contamination and pollution and for maintaining satisfactory sanitary conditions around the boring shall be carried out.

c. A boring which is temporarily abandoned shall be constructed to prevent the introduction of surface contaminants into the boring to prevent the passage of water from one aquifer to another. At the minimum, a temporarily abandoned boring shall be cased from bedrock or from the bottom of the boring if the boring terminates in unconsolidated materials, to a point one foot above the ground surface, or if in a flood plain, at least two feet above the level of the highest flood of record. The casing shall be protected with an overlapping cap which will prevent any surface contamination from entering the boring.

d. Any boring which is temporarily abandoned shall be marked and protected with four steel posts (schedule 40 steel pipe) of at least four inch diameter at equal distances from each other and which are placed two feet from the center of the casing. Such posts shall be installed to a depth of four feet into solid ground, or to a depth of two feet if each post is surrounded with one foot of concrete to a depth of two feet.

e. A boring shall not be temporarily abandoned for more than five years.

3. Permanent abandonment.

a. Whenever the explorer determines that a boring need not remain open any longer, or whenever he is about to lose the right to explore, the explorer shall permanently abandon the boring. The boring shall be filled with grout to prevent contaminating materials from entering the water-bearing ground formations.

b. All materials, debris and obstructions that may interfere with sealing operations shall be removed from the boring. Liner pipe shall be removed or perforated when necessary to assure placement of an effective seal. The commissioner shall be consulted for instruction in case of abandonment of a contaminated boring or where there is a question of proper procedure.

c. All casing and screen may be salvaged except casing that has been cemented in place. The boring shall be filled with appropriate sealing materials as described in subpart D.3.g. prior to removal of the casing.

d. The top of the hole shall be filled with ten feet of cement or concrete grout to within two feet of the land surface. Casing remaining in the hole shall be cut off at least two feet below land surface. The remaining top two feet of hole

shall be filled with native topsoil.

e. When concrete, cement or heavy drilling fluid is used as a grout material, it shall be inserted in the boring through a grout pipe from the bottom of the boring upward to the surface under pressure.

f. The flow in a boring,[1] encountering flowing artesian conditions shall be confined if possible; and the boring abandoned in accordance with these rules.

g. A permanently abandoned boring shall be filled and sealed using one or more of the following substances in accordance with the geological materials penetrated.

(1) The section of a boring in unconsolidated deposits shall be filled with neat cement, concrete, or heavy drilling fluid to provide a permeability no greater than the natural condition.

(2) The section of a boring in a rock formation shall be filled with neat cement or concrete.

(3) The section of a boring in a cavernous or creviced rock (such as cavernous limestone or creviced granite, etc.) shall be filled with concrete or neat cement or alternate layers of concrete or neat cement and gravel or stone aggregate. At the top of the cavernous or creviced formation, the filling shall be completed by a layer of neat cement or concrete extending at least ten (10) feet into the above overlying formation, and finished as provided in these rules.

(4) A boring so large that the use of neat cement, concrete or heavy drilling fluid is impractical, may be sealed with other materials subject to the approval of the commissioner.

4. Abandonment report. Within 30 days of temporary or permanent abandonment, the explorer shall submit an abandonment report, as required by Minnesota Statutes, section 156A.071, subdivision 8, to the commissioner. The abandonment report shall specify whether the boring is being temporarily or permanently abandoned. A separate abandonment report shall be filed when a temporarily abandoned boring is permanently abandoned.

[1]Proper judgment shall be exercised in the feasibility and practicability of sealing a boring encountering flowing artesian conditions. In some cases the confining formation may have been so badly disturbed that sealing may only cause the flow to discharge in a less appropriate location. In other situations, the flow may have eroded so much material that the landscape has taken on the appearance of a natural spring. The sealing in this case may be impractical, if not impossible.

APPENDIX

List of Counties Where Plastic Casing May be Used

Aitkin
Becker
Beltrami
Benton
Big Stone
Cass
Chippewa
Clay
Clearwater
Cottonwood
Crow Wing
Douglas
Grant
Hubbard
Isanti
Itasca
Jackson
Kandiyohi
Kittson
Lac Qui Parle
Lake of the Woods
Lincoln
Lyon
Mahnomen
Marshall
Martin
Meeker
Mille Lacs
Morrison
Murray
Nobles
Norman
Otter Tail
Pennington
Pipestone
Polk
Pope
Red Lake
Renville
Rock
Roseau
Sherburne
Stearns
Swift
Stevens
Todd
Traverse
Wadena
Wilkin
Yellow Medicine

MINNESOTA HEALTH DEPARTMENT

Rules and Regulations

CHAPTER SEVENTEEN: MHD 231-245

MHD 231 Roller Towels. In order to prevent the spread of communicable diseases, the use of the roller towels in public places, public conveyances and public buildings, is hereby prohibited, except that continuous towels, dispensed from a cabinet which is so constructed as to provide complete separation between the clean and soiled portions of the towel on separate rolls within the cabinet, and to provide that the soiled portion is taken up on the soiled towel roll at the same rate the clean portion is withdrawn from the clean roll, shall not be within this prohibition.

MHD 232 Vending Machines

(a) **Definitions**

(1) **Vending Machine.** The term "vending machine" shall mean any self-service device offered for public use which, upon insertion of a coin, coins or token, dispenses unit servings of food or beverage, either in bulk or in package, without the necessity of replenishing the device between each vending operation. This section shall not include bottled or canned soft drinks, prepackaged confections, and similar dry, nonperishable items, ball gum, nuts and panned candies.

(2) **Machine Location.** The term "machine location" shall mean the room, enclosure, space, or area where one or more vending machines are installed and operated.

(3) **Commissary.** The term "commissary" shall include only those establishments defined in M.S.A. Chapter 157 and 144.

(4) **Food.** The term "food" shall mean any raw, cooked, or processed edible substance, beverage or ingredient used or intended for use in whole, or in part, for human consumption.

(5) **Readily Perishable Foods.** The term "readily perishable foods" shall mean any food or beverage or ingredients consisting in whole or in part of milk, milk products, eggs, meat, fish poultry, or other food capable of supporting rapid and progressive growth of microorganisms which can cause food infections or food intoxication. However, products in hermetically sealed containers processed by heat to prevent spoilage, and dehydrated, dry or powdered products so low in moisture content as to preclude development of microorganisms are excluded from the terms of this definition.

(6) **Hot Liquid, Food or Beverage.** The term "hot liquid, food or beverage" shall mean liquid, food or beverage, the temperature of which at the time of service to the consumer is at least 140° F.

(7) **Single Service Article.** The term "single service article" shall mean any utensil, container, implement, or wrapper intended for use only once in the preparation, storage, display, service or consumption of food or beverage.

(8) **Product Contact Surface.** The term "product contact surface" shall mean any surface of the vending machine, appurtenances, or containers which comes into direct contact with any food, beverage, or ingredient.

(9) **Person.** The term "person" means any individual, partnership, corporation, company, firm, institution, trustee, association, or any other public or private entity.

(10) **Employee.** The term "employee" shall mean any operator or any person employed by him who handles any food, beverage, or ingredient to be dispensed through vending machines, or who comes into contact with food contact surfaces of containers, equipment, utensils, or packaging materials, used in connection with vending machines operations, or who otherwise services or maintains one or more such machines.

(b) **Sanitation Requirements for Vending Machine Operations**

(1) **Foods, Beverages, Ingredients, Consumer Containers, Equipment Maintenance and Operations.** Foods, beverages and ingredients intended for sale through vending machines shall be obtained from sources complying with applicable local, State and Federal laws and regulations. Such products shall be clean and wholesome, free from spoilage, and shall be processed, prepared, handled and stored in such a manner as to be protected against contamination and adulteration. All product contact surfaces of containers and equipment shall be protected from contamination.

(2) **Satisfactory Compliance.** This item shall be deemed to have been satisfied when the following requirements are met:

(aa) All foods, beverages, and ingredients offered for sale through vending machines, shall be manufactured, processed, and prepared in commissaries or establishments which comply with all applicable local, State and Federal laws and regulations. Verification of products shall be secured by the State Board of Health from those agencies having jurisdiction. Inspection by the State Board of Health shall be conducted in accordance with M.S.A. Chapter 157 and 144.

(bb) All foods, beverages, and ingredients offered for sale through vending machines shall be wholesome and free from spoilage, contamination and adulteration.

(cc) All foods, beverages, and ingredients shall be stored or packaged in clean protective containers, and shall be handled, transported and vended in a sanitary manner. Wet storage of packaged products is prohibited.

(dd) Readily perishable foods offered for sale through vending machines shall be dispersed to the consumer in the individual original container or wrapper into which it was placed at the commissary or at the manufacturer's or processor's plant, or such products shall be dispensed into single service containers.

In those vending machines dispensing readily perishable foods, beverages, or ingredients in bulk, the bulk supplies of such foods, beverages, or ingredients shall be transferred only to a bulk vending machine container and appurtenances which are clean and have been subjected to an approved bactericidal process.

(ee) Readily perishable foods or ingredients within the vending machine shall be maintained at a temperature not higher than 45° F. for cold foods, or a temperature not lower than 140° F. for hot foods. Vending machines dispensing readily perishable foods shall be provided with controls which insure the maintenance of these temperatures at all times; **Provided,** that an exception may be made for the actual time required to fill or otherwise service the machine and for a maximum recovery period of 30 minutes following completion of filling or servicing operations. Such controls shall

also place the machine in an inoperative condition until serviced by the operator, in the event of power failure or other condition, which permits the food storage compartment to attain a temperature over 45° F., or below 140° F. whichever is applicable. Vending machines dispensing readily perishable food shall be provided with a thermometer which, to an accuracy of ± 2° F., indicates the air temperature of the food storage compartment.

(ff) Milk and fluid milk products offered for sale through vending machines shall be dispensed only in individual, original containers or from bulk containers into which such product was placed at the milk plant; **Provided,** that in the case of vending machines that use fluid milk products as an ingredient in hot liquid foods or beverages, such milk product may be transferred at the machine location from the individual, original container of not more than one half gallon capacity to a vending machine bulk container which is clean and has been subjected to an approved bactericidal process in accordance with paragraph (hh) of this item; **Provided further,** that in such transfer, the entire contents of the individual original container are used.

(gg) All multi-use parts of any bulk milk vending machine which come in direct contact with the milk or milk product shall be effectively cleaned and bactericidally treated at the milk plant; **Provided,** that single service dispensing tubes which receive bactericidal treatment at the fabricating plant and which are individually packaged in such manner as to preclude contamination, may be exempted from this provision. The can or other bulk milk container shall be filled only at the milk plant and shall be sealed with two seals in such manner as to make it impossible to withdraw any part of its contents without breaking one seal, and impractical to introduce any substance without breaking the other seal. The delivery tube and any milk contact parts of the dispensing device shall be attached at the milk plant, and shall be protected by a moisture-proof covering, or housed in a compartment with a moisture-tight closure, which shall not be removed until after the container is placed in the refrigerated compartment of the vending machine.

(hh) With the exception of product contact surfaces of bulk milk vending machines for which separate provisions for cleaning and bactericidal treatment are specified in paragraph (gg) of this item, all multi-use containers or parts of vending machines which come into direct contact with readily perishable foods, beverages, or ingredients shall be removed from the machine daily and shall be thoroughly cleaned and effectively subjected to an approved bactericidal process at the commissary or other approved facility; **Provided,** that the requirement for daily cleaning and bactericidal treatments may be waived for those contact surfaces which are maintained at all times at a temperature of not higher than 45° F. or at a temperature of not lower than 140° F., whichever is applicable. Such parts shall after cleaning and bactericidal treatment, be protected from contamination.

(ii) All parts of vending machines which come into direct contact with other than readily perishable foods, shall be thoroughly cleaned and subjected to bactericidal treatment by methods approved by the health authority. The frequency of such cleaning and bactericidal treatment shall be established by the health authority based upon the type of product being dispensed. A record of such cleaning and bactericidal treatment operations shall be maintained by the operator in each machine and shall be current for at least the past 30 days.

(jj) In lieu of a permanent fixed installation of sink facilities, the operator may provide portable equipment which can be moved from one location to another. Such equipment shall consist of detergents, disinfectants,

brushes, pails and/or other utility devices required to permit effective "on the spot" cleaning and disinfection with separate containers for washing and rinsing operations.

(kk) All single service containers, which receive food or beverage from machines dispensing such products in bulk, shall be purchased in sanitary cartons or packages which protect the containers from contamination, shall be stored in a clean dry place until used, and shall be handled in a sanitary manner. Such containers shall be stored in the original carton or package in which they were placed at the point of manufacture until introduced into the container magazine or dispenser of the vending machine. Single service containers stored within the vending machine shall be protected from manual contact, dust, insects, rodents and other contamination.

(c) **Machine Location.** The machine location shall be such as to minimize the potential for contamination of the product, shall be easily cleanable, and shall be kept clean.

(1) **Satisfactory Compliance.** This item shall be deemed to have been satisfied when the following requirements are met:

(aa) Each vending machine shall be located in a room, area or space which can be maintained in a clean condition and which is protected from overhead leakage from drains and piping. Each vending machine shall be so located that the space around and under the machine can be readily cleaned, and so that insect and rodent harborage is not created.

(bb) The floor area upon which vending machines are located shall be reasonably smooth, of cleanable construction, and be capable of withstanding repeated washing and scrubbing. This space and the immediate surroundings of each vending machine shall be maintained in a clean condition.

(d) **Exterior Construction and Maintenance.** The exterior construction of the vending machine shall be such as to facilitate cleaning and to prevent the entrance of insects and rodents, and the exterior of the machine shall be kept clean. Service connections shall be such as to protect against unintentional or accidental interruption of service to the machine.

(1) **Satsifactory Compliance.** This item shall be deemed to have been satisfied when the following requirements are met:

(aa) The vending machine shall be of sturdy construction and the exterior shall be so designed, fabricated, and finished as to facilitate its being kept clean, and prevent the entrance of insects and rodents.

(bb) Door and panel access openings to the product and container storage spaces of the machine shall be tight fitting, and if necessary gasketed, so as to preclude the entrance of dust, moisture, insects and rodents.

(cc) All necessary ventilation louvers or openings into vending machines shall be effectively screened against insects and rodents; **Provided,** that an exception to this provision may be made for vending machines currently in use until such time as such machines are relocated or removed from present machine location for any purposes. Such screening material shall be not less than 16 mesh to the inch or equivalent.

(dd) In all new vending machines in which a condenser unit is an integral part of the machine, such unit shall be sealed from the product and container storage spaces.

(ee) Unless the vending machine is sealed to the floor so as to prevent seepage underneath, or can be manually moved with ease, one or more

of the following provisions shall be utilized to facilitate cleaning operations: (a) the machine shall be mounted on legs six or more inches in height; or (b) the machine shall be mounted on casters or rollers; or (c) the machine shall be mounted on gliders which permit it to be easily moved.

(ff) All service connections through an exterior wall of the machine, including water, gas, electrical, and refrigeration connections, shall be grommeted or sealed to prevent the entrance of insects and rodents. All connections to such utilities shall be such as to discourage their unauthorized or unintentional disconnection.

(gg) All new vending machines shall be constructed in accordance with the specifications set forth in the "Vending Machine Evaluation Manual" by the Automatic Merchandising Health-Industry Council of the National Automatic Merchandising Association, 7 South Dearborn Street, Chicago 3, Illinois or "Standard C-1" of the National Sanitation Foundation, Ann Arbor, Michigan.

(e) **Interior Construction and Maintenance.** All interior surfaces and component parts of the vending machine shall be so designed and constructed as to permit easy cleaning, and shall be kept clean. All product contact surfaces of the machine shall be of smooth, non-toxic, corrosion resistant, and relatively non-absorbent material, and shall be capable of withstanding repeated cleaning and bactericidal treatment by normal procedures. Such surfaces shall be protected against contamination.

(1) **Satisfactory Compliance.** This item shall be deemed to have been satisfied when the following requirements are met:

(aa) The non-product contact surfaces of the interior of vending machines shall be so designed and constructed as to permit easy cleaning, and to facilitate maintenance operations. Inaccessible surfaces or areas shall be minimized.

(bb) All product contact surfaces of vending machines shall be smooth, in good repair, and free of breaks, corrosion, open seams, cracks and chipped places. The design of such surfaces shall be such as to preclude routine contact between food and V-type threaded surfaces. All joints and welds in product contact surfaces shall be smooth; and all internal angles and corners of such surfaces shall be rounded to facilitate cleaning.

(cc) All product or ingredient contact surfaces of vending machines, including containers, pipes, valves, and fittings, shall be constructed of nontoxic, corrosion resistant, and relatively non-absorbent materials, and shall be kept clean. All containers, valves, fittings, chutes, and faucets which are in contact with food shall be easily and readily removable, and so fabricated as to be easily disassembled and when disassembled, all surfaces shall be visible for inspection and cleaning. In machines of such design that product contact pipes or tubing are not readily removable, inplace cleaning of such pipes and pipe fittings may be permitted; **Provided,** (a) they are so arranged that cleaning and bactericidal solutions can be circulated throughout the fixed system, (b) such solutions will contact all interior surfaces, (c) the system is self-draining or otherwise completely evacuated, and (d) the cleaning procedures result in thorough cleaning of the equipment.

(dd) The openings into all non-pressurized containers used for the storage of vendable foods and ingredients, including water, shall be provided with covers which prevent contamination from reaching the interior of the containers. Such covers shall be designed to provide a flange which overlaps the opening, and shall be sloped to provide drainage from the cover surface. Any port opening through the cover shall be flanged upward

at least ⅜" and shall be provided with a cover which overlaps the flange. Condensation or drip deflecting aprons shall be provided on all piping, thermometers, equipment, rotary shafts and other functional parts extending into the container, unless a watertight joint is provided. Such aprons shall be considered as satisfactory covers for those openings which are in continuous use. Gaskets, if used, shall be of a material which is non-toxic, relatively stable, and relatively non-absorbent, and shall have a smooth surface. All gasket retaining grooves shall be readily cleanable.

(ee) The delivery tube or chute and orifice of all bulk food and bulk beverage vending machines shall be protected from normal manual contact, dust, insects, rodents, and other contamination. The design shall be such as to divert condensation or other moisture from the normal filling position of the container receiving the food or beverage. The vending stage of such machines shall be provided with a tight fitting, self-closing door or cover which is kept closed, except when the machine is in the process of delivering food or beverage.

(ff) The product storage compartment within vending machines dispensing packaged liquid products shall be so constructed as to be self-draining, or shall be provided with a drain outlet which permits complete draining of the compartment. All such drains shall be easily cleanable.

(gg) Opening devices which come into contact with the product or the product contact surface of the containers, shall be constructed of smooth, non-toxic, corrosion resistant, and relatively non-absorbent materials. Unless the opening device is of a single-service type, it shall be readily removable for cleaning, and shall be kept clean. Parts of multi-use opening devices which come into contact with the product or product contact surface of containers shall be reasonably protected from manual contact, dust, insects, rodents, and other contamination, and such parts shall be readily removable for cleaning and shall be kept clean.

(f) **Water Supply.** Water used in vending machines shall be from an approved source, and shall be of a safe and sanitary quality.

(1) **Satisfactory Compliance.** This item shall be deemed to have been satisfied when the following requirements are met:

(aa) All water used in vending machines shall be of a safe, sanitary quality, and from an approved source. Water used as a product ingredient shall be piped into the vending machine under pressure, and all connections and fittings shall be installed in accordance with local or State plumbing regulations. Containers for the storage of water shall be designed and maintained in the same manner as product contact surfaces. The use of bottled water is not excluded.

(bb) If used, water filters or other water conditioning devices which are a part of vending machines shall be of a type which may be disassembled for periodic cleaning or replacement of the active element. Replacement elements shall be handled in a sanitary manner.

(cc) All vending machines which dispense carbonated beverages and which are connected to a water supply system, shall be equipped with two (or a double) check valves; or an air gap; or a device to vent carbon dioxide to the atmosphere; or other devices approved by the health authority, which will provide positive protection against the entrance of carbon dioxide or carbonated water into the water supply system.

(dd) Where such check valves are used for the protection of the water supply system, a screen of not less than 100 mesh to the inch shall be installed in the water supply line immediately upstream from the check valves.

(ee) In all vending machines which dispense carbonated beverages and which are connected to a water supply system, the ingredient water contact surfaces from the check valves or other protective device downstream, including the device itself shall be of such material as to preclude the production of toxic substances which might result from interaction with carbon dioxide or carbonated water.

(g) **Waste Disposal.** All wastes shall be properly disposed of, and pending disposition shall be kept in suitable containers so as to prevent creating a nuisance.

(1) **Satisfactory Compliance.** This item shall be deemed to have been satisfied when the following requirements are met:

(aa) All trash and other waste material shall be removed from the machine location as frequently as may be necessary to prevent nuisance and unsightliness, and shall be disposed of in a manner approved by the health authority.

(bb) Self-closing, leak-proof, readily cleanable, plainly labeled and designated waste container or containers shall be provided in the vicinity of each machine or machines to receive used cups, cartons, wrappers, straws, closures and other single service items. Such waste containers shall not be located within the vending machine; **Provided,** that an exception may be made for those machines dispensing only packaged products with crown closures, in which case the closure receptacle may be located within the machine. Suitable racks or cases shall be provided for multi-use containers or bottles.

(cc) Containers shall be provided within all machines dispensing liquid products in bulk for the collection of drip, spillage, overflow, or other liquid wastes. An automatic shut-off device shall be provided which will place the vending machine out of operation before such container overflows. Containers or surfaces on which such wastes may accumulate shall be readily removable for cleaning, shall be easily cleanable, and shall be corrosion resistant. If liquid wastes from drip, spillage or overflow, which originate within the machine, are discharged into a sewerage system, the connection to the sewer shall be through an air gap.

(h) **Delivery of Foods, Ingredients, Equipment and Supplies to Machine Location.** Foods, beverages, and ingredients, and product contact surfaces of containers, equipment and supplies, shall be protected from contamination while in transit from commissary as defined in (a) 3. to machine location. Readily perishable foods and beverages while in transit from such commissary shall be maintained at a temperature not higher than 45° F., or not lower than 140° F.

(1) **Satisfactory Compliance.** This item shall be deemed to have been satisfied when the following requirements are met:

(aa) Food, beverages, or ingredients while in transit to vending machine locations shall be protected from the elements, dirt, dust, insects, rodents, and other contaminations. Similar protection shall be provided for single-service containers, and for the product contact surfaces of equipment, containers, and devices in transit to machine locations.

(bb) Readily perishable foods or beverages, while in transit from the commissary to vending machine locations shall be maintained at a temperature of not more than 45° F., or at a temperature of not less than 140° F.

(i) **Personnel — Cleanliness.** Employees shall keep their hands clean, and shall wear clean outer garments while engaged in handling foods or beverages, or product contact surfaces of utensils or equipment.

(1) **Satisfactory Compliance.** This item shall be deemed to have been satisfied when the following requirements are met:

(aa) Employees shall clean their hands immediately prior to engaging in any vending machine servicing operation which may bring them into contact with foods, beverages, or ingredients, or with product contact surfaces of utensils, containers, or equipment. While engaged in such servicing operations, employees shall wear clean outer garments.

MHD 233 Enclosed Sports Arenas

(a) **Application**

This regulation applies to:

(1) owners/operators of ice arenas in which internal combustion engine-powered ice resurfacing machines are used; and

(2) owners/operators of enclosed sports arenas in which other internal combustion engine-powered vehicles or equipment are used for racing, competition or for demonstration including, but not limited to, midget cars, motorcycles and snowmobiles.

(b) **Definitions**

For the purposes of this regulation, the following terms shall have the meanings given them unless the context clearly indicates otherwise.

(1) "Board" means the State Board of Health or the Minnesota Department of Health, whichever is appropriate.

(2) "Person" means any natural person, corporation, partnership or other business association, and includes the State and its political subdivisions.

(3) "Resurfacing machine" means internal combustion engine-powered ice resurfacing machine.

(4) "Certificate" means a Certificate of Approval issued by the Board pursuant to this regulation.

(5) "Applicant" means a person who applies for a Certificate pursuant to this regulation.

(6) "Certificate holder" means a person to whom a Certificate is issued pursuant to this regulation.

(7) "Ice arena" means any building with a roof and a majority of the sides closed which contains an ice rink.

(8) "Enclosed sports arena" means any building with a roof and a majority of the sides closed in which sporting events and demonstrations occur.

(c) **Resurfacing Machines**

(1) After July 1, 1973, no person shall own or operate an ice arena in which a resurfacing machine is used unless a Certificate is issued by the Board. The Certificate must be displayed in a conspicuous place in the ice arena. If all conditions specified in this regulation are met, the Board shall issue a Certificate.

(2) Applications for a Certificate must be submitted on forms prescribed by the Board. The applicant must be the owner/operator of the arena. An application shall be submitted:

(aa) Prior to July 1, 1973, by all owners/operators of existing ice arenas.

(bb) Prior to commencement of operation by all owners/operators of new ice arenas, and

(cc) Prior to subsequent change of the approved method of maintenance of required air quality conditions or the replacement or modification of the resurfacing machine.[1]

(3) The applicant must document that acceptable air quality conditions can be maintained. Such conditions are:

(aa) One-hour average air concentrations of not more than 30 parts of carbon monoxide per million parts of air by volume (30 ppm), and

(bb) One-hour average air concentrations of not more than 0.5 ppm of nitrogen dioxide.

The Board may refuse to issue a Certificate if the applicant's documentation is insufficient to demonstrate that acceptable air quality conditions will be maintained during all hours of operation.

(4) Acceptable methods of maintenance of the required air quality conditions are:

(aa) Proper ventilation;

(bb) Proper mechanical adjustment of the internal combustion engine; and

(cc) Any other method acceptable to the Board. Such acceptance shall be based upon a reasonable demonstration by the certificate applicant that such alternate method is adequate to maintain the required air quality conditions.

(5) When (c) (4) (bb) is proposed as a method of control, the name of the mechanic(s), his qualifications, and equipment proposed to be used must be included in the request.

(6) Air quality conditions shall be measured at least once per week. The measurement shall be made at board height at the red line of the ice 20 minutes after completion of resurfacing. The measurement shall be made each week at a time of maximum use of the resurfacing machine. This measurement shall be accepted as representing the one-hour average air concentration. A record of measurement findings shall be kept and made available to the Board upon request. Such additional measurements shall be made as considered necessary by the Board.

(7) Acceptable methods of measuring air quality conditions are:

(aa) Gas detector tubes certified by the National Institute of Occupational Safety and Health.

(bb) Any other method acceptable to the Board. The burden is on the certificate applicant to prove that such methods are as accurate and reliable as that specified in (c) (7) (aa) above.

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[1]Modification of the resurfacing machine does not include routine maintenance or tuneups.

(8) When one-hour averages of more than 30 ppm but less than 125 ppm of carbon monoxide and/or more than 0.5 ppm but less than 2 ppm of nitrogen dioxide exist in the arena, immediate corrective action must be taken.[2] Subsequent tests shall be conducted to confirm the effectiveness of such action.

(9) Whenever the conditions of paragraph (c) (8) occur, a report must be submitted to the Board within five (5) working days explaining why the methods of air quality control had failed, what immediate corrective action was taken, and what action is planned to prevent recurrence of exceeding the air quality standards.

(10) One-hour average air concentrations of more than 125 ppm of carbon monoxide and/or more than 2ppm of nitrogen dioxide constitute an imminent, substantial danger to the health of persons. The arena shall be closed immediately and all people evacuated. The arena may reopen when the air quality standards of (c) (3) are obtained and can be maintained. The same procedure prescribed in (c) (9) above shall be followed.

(d) **Other Internal Combustion Engines**

(1) After July 1, 1973, no person who owns or operates an enclosed sports arena open to the general public shall permit the operation of other internal combustion engine-powered equipment or vehicles for racing, competition, demonstration, or other purposes unless a Certificate is issued by the Board. If all conditions specified in this regulation are met, the Board shall issue a Certificate. The Certificate must be displayed in a conspicuous place in the arena.

(2) Applications for a Certificate must be submitted at least 45 days prior to the event and upon forms prescribed by the Board. The application must be submitted by both the owner/operator of the arena and the sponsor of the activities which involve use of internal combustion engines.

(3) The provisions of paragraphs (c) (3)-(5), (7), (8) and (10) above shall also apply. Air quality conditions shall be measured and reports made as directed by the Board depending upon the specific type of activity to be conducted in the building.

(e) **Revocation or Suspension of Approval; Reinstatement**

(1) The Board may suspend or revoke the approval granted pursuant to paragraphs (c) (1) and (d) (1) upon the finding of violations of the provisions of these rules and regulations. All proceedings shall be in accordance with the Minnesota Administrative Procedures Act, Minn. Stat. Chap. 15.

(2) A suspended or revoked Certificate of Approval shall be returned to the Board.

(3) Reinstatement shall be in accordance with the suspension or revocation order and upon an adequate showing that the grounds for suspension or revocation shall not recur.

MHD 234-245 Reserved for future use.

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[2]This may include an immediate increase in the ventilation rate and/or an increase in the interval between resurfacing operations.

4427-4441

MHD 234 Fees for examinations, licenses and copying records; license expiration dates.

(a) Ambulance services.

(1) License fees. Each application for a license to operate an ambulance service, as defined in Minnesota Statutes, sections 144.801 to 144.806, shall be accompanied by a basic fee of $35 plus a $10 fee for each ambulance operated by the applicant. Newly established ambulance services whose original license is issued for less than a full year shall pay the full fee. The licensee shall pay an additional $10 fee for each ambulance added to the ambulance service after the license has been issued.

(2) Expiration date. Ambulance services shall be licensed annually from July 1 (or from the date the original license is issued) until June 30.

(b) Effective date. The provisions prescribed in regulation MHD 234 shall apply to all licenses effective on or after January 1, 1975.

(c) Fees for record copying. Unless otherwise provided by law, the charge per copy of each page of board or department records, files, or other official documents shall be as follows:

(1) Fee for first copy of first page, $.50.

(2) Fee for each additional page requested at the same time, $.05.

1.235-315

Chapter One: Rules

7 MCAR S 1.235 Definitions.

A. Application. The following definitions apply to 7 MCAR SS 1.235-1.315, unless the context clearly requires another meaning.

B. Allocation. "Allocation" means the assignment of a position to an appropriate class on the basis of kind, difficulty, and responsibility of the work performed in the position.

C. Appointing authority. "Appointing authority" means the county board of commissioners or other officer or board authorized by statute or lawfully delegated authority to make appointments to positions under the merit system for public health.

D. Change in allocation. "Change in allocation" means the reclassification of a position resulting from significant sudden changes imposed by the appointing authority which affects the duties and responsibilities of a position.

E. Class. "Class" means one or more positions sufficiently similar in the duties performed, degree of supervision exercised or required, requirements of training, experience, or skill, and such other characteristics that the same title, the same tests of fitness, and the same schedule of compensation may be applied with equity to all the positions.

F. Classified service. "Classified service" means all positions covered by these rules as provided in 7 MCAR S 1.236 E.

G. Commissioner. "Commissioner" or "commissioner of health" means the administrative head of the Department of Health.

H. Council. "Council" means the merit system council.

I. County register. "County register" means the subregister established for a county from a statewide competitive or promotional register containing the names of persons who have legal residence in the county or, in the event of a promotional examination, who are employed by the local agency.

J. Day. "Day" means calendar day except where otherwise specified in the specific rule.

K. Demotion. "Demotion" means a change by an employee from a position in one class to a position in another class with less responsible duties and a lower salary range.

L. Desirable qualifications. "Desirable qualifications" means the requirements of training and experience desired but not necessary to qualify for a given class of positions in the

classification plan.

M. Disabled veteran. "Disabled veteran" means a veteran who is rated or certified as disabled in accordance with the provisions of Minnesota Statutes, section 43A.11.

N. Dismissal. "Dismissal" means the termination of employment for cause.

O. Eligible person. "Eligible" or "eligible person" means any person whose name is on a register.

P. Emergency appointment. "Emergency appointment" means an appointment required by a state of emergency as described in 7 MCAR S 1.245 C.

Q. Employee. "Employee" means any person employed by a local public health agency in a position covered by 7 MCAR S 1.236 E. who is paid a salary or wage.

R. Exclusive representative. "Exclusive representative" has the meaning given in Minnesota Statutes, section 179.63, subdivision 6.

S. Facsimile. "Facsimile" means a replica, e.g., facsimile of 7 MCAR S 1.315 is a chart showing each of the salary rates adopted by an agency divided into monthly and hourly rates and either daily rates and bi-weekly or four-week rates if paid on this basis or the daily rate based on the number of working days in the month. The number of working days in a month is 20, 21, 22 or 23 days if an employee is paid on a monthly basis.

T. Intermittent employee. "Intermittent employee" means an employee who works whenever needed or on a schedule which cannot be predicted in advance.

U. General adjustment. "General adjustment" means the merit system recommended salary adjustment based on a salary survey or a review of consumer price index changes under 7 MCAR S 1.2392.

V. Layoff. "Layoff" means the termination of employment because of abolishment of a position, lack of funds, shortage of work, or other reason beyond the control of the employee.

W. Layoff list. "Layoff list" means a list of permanent or probationary employees who have been laid off by reason of abolishment of their positions, lack of funds, shortage of work, or other reason beyond the control of the employees.

X. Limited term appointment. "Limited term appointment" means an appointment from a register for a period not to exceed six months as described in 7 MCAR S 1.245.

Y. Local agency. "Local agency" means the organization created to carry out the functions and programs of the jurisdiction's public health responsibilities.

Z. Local public health authority. "Local public health authority" means the governing board, commission, or council under whose authority a county, town, village, or borough establishes a local public health agency.

AA. Merit increase. "Merit increase" means an increase given to an employee based on meritorious job performance.

BB. Military leave. "Military leave" means a leave of absence granted by state law to employees entering active duty in the armed forces of the State of Minnesota or the United States of America.

CC. Minimum qualifications. "Minimum qualifications" means the requirements of training and experience necessary to qualify for a given class.

DD. Original appointment. "Original appointment" means a regular appointment of an individual to a local public health staff through selection from an open-competitive register. It is the beginning point of the probationary period, sometimes referred to as a probationary appointment.

EE. Permanent employee. "Permanent employee" means an employee who has successfully completed a probationary period or who has attained permanent status upon the installation of the merit system.

FF. Position. "Position" means a group of current duties and responsibilities assigned or delegated by competent authority requiring the full or part-time employment of one person.

GG. Probationary employee. "Probationary employee" means an employee who is serving a probationary period in a class to which the employee has been appointed from an eligible list.

HH. Probationary period. "Probationary period" means the first six-month working test period during which a new appointee is required to demonstrate fitness for the position to which he is appointed by actual performance of the duties of the position.

II. Promotion. "Promotion" means a change of an employee from a position in one class to a position in another class with more responsible duties and a higher salary range.

JJ. Provisional appointment. "Provisional appointment" means an appointment of a person not on a register, to fill a position pending the establishment of a register for that position in accordance with the provisions of 7 MCAR S 1.245.

KK. Reallocation. "Reallocation" means the reclassification of a position resulting from significant changes that occur gradually over a period of time in the duties and responsibilities of the position.

LL. Reclassification. "Reclassification" means a reallocation or change in the allocation of a position to a higher, lower, or equivalent class.

MM. Re-employment list. "Re-employment list" means a list of former permanent or probationary employees who have been laid off or who have voluntarily separated from merit system employment in good standing and whose applications for re-employment in the merit system are submitted within one year of separation.

NN. Register. "Register" means an officially established list of eligibles for a particular class.

OO. Resignation. "Resignation" means the termination of employment made at the request of the employee.

PP. Salary adjustment. "Salary adjustment" means an increase given to employees due to cost-of-living factors, going rates for similar jobs, labor market conditions, or a combination of these reasons.

QQ. Salary increase. "Salary increase" means an increase granted to an employee on the basis of working out of class or due to unusual employment conditions and not based on job performance, cost of living factors, going rates for similar jobs, labor market conditions, or a combination of these reasons.

RR. State agency. "State agency" means the Department of Health, which is responsible for the administration and supervision of the public health programs in the State of Minnesota.

SS. Supervisor. "Supervisor" means the merit system supervisor.

TT. Suspension. "Suspension" means an enforced leave of absence with or without pay, for disciplinary purposes or pending investigation of charges made against an employee.

UU. Temporary employee. "Temporary employee" means an employee who has been appointed to a position from an eligible register but the appointment has a definite ending date.

VV. Transfer. "Transfer" means a change from one position to another in the same class or in another class having the same salary range and usually involving the performance of similar duties and requiring essentially the same qualifications of training and experience.

WW. Veteran. "Veteran" means a person defined as a veteran by Minnesota Statutes, section 197.447.

XX. Veterans' preference. "Veterans' preference" means the preference granted to veterans by Minnesota Statutes, section 43A.11.

1.235-315

7 MCAR S 1.236 Statement of policy and means of effecting policy.

A. Objectives. The ultimate purpose in effecting the merit principle of personnel administration of the local public health agencies is to promote economy and effective service. It is the declared aim of the Department of Health to put into full force and effect the merit principles of personnel administration. To this end the council, the supervisor, and the commissioner shall work toward the objectives of:

1. The proper classification of positions in order that positions essentially alike in duties and responsibilities shall be treated alike and that positions not so alike shall be treated with due consideration of the nature and extent of the differences between them.

2. Fair and equal opportunity to all qualified citizens of the United States to compete for positions and promotions under the jurisdiction of the merit system solely on the basis of merit and fitness as ascertained through practical examination.

3. An attractive career service in public health employment within the State of Minnesota.

B. Adoption of the rules. Rules 7 MCAR SS 1.235-1.315 have been adopted to accomplish the objectives stated in A. The rules have been promulgated by the commissioner in accordance with Minnesota Statutes, section 144.071, and in compliance with the provisions of Minnesota Statutes, chapter 15. Rules 7 MCAR SS 1.235-1.315 of the public health merit system have been adopted in accordance with Minnesota Statutes, chapter 15 and have the force and effect of law. Merit system manual IV-5000-6530, available from the office of the Minnesota merit system, of the public health merit system provides instructions to appointing authorities necessary to the implementation of the rules. These instructions from the manual are accorded similar status under these rules.

C. Amendment of the rules. If and when it appears desirable in the interests of good administration, the commissioner with the advice and recommendations of the council, may amend these rules after compliance with the provisions of Minnesota Statutes, chapter 15. For this purpose, the commissioner is authorized to call and hold public hearings for the purpose of amending these rules as well as to perform any and all acts incidental thereto, including but without being limited thereto, signing an order for hearing and notice of hearing as well as acting as presiding officer or appointing a presiding officer for the hearing. Amendments of the rules specified in B. shall be considered as amendments of these rules.

D. Editing of the rules. Before issuing or reissuing sections of the merit system rules, the supervisor may make the following, and only the following, changes. Such changes shall

not be deemed to be amendments to the rules, and each shall be reported to the commissioner before release of the material. Any changes not approved by the commissioner shall be excluded from the material to be released. The supervisor may make:

1. Changes to correct spelling or typographical errors;

2. Changes to correct grammatical construction, but the changes shall not alter the interpretation, intent, or purpose of the rule;

3. Changes to correct exact quotations of statutes which are clearly identified as such by enclosure in quotation marks and by citation of statutory reference when enactment of statutory amendments makes that action necessary to make the quotations true and accurate; and

4. Changes to renumber rules or rule references as necessary due to the adoption of new rules or the abolition of existing rules.

E. Positions covered. Rules 7 MCAR SS 1.235-1.315 shall apply to every position created under the jurisdiction of the local public health authority for which any federal personnel funds are paid to the local jurisdiction, except any local public health officer appointed pursuant to Minnesota Statutes, chapter 145, and except the position of the director of a comprehensive health department established pursuant to Laws of 1969, chapter 235.

F. Political activity.

1. No employee shall use his or her official authority or influence for the purpose of interfering with or affecting the result of an election or nomination for office.

2. No employee shall directly coerce, attempt to coerce, command, or advise a merit system employee to pay, lend, or contribute anything of value to a party, committee, organization, agency, or person for political purposes.

3. No employee shall be a candidate in a partisan election for any public office which is obtained through a partisan election. Candidacy for political party office is not prohibited.

4. An employee continues to be covered by the Federal Hatch Act restrictions including all the restrictions listed in 7 MCAR S 1.236 F.1.-F.5. while on annual leave, sick leave, leave without pay or administrative leave. Any employee shall resign from the service upon filing as a candidate for public office, except as provided in 7 MCAR S 1.236 F.5.

5. Any employee may be a candidate in nonpartisan elections. These are elections in which none of the candidates is to be nominated or elected as representing a political party

whose candidates for presidential elector received votes in the last presidential election.

6. All prohibitions of political activity provided in the Federal Hatch Act apply to employees under the merit system.

G. Prohibition against discrimination; generally. No person shall be discriminated for or against in such matters as recruitment, examination, appointment, tenure, compensation, classification, or promotion, or in such matters as conditions, facilities, or privileges of employment because of race, color, creed, religion, national origin, physical disability where such disability does not interfere with the completion of assigned duties, age, marital status, status with regard to public assistance, or sex. Any person aggrieved by a violation of these prohibitions may file a complaint under the provisions of Minnesota Statutes, chapter 363.

H. Political opinions; discrimination. No person shall be discriminated for or against as provided in G. because of his political opinions or affiliations within the limitations imposed by F., nor shall discrimination occur because of any other non-merit factor. Any person aggrieved by a violation of a prohibited discrimination that does not come within the jurisdiction of Minnesota Statutes, chapter 363 may file a complaint with the supervisor setting forth the basis of his belief that an act or threat or promise of an act of discrimination occurred and identifying by name and position the person alleged to have committed such act or threat or promise of an act of discrimination.

I. Investigations of discrimination. The supervisor or a designated representative shall conduct an investigation of the alleged discrimination and shall report the complaint and the findings of the investigation to the council at its next meeting. The complainant shall have the right to present his complaint personally to the council. The council shall order any further investigation or hearing as may be warranted before making its decision. If the council finds that discrimination has occurred, it shall take whatever action it deems warranted and within its authority to remedy the effect of any act or threat or promise of an act of discrimination and to prevent future discrimination.

J. Violations.

1. Violations of any of the provisions of 7 MCAR SS 1.235-1.315 by an employee in the service shall be considered sufficient cause for the dismissal of that person.

2. Violations of 7 MCAR SS 1.235-1.315 by an appointing authority shall be brought to the attention of the appointing authority by the supervisor. The notice shall include remedial measures necessary to correct past violations and to ensure future compliance. If the appointing authority refuses to take corrective action, the supervisor shall inform the commissioner

who shall deny or suspend payment of all or part of state and federal administrative reimbursement funds, suspend services from the merit system, or require that other corrective action be taken.

3. An appointing authority may appeal any denial or suspension of administrative reimbursement, or suspension of services, to the merit system council which, after a review of the record available to the commissioner, shall make its recommendation to the commissioner. The commissioner's decision shall be final.

1.235-315

7 MCAR S 1.237 Organization.

A. Duties and powers of commissioner. The commissioner shall exercise the duties and powers specified in Minnesota Statutes, section 144.071.

B. Affected employees. The authority to require methods relating to the establishment and maintenance of personnel standards on a merit basis shall extend to all employees of local public health authorities with civil service systems except as provided in 7 MCAR S 1.236 E. Rules 7 MCAR SS 1.235-1.315 shall be applicable to these employees until the local jurisdiction adopts and maintains rules affecting classification and compensation, examination and certification of eligibles, and other personnel standards that substantially conform to 7 MCAR SS 1.235-1.315 and are so certified as conforming by the supervisor.

C. Public health merit system council.

1. The public health merit system council shall be the council appointed by the governor to serve as the council for the county welfare merit system.

2. It shall be the duty of the council within the scope of 7 MCAR SS 1.235-1.315:

a. To establish general policies for the administration of merit examinations and the hearing of personnel appeals as provided in 7 MCAR S 1.2541;

b. To hear such appeals or to appoint an appeal board of three members or to appoint a referee to hear such appeals on its behalf;

c. To consult with the supervisor in formulating procedures for the purpose of insuring conformity with the rules and the policies of the council;

d. To review the classification and compensation plans in relation to the merit system program of recruitment and examination and to consult with the commissioner on their adoption and revision;

e. To make recommendations to the commissioner about internal personnel policies to insure conformity with 7 MCAR SS 1.235-1.315;

f. To promote public understanding of the purposes, policies, and practices of the merit system;

g. To review and make recommendations to the commissioner about amendments to the rules of the public health merit system.

3. Meetings of the council shall be held as often as necessary and practicable upon call of the chairman, of the supervisor, or of the commissioner. The commissioner shall have the right to be represented at all meetings of the council, but such representation shall be without voting power. The council shall adopt procedures for the conduct of its activities.

4. Each member of the council shall be paid $50 per regular meeting, but no member shall be paid more than $600 in any one calendar year for regular meetings. Each member of the council shall be paid $50 per day when serving on an appeal or hearing board. In addition members whose residence is in excess of 50 miles of the place of meeting shall be compensated for travel expenses and, in an instance in which the meeting is scheduled for more than one day or when the hour of the beginning of the meeting, or the close of the meeting, does not allow coming from or returning to the place of residence within a reasonable time, for lodging and meals.

D. Public health merit system supervisor.

1. The public health merit system supervisor shall be the duly appointed supervisor of the Minnesota merit system.

2. In conformance with 7 MCAR SS 1.235-1.315, it shall be the duty of the supervisor to:

a. Develop and put into effect policies and procedures for the administration of the merit system as they relate to the preparation, administration, and scoring of examinations; the preparation, custody, and maintenance of registers of eligibles; the determination of availability of eligibles for appointment; the certification for appointments; and the determination of the adequacy of existing registers;

b. Develop and administer the classification and compensation plans and to consult with the commissioner and the council on the adoption and revision of such plans as they relate to the merit system program of recruitment and examination;

c. Maintain personnel records of all persons employed under the merit system and records of all personnel action;

d. Promote public understanding of the purposes,

policies, and practices of the merit system and to develop and put into effect procedures for carrying out the personnel administration of the rules of the merit system;

e. Appoint a staff, including technicians, clerks, stenographers, and such other permanent or temporary employees as are necessary to carry out the provisions of 7 MCAR SS 1.235-1.315. The employees shall be chosen in accordance with the rules of the Minnesota Department of Employee Relations;

f. Review, develop, and propose amendments to existing merit system rules for consideration and recommendation by the merit system council and in accordance with Minnesota Statutes, chapter 15; and

g. Perform other duties prescribed by 7 MCAR SS 1.235-1.315 or by the council.

1.235-315

7 MCAR S 1.238 Classification plan.

A. Presentation and adoption. The commissioner of health shall formally adopt a comprehensive classification plan for all positions covered by 7 MCAR SS 1.235-1.315 which shall be published as part of the public health merit system manual. The plan shall be based on investigation and analysis of the duties and responsibilities of positions and shall be so developed and maintained that all positions that are substantially similar in the kind, difficulty, and responsibility of work are included in the same class. Class titles established by the classification plan shall be used in all personnel and financial records of the Minnesota Department of Health and the local public health agencies, as well as in all examination procedures.

Any subsequent amendment shall be submitted to the council for review and recommendation in relation to the merit system program of recruitment and examination.

B. Allocation of positions. Every position under the public health merit system as provided in 7 MCAR S 1.236 E. shall be allocated by the supervisor to one of the appropriate classes established in the classification plan. No person shall be appointed or promoted to any position until it has been properly classified as herein provided. As additional classes are established or existing classes are abolished or changed, such necessary allocation or reallocation shall be made by the supervisor to new or existing classes as necessary.

C. Reclassification of positions. Whenever a position appears to be improperly allocated, the supervisor shall, upon his own initiative, or upon the request of an appointing authority or a permanent employee, investigate the duties of the position. Following the investigation the supervisor shall allocate the position to its proper class and notify the affected parties.

D. Incumbents of reclassified positions.

1. When a position is reclassified and it is determined to be a reallocation, the supervisor shall authorize an appointing authority to promote the incumbent of the reallocated position. An employee so promoted shall serve a probationary period in the higher class.

2. When a position in one class is reclassified because of a change in allocation, the incumbent shall not be deemed eligible to continue in the position unless he is eligible for original appointment, promotion, transfer, or demotion to the new class of positions. If he is ineligible to continue in such a position, he may be transferred, promoted, or demoted, by appropriate action of the appointing authority in accordance with such provisions of 7 MCAR SS 1.235-1.315 as may be deemed to be applicable. If ineligibility of a permanent or probationary incumbent of such a reclassified position arises from the existence of an eligible register established from an examination that the incumbent did not take, he may be permitted to take the same or equivalent examination from which the existing register was established, provided that his name is not on the existing register; he did not take and fail the examination from which the existing register was established; and he was eligible to take that examination at the time it was given. The names of successful candidates examined under this rule shall be placed on the existing register in accordance with the score attained. In any case in which the incumbent is ineligible to continue in the position and he is not transferred, promoted, or demoted, the provisions of these rules about layoff shall apply. A transfer, promotion, demotion, or layoff in accordance with 7 MCAR SS 1.235-1.315 must occur within 60 days of the notification of reclassification of the position.

3. The commissioner of health may authorize the reclassification of a position from one classification to a higher designated classification when the duties to be performed in the higher class are not significantly different from those performed in the lower class and where both classifications are in the same occupational grouping. Incumbents of positions so reclassified must meet the specified minimum qualifications for the higher designated class and promotions shall be made following a non-competitive promotional examination which shall include an evaluation by the appointing authority of the incumbents' ability to perform in the higher class.

4. If the incumbent examined in accordance with the above procedure successfully completes the examination process, notwithstanding the provisions of 7 MCAR S 1.2442 B., the supervisor may certify only the name of the eligible incumbent to the appointing authority. Notwithstanding the provisions of 7 MCAR S 1.246 B.1., an employee appointed under the provisions of this rule will not be required to serve a new probationary period in the higher classification.

E. Class specifications. The classification plan shall consist of written specifications for each class. Each specification shall include an appropriate class title, a description of the duties and responsibilities of the work, and the requirements of training, experience, and other qualifications.

F. Revision of plan. Existing classes may be abolished or changed and new classes added in the same manner as outlined in A.

7 MCAR S 1.239 Preparation of compensation plan.

A. Commissioner's adoption. The commissioner shall formally adopt and make effective a comprehensive compensation plan, as provided in 7 MCAR S 1.314, for all classes of positions which shall apply to all agencies covered by the merit system except as otherwise negotiated for employees in a bargaining unit in an agency where there is an exclusive representative or in those instances where the requirements of 7 MCAR S 1.2395 B.3. have been satisfied. The plan shall include salary ranges for the various classes, with the salary of each class consistent with the duties and responsibilities outlined in the class specifications. Minimum, intervening, and maximum rates of pay for each class shall be established to provide for salary advancement without change of duty, in recognition of meritorious service. The advice and suggestions of appointing authorities, prevailing salary rates for similar and competing types of employment in business and government, and other relevant factors shall be taken into consideration in developing the salary ranges.

B. Review by council. The proposed compensation plan and any amendments shall be submitted to the council for review and recommendation. After review and recommendation by the council and after compliance with Minnesota Statutes, chapter 15, the commissioner shall formally adopt the compensation plan. That plan shall be the official salary schedule of the Minnesota merit system on the date specified in the plan.

C. Classes of positions in plan. The comprehensive compensation plan shall provide for separate alphabetically designated salary plans for different occupational groupings of classes reflecting progressively higher salary ranges except for those classes for which a single range of rates is found to be appropriate. Plans shall be established as provided in 7 MCAR S 1.314 as follows:

1. Professional and administrative: A, B, and C;

2. Health services support: A, B, and C;

3. Clerical: A, B, and C; and

4. Building maintenance: A and B.

1.235-315

7 MCAR S 1.2391 Selection of salary ranges by local public health authority.

A. Adoption of an official plan. Appointing authorities shall choose a salary plan by resolution for each occupational grouping of classes from among the plans listed in 7 MCAR S 1.239 C. unless the provisions of E. apply or if salaries are negotiated with an exclusive representative. The plans adopted shall be the official plans for the appointing authority until amended.

B. Selection of rates. By resolution, each appointing authority shall designate the minimum, intervening, and maximum salary rates to be paid for each class of positions used by the appointing authority. The rates must be within the minimum and maximum salaries for the classes in the adopted plan. The appointing authority shall promptly notify the supervisor about the rates selected.

C. Plan amendments. By resolution, the appointing authority may amend its official plan for one or more occupational groupings of classes. The appointing authority shall promptly notify the supervisor about official action taken to amend its plan.

D. Incumbents. Salary rates for incumbents of positions shall be established in accordance with 7 MCAR S 1.2395 B.-C. on the basis of the plan adopted as provided in 7 MCAR S 1.239 C.

E. Nonrepresented employees. In agencies with an exclusive representative, the appointing authority may pay confidential, supervisory, and other personnel not covered by an exclusive representative who are in the same class as employees who have an exclusive representative, the same rate of pay and salary ranges as negotiated for the class under 7 MCAR S 1.2393. In no case would this rule allow the appointing authority to reduce the rate of pay of confidential, supervisory, or other excluded employees.

7 MCAR S 1.2392 Adjustment of the official salary schedule of the Minnesota merit system.

A. In general. The compensation plan provided in 7 MCAR S 1.314 shall be adjusted for changes in the level of salary rates in business and government for similar and competing types of employment and for changes in the Twin City Consumer Price Index.

B. Review of labor market conditions. In every odd-numbered year the supervisor shall conduct a review of the changes in the level of salary rates in the labor market since the time of the most recent adjustment of the compensation plan. This review shall utilize the data and findings of other labor market surveys and shall, to the extent possible, be based upon similar surveys and data used in previous reviews. The supervisor shall

complete this study and report the findings to the commissioner of health on or before July 31 of each odd-numbered year.

C. Plan amendments. From the results of this study, the supervisor shall propose amendments to the compensation plan in accordance with Minnesota Statutes, chapter 15 and 7 MCAR S 1.239. An amended compensation plan shall not be effective until the next succeeding January 1, or for those agencies on a bi-weekly or four week payroll period on the beginning date of the first payroll period following the next succeeding January 1.

D. Review of consumer price index. In every even-numbered year, the supervisor shall conduct a review of the changes in the consumer price index for urban wage earners and clerical workers for Minneapolis-St. Paul, as published by the Bureau of Labor Statistics, new series index (1967=100). The supervisor shall recommend that all rates of pay in the professional and administrative, health services support personnel, clerical, and building maintenance salary schedules be adjusted by an amount equal to 80 percent of the increase between the consumer price index for June of the current year and the consumer price index for June of the preceding year. This amount shall be rounded to the nearest tenth of a percent and may not exceed nine percent. The new recommended monthly salary rates shall be rounded to the nearest whole dollar. The same percentage increase recommended by the supervisor for all rates of pay shall be recommended as a general salary adjustment for all incumbents of positions in the professional and administrative, health services support personnel, clerical, and building maintenance salary schedules. An amended compensation plan resulting from these recommendations shall not be effective until the next succeeding January 1, or for those agencies on a bi-weekly or four-week payroll period on the beginning of the first payroll period following the next succeeding January 1.

E. Plan adjustments. The appointing authority may implement an adjusted compensation plan by adjusting the salaries of the employees to the same numerically designated salary rate on the adjusted plan that the employees were paid under the former plan.

1.235-315

7 MCAR S 1.2393 Negotiation of salary schedule.

A. Role of exclusive representative. In agencies where employees have elected an exclusive representative the appointing authority and the exclusive representative may negotiate their own salary schedules for employees in the bargaining unit by class, with the salary for each consistent with the functions outlined in the class specifications. Minimum, intervening, and maximum rates of pay for each shall be established to provide for steps in salary advancement without change of duty in the recognition of meritorious service. When a new classification not previously used in the agency is established in the middle of the contract period and that class falls within the bargaining unit and no provision exists in the contract for establishing those salaries, the appointing

authority and the exclusive representative shall negotiate a salary schedule for the new classification within 60 days of the date of establishment of the classification.

B. Filing. A complete copy of the adopted salary schedule must be filed with the supervisor within ten days after the signing of the contract or agreement. If the contract or agreement calls for succeeding increases in the salary schedule which change the original minimum and maximum salaries or intervening steps a new adjusted salary schedule must be filed with the supervisor within ten days after the effective date of any such succeeding adjustment.

7 MCAR S 1.2394 Administration of the plan; minimum rates of pay. In agencies without an exclusive representative or where the collective bargaining agreement is silent regarding initial salaries, the entrance salary for any new employee shall normally be at the minimum rate of pay for the class to which the appointment is made. Requests to appoint above the minimum rate of pay may be made based on the exceptional qualifications of the candidate or the unavailability of candidates at the minimum rate, giving consideration to the salaries of current employees in the same classification. All candidates with similar exceptional qualifications must be offered the same rate of pay which shall be one of the established steps in the agency's adopted salary range for the class to which the appointment is made. A request to appoint above the minimum rate of pay must be submitted in writing by the appointing authority to the supervisor for prior approval and must include the reasons why the request is being made.

7 MCAR S 1.2395 Salary adjustments and increases.

A. Availability of funds. Before salary increases and adjustments are made in accordance with related rules or in accordance with a negotiated collective bargaining agreement, the local public health authority shall have in its records and carry in its minutes a definite statement that funds for this purpose are available.

B. Plan requirements. In agencies where there is no exclusive representative or collective bargaining agreement, negotiated adjustments in the rates of pay of incumbents of positions, in order to conform to a newly adopted or currently effective compensation plan, shall be in accordance with 1.-8.

1. If the rate of pay of an employee is below the minimum of the range prescribed for the employee's classification on the merit system compensation plan adopted by the local public health authority, the rate shall be adjusted to that minimum.

2. If the rate of pay of an employee is at or above the new minimum salary adopted for the employee's class, the employee may receive the general merit system adopted adjustment

and, if the employee's class was adjusted to a greater extent than the general adopted adjustment, the employee may receive the additional adjustment as provided in 7 MCAR S 1.2392 D. as long as that additional adjustment does not place the employee's salary over the new maximum adopted salary for the class.

3. If a local public health authority determines the general merit system adopted adjustment is inappropriate for its employees, the authority may grant a different adjustment. The authority shall file with the supervisor the new salary steps by class and a salary conversion table as provided for in 7 MCAR S 1.315. The adjustments shall at least place employees at the minimum salary and not over the maximum salary for their classes, on the salary plan adopted by the authority.

4. Employees at the maximum salary for their class may be granted salary adjustments over the maximum salary prescribed for their class only if that merit system adjustment is adopted and only in the amount adopted for incumbents of that class.

5. If the rate of pay of an employee is higher than the maximum of the range prescribed for the employee's class of positions, the rate may remain the same as long as the employee retains the same classification.

6. If the rate of pay of an employee falls between the minimum and maximum of the salary range prescribed for the employee's class but does not correspond to any intervening steps in the range due to the adoption of a merit system general adjustment, that rate may remain the same. In the case of subsequent merit increases, the employee shall be placed back on a step in the adopted salary range for the appropriate class.

7. Employees at the maximum salary rate for their class may be granted merit system adopted salary adjustments only in the amount adopted for incumbents of that class. If an appointing authority wishes to grant a larger general adjustment to its employees than that adopted by the merit system and that adjustment would place an employee's rate of pay above the maximum salary rate for the employee's class, the appointing authority by prior resolution may grant to that employee the annual equivalent of the difference between the merit system adopted adjustment for incumbents and the agency adopted adjustment in the form of a single lump-sum salary payment on the effective date of the general adjustment. The employee's base salary shall remain at the maximum salary rate for the class.

8. An appointing authority may propose a salary increase within the salary range to an employee upon detailed written statements to the supervisor specifying the unusual employment conditions that make that action necessary and the interests of the authority that will be served by that action. The supervisor shall review each proposal giving due consideration to the salary rates paid other employees in the same class in the authority and shall deny any request which does not assure

equitable compensation for comparable work. Salary increases proposed in accordance with this provision are not based on employee performance or a general merit system adopted salary adjustment. The granting of such an increase shall not affect the employee's eligibility for subsequent merit increases or salary adjustments in accordance with merit system rules. If the unusual employment conditions giving rise to such an increase are of a temporary nature, the employee's salary shall be decreased to its previous level upon termination of those conditions, notwithstanding the provisions of 7 MCAR S 1.2397 A. or 1.2541 D.

C. Recommended adjustments. The merit system general adjustment recommended for incumbents is eight percent for employees on the professional and administrative, health services support, clerical, and building maintenance salary schedules.

D. Salary differentials. Intra-agency salary differentials between employees in the same class of positions, between employees in different classes of positions in the same occupational field, and between occupational fields in the same appointing authority are recognized as important factors in the maintenance of satisfactory morale. If the general adjustments result in the reduction of the differentials between employees in the same class of positions or between employees in different classes of positions in the same occupational field, adjustments may be made that will insofar as practicable, maintain differentials, within the limits of the new plan. In maintaining differentials, the appointing authority shall take into consideration the length of service and quality of performance of the employee affected.

E. Collective bargaining agreement. In agencies where there is an exclusive representative and a negotiated salary schedule for employees in the bargaining unit, adjustments in the rates of pay of employees shall follow the wording of the contract or agreement.

1.235-315

7 MCAR S 1.2396 Merit increases.

A. Increases by steps. Merit increases from the minimum on the official merit system compensation plan or on any negotiated salary schedule or on any salary schedule filed with the supervisor pursuant to 7 MCAR S 1.2395 B.3. shall be by successive intervening steps of pay for the class, with due consideration for length of service and quality of performance.

B. Eligible employees. In appointing authorities that have adopted a merit increase policy, an employee may be considered for a merit increase upon the satisfactory completion of the probationary period.

C. Annual review for merit increases. In appointing authorities that have adopted a merit increase policy, a merit

increase for each employee not at the maximum salary for his or her classification shall be considered at least once each 12-month period unless otherwise negotiated through a contract or agreement by the appointing authority and the exclusive representative. If an increase is not granted, the reasons for the denial of the increase shall be reported, in writing, to the employee and to the merit system supervisor.

D. Restriction on frequency of increases. In appointing authorities that have adopted a merit increase policy, except as otherwise negotiated by the appointing authority and the exclusive representative, a merit increase shall not be granted until the employee has served at least six months at the rate of pay from which an increase is proposed, except that in cases of exceptionally meritorious service, a merit increase of more than one salary step in the range or at less than a six-month interval may be permitted. In each case, however, the facts upon which the merit increase is based shall be recorded in the official minutes of the local public health authority and reported to the merit system supervisor.

E. Increases based on additional education. In appointing authorities that have adopted a merit increase policy, an extraordinary merit increase within the authority's salary range may be granted upon satisfactory completion of 15 additional credits in a field or fields pertinent to the employee's class. In each case the employee's transcript of coursework must accompany the proposed merit increase.

F. Lump sum payments. In appointing authorities that have adopted a merit increase policy, the appointing authority may grant an employee who meets all other eligibility requirements of the authority for a merit increase but whose salary is at or above the maximum rate of pay in the adopted salary range for the relevant classification, the annual equivalent of a one step merit increase in the form of a single lump sum payment in recognition of meritorious job performance. Before this provision can be effective, an appointing authority must establish by resolution as its official policy prior to the beginning of the year in which such merit increases are granted that such payments will be granted for meritorious job performance. The base salary of an employee receiving a lump sum merit increase shall remain at the rate attained immediately prior to the increase.

1.235 315

7 MCAR S 1.2397 Salary decreases.

A. In general. Except as otherwise negotiated by an appointing authority and the exclusive representative, a salary decrease within the range prescribed for the class may be made only for just cause. A permanent employee shall be notified of the intent to effect a reduction in pay and the reasons for the action at least ten calendar days prior to the date on which the reduction becomes effective. A copy of the notice shall be sent to the supervisor. A permanent employee whose salary is reduced

may request a hearing as provided in 7 MCAR S 1.2541 D.

B. Exemption. Collective bargaining agreement provisions whereby a salary adjustment or salary increase is negotiated for a set period of time do not fall within the provisions of A.

235-315

7 MCAR S 1.2398 Work-out-of-class. If an employee is expressly assigned in writing to perform all the duties of a position allocated to a higher classification that is temporarily unoccupied for reasons other than vacation or sick leave and that work exceeds 15 consecutive work days in duration, the employee so assigned shall be paid for all hours of the assignment at least at the minimum rate of pay of the salary range for the higher class or may be granted a one step salary increase within the employee's salary range. If the assignment is to a position in a classification at an equal or lower level, the employee shall be paid for all hours of the assignment at the employee's current rate of pay. A work-out-of-class assignment may be proposed only if the duration of the vacancy is anticipated to be less than six months. Approval of these assignments by the supervisor is required and requests for approval must be received by the supervisor within five calendar days of the assignment. Upon completion of the work-out-of-class assignment, the employee's salary shall be reduced to its previous level, notwithstanding the provisions of 7 MCAR S 1.2397 A. or 1.2541 D.

7 MCAR S 1.240 Recruitment and appointment; physical examinations. Before appointment applicants may be required to pass a satisfactory physical examination.

7 MCAR S 1.241 Applications.

A. Filing applications.

1. All applications shall be made on forms prescribed by the supervisor and must be filed on or before the closing date specified in the announcement, or postmarked before midnight of that date. On such applications the supervisor shall require all pertinent information pertaining to education, experience, age and any other information that the supervisor may deem necessary. All applications shall be signed and the truth of all statements contained therein certified by such signature.

2. In those classes of positions in which there is difficulty in obtaining qualified eligibles, the supervisor may establish a program that will be both positive and continuous. Under such a plan applications may be accepted at any time and examinations held whenever applicants have filed in sufficient numbers to insure adequate competition.

B. Disqualification of applicants.

1. The supervisor may refuse to examine an applicant, or after examination he may disqualify such applicant or remove his name from a register, or he may refuse to certify any eligible person on a register if the applicant:

a. Is found to lack any of the preliminary requirements established for the examination for the class of positions;

b. Is physically, mentally, or emotionally so disabled as to be rendered unfit for the proper performance of the duties of the class;

c. Is addicted to habit-forming drugs or is a habitual user of intoxicating liquors to excess;

d. Had been guilty of any crime involving moral turpitude or of infamous or notoriously disgraceful conduct;

e. Has been dismissed from the public service or any other position for delinquency or misconduct;

f. Has made false statement of any material fact in his application;

g. Has used or attempted to use political pressure or bribery to obtain an advantage in the examination or appointment;

h. Has directly or indirectly obtained information about the examinations to which as an applicant he was not entitled;

i. Has failed to submit his application correctly or within the prescribed time limits;

j. Has taken part in the compilation, administration, or correction of the examination;

k. Has otherwise violated provisions of these rules.

2. A disqualified applicant shall be promptly notified of such action, and an applicant who is not admitted to an examination because of failure to meet the preliminary requirements shall be notified by letter mailed to his last known address sufficiently in advance of the examination to allow for an appeal from rejection as provided in 7 MCAR S 1.254 A.

1.235-315

7 MCAR S 1.242 Examinations; general characteristics.

A. Content of examinations. Examinations for entrance into the public health merit system shall be conducted on a competitive basis. Examinations shall be practical in nature, shall be constructed to reveal the capacity of the applicant for the particular position for which he is competing as well as his general background and related knowledge, and shall be rated objectively.

The supervisor shall determine the content of all examination processes. Examinations shall include: performance tests, written examinations, ratings of experience and training, promotional ratings, or oral examinations.

B. Weighting of parts. The supervisor shall assign definite weights to each part of the examination prior to its public announcement.

C. Positions for disadvantaged groups. Recruitment and selection for those positions identified in the minimum qualifications of the class specification as directed toward clients and other disadvantaged groups will be limited to persons of low income or low educational achievement, including the physically and mentally disabled. It will be the specific responsibility of the individual appointing authorities to effectively make known opportunities for these jobs to such persons. Persons who do not meet these limitations will be disqualified from competition for these positions and notified of the reasons therefor. Examinations for these positions will include at least one of the following: performance test, oral examination, written test, or oral directions test combining aspects of performance and minimum literacy. The supervisor shall assign definite weights to each part of the examination prior to its public announcement. Eligible lists will be established on an area or county basis only or on the basis of both area and county. Certification of eligibles on an area basis smaller than the county unit may be approved by the supervisor. Since these positions cover a broad range of duties requiring many different abilities, knowledges, and basic skills, notwithstanding other provisions of the rules, the supervisor also may approve selective certification of eligibles who possess a particular ability, knowledge, or skill or a combination of these attributes.

7 MCAR S 1.2421 Notice of examinations. The supervisor shall announce all examinations for original entrance into the public health merit system at least two weeks in advance of the closing date for receipt of applications, and shall make every reasonable effort to attract qualified persons to compete in these examinations. Notice of examinations shall be posted in important centers throughout the state, and copies shall be distributed among appointing authorities throughout the state, newspapers, public officials, educational institutions,

professional and vocational societies, and such other organizations and individuals as the supervisor may deem expedient. Public announcements of examinations shall specify the title and salary ranges of the classes of positions, the duties to be performed, the minimum qualifications required, the final date on which applications will be received, and all other conditions of competition, including the relative weight assigned to the various parts of the examination.

7 MCAR S 1.2422 Conduct of examinations.

A. Place; monitors. Written tests shall be conducted simultaneously in as many places as are necessary for the convenience of the applicants and as are practicable for proper administration. The supervisor may designate such monitors as may be necessary to conduct examinations under instructions prescribed by him and may also arrange for the use of public buildings in which to conduct the examinations. The supervisor shall provide for the compensation of monitors in accordance with the approved budget for the purpose.

B. Refusal to score. The supervisor shall refuse to score the examination of an applicant who copies another applicant's examination paper, or who falsifies his or her identity to gain admittance to the examination, or who otherwise meets the criteria for disqualification as provided in 7 MCAR S 1.241 B.1.

7 MCAR S 1.2423 Rating examinations.

A. Determination of score. The supervisor shall determine a final score for each applicant's examination, computed in accordance with the weights for the several parts established by the supervisor as set forth in the announcement. Failure in any part of an examination shall disqualify the applicant in the entire examination. All applicants for the same position shall be accorded uniform and equal treatment in all phases of the examination procedure.

B. Determination of passing point. The supervisor shall utilize appropriate scientific techniques and procedures in rating the results of examinations and in determining the final scores of the applicants. The supervisor shall establish reasonable passing points for all examinations, giving due regard to the number of applicants and to the number of vacancies that may reasonably be expected to occur during the life of the register.

7 MCAR S 1.2424 Rating training and experience. When training and experience form a part of the total examination, the supervisor shall determine a procedure for the evaluation of the training and experience qualifications of the various applicants. The formula used in appraisal shall give due regard to recency and quality, as well as quantity, of experience and

to the pertinency of the training. This procedure shall allow for the substitution of training for experience, and experience for training, within the limits stated in the class specifications.

7 MCAR S 1.2425 Oral examinations. When an oral examination forms a part of a total examination for a class of positions, the supervisor shall select one or more oral examination boards as needed. An oral examination board shall consist of two or more members who shall be known to be interested in the improvement of public administration and in the selection of efficient government personnel and at least one of whom shall be technically familiar with the character of work in the position for which the applicant will be examined. Any person holding political office or any officer or committee member of any political organization, or any person actively engaged in the work of any political organization, shall not serve as a member of any such board. If practicable, all applicants qualifying for the oral examination for the same class of positions shall be rated by the same oral examination board. A member of any oral examination board shall disclose each instance in which he knows the applicant personally and, in those instances, the supervisor shall determine whether that member shall rate that applicant.

7 MCAR S 1.2426 Notice of examination results. Each applicant passing all parts of the examination shall be notified by mail by the supervisor of his final rating as soon as the rating of the examination has been completed and the register established. An eligible, upon request and presentation of proper identification, shall be entitled to information about his relative position on a register. An applicant who fails any part of the examination or the total examination shall be promptly notified of his failure.

7 MCAR S 1.2427 Examination records. The supervisor shall be responsible for the maintenance of all examination records. Applications and other necessary examination records shall be kept during the life of the register. Examination records of appointees shall be kept permanently, but examination records of applicants not appointed may be destroyed 30 days after the register expires.

7 MCAR S 1.243 Registers.

A. Establishment of registers.

1. After each examination the supervisor shall prepare and maintain registers of persons who attain passing scores in the examination. The names of eligible persons shall be placed on registers in the order of their final rating, beginning with the highest, except as modified by veteran's preference. If two

or more persons have final ratings that are identical, their names shall be arranged on the register in the order in which their applications for examination were accepted. Remaining tie scores shall be broken by arranging names in alphabetical order.

2. Eligible registers resulting from examinations shall be of three kinds: open-competitive registers, from which original appointments shall be made; promotional registers, from which promotions shall be made; and trainee registers, from which trainee appointments shall be made. Other registers or lists of persons eligible for appointment may be established in accordance with other provisions of these rules.

3. Promotional registers shall consist of the names of permanent and probationary employees who attain passing scores in the examination for promotion to a class of positions.

4. Trainee registers shall consist of the names of persons who qualify in an examination for a trainee classification or those persons who qualify for appointment to a regular class of positions and who also apply for placement on a trainee sub-register of the established register for the regular class of positions.

5. Registers shall normally be established on a statewide basis. Nevertheless, the supervisor may offer examinations on a county or area basis or may establish a county or area sub-register of a statewide register. Eligibility for placement on a county or area sub-register shall be determined by legal residence in the county or area or, in the case of a promotional register, by employment with the local public health agency.

6. Layoff lists shall be established by county and shall include the names of permanent and probationary employees who have been laid off from employment because of lack of funds or lack of work in accordance with the provisions of these rules. Names shall be placed on this list in reverse order of layoff.

7. The supervisor may establish a reemployment list of the names of former permanent and probationary employees who are eligible under the rules for reinstatement to a class of positions and who apply for placement on this list. Names shall be placed on this list in the manner determined by the supervisor. All persons on such list are equally eligible for appointment, and no rank or position shall be assigned.

B. Change of address.

1. Each applicant or eligible shall file with the supervisor notice of any change of address.

C. Duration of registers.

1. The life of each register shall normally be one year from the date of its establishment, but this period may be reduced or extended by the supervisor. In no case, however,

shall a register be in existence for a period of more than three years. A register may be deemed by the supervisor to be exhausted if fewer than three available eligibles remain on it. Upon exhaustion of a register, or if the supervisor reduces the life of a register, he shall notify each eligible remaining on such register to this effect by mail to his last known address.

D. Removal of names from registers.

1. The supervisor may remove the name of an eligible from a register for any of the following causes:

a. Appointment through certification from such register to fill a probationary appointment.

b. Appointment through certification from a register for another class whose minimum salary is either equal to or higher than the minimum salary for this class of positions; but, at the request of the appointee in such a case, his name may be continued on, or restored to, any or all registers other than the one from which the appointment was made, for the remainder of the life of such registers.

c. Filing of a statement by the eligible that he is not willing to accept appointment. Such statement of unwillingness may be restricted to a limited period of time, or to geographic locations or positions involving other conditions of employment, as specified. The name of the eligible shall then be treated as not available and shall be passed over in certification to fill any vacancy under the conditions specified as though such name did not appear on the register. Any eligible may file a new statement at any time modifying for future consideration any prior statement about the time, place, or other conditions under which appointment will be accepted.

d. Declination of appointment under such conditions as the eligible previously has indicated he would accept.

e. Failure to respond within five days to any inquiry of the supervisor or an appointing authority relative to availability for appointment.

f. Consideration of a probationary appointment from a promotional register by three different appointing authorities, or three times by one appointing authority, and not appointed.

g. Consideration of a probationary appointment from an open-competitive register to a class of positions within the preceding two years by three different appointing authorities, or three times by one appointing authority, and not appointed.

h. Any cause specified in Rule 7 MCAR S 1.241 A.3.

i. Is not available in an area under the jurisdiction of the merit system.

2. The supervisor, upon noting any declination or failure of any eligible to respond, may send a notice to the eligible of the removal of his name from the register. Such notice may include any inquiry about the reasons for such declination or failure to respond and a question as to whether the eligible is willing to accept the next appointment offered under such conditions as he may specify. Upon the furnishing of reasons satisfactory to the supervisor for the declination or failure to respond, and a statement of willingness to accept appointment, the name of the eligible may be restored to the register for certification for appointment under the conditions specified. It shall be considered impossible to locate an eligible when any communication mailed to him at the last known address of record supplied by him is not replied to within five days or is returned unclaimed, or if a telegram is not replied to within three days. It shall be known to the supervisor that an eligible is not willing to accept a position when a declination of appointment or statement of unwillingness to accept appointment is on file with the supervisor.

1.235-315

7 MCAR S 1.244 Methods for filling vacancies. Vacancies in the classified service shall be filled by reemployment, original appointment, promotion, transfer, demotion, or reinstatement.

7 MCAR S 1.2441 Requisition for certification of certain individuals. If a vacancy in any position under an appointing authority is to be filled other than by reinstatement, noncompetitive examination, transfer, or demotion, and a new employee is needed, a requisition shall be submitted by the appointing authority to the supervisor. The requisition shall state the number of positions to be filled in each class together with the class title and other appropriate information. In addition, desirable special qualifications for the particular position under consideration may be indicated. In requesting the certification of individuals with special qualifications, the appointing authority shall state in the request the reasons for the special qualification requested. Eligibles shall be certified in strict order of standing on the register, except in a case in which the supervisor has determined there is reason for a certification of an eligible with special qualifications. Requests for certification of certain individuals with special qualifications approved by the supervisor shall be reported to the council at its next scheduled meeting.

7 MCAR S 1.2442 Certification methods.

A. Entrance register. After receiving a requisition, the supervisor shall certify the names of available eligibles. If one position is involved, he shall certify the seven highest available names together with any additional names of persons having an examination rating within three points of the person on the certification with the highest examination rating, and

any additional names of persons having the same examination score as that of the seventh person certified, from the open-competitive entrance register established for the class of positions. Names of available eligibles from the appropriate reemployment register, if one exists, shall also be certified as additional names.

B. Promotional register. The supervisor may also certify the three highest available names together with any additional names of persons having an examination rating within three points of the person on the certification with the highest examination rating, and any additional names of persons having the same examination score as that of the third name certified, from the appropriate promotional register if such register exists and is requested. Names of available eligibles from the appropriate reemployment register, if one exists, shall also be certified as additional names.

C. Multiple vacancies. If more than one vacancy exists, the supervisor shall certify at least as many names from the register as there are vacancies to be filled, together with any additional names of persons having an examination rating within three points of the person on the certification with the highest examination rating, and any additional names of persons having the same examination score as that of the seventh person certified on a competitive certification or as that of the third person certified on a promotional certification. Supplementary certifications will be issued only in instances in which it is found that there are less than seven available candidates on the competitive certification or three available candidates on the promotional certification.

D. Selection for appointment. The appointing authority may select for appointment anyone among the certified candidates who is eligible for appointment.

E. Inadequate registers. When the number of names available for filling any vacancy by original appointment, promotion, or reinstatement is fewer than seven on a competitive certification or three on a promotional certification, and there are fewer than three different names on all registers combined, the appointing authority may decline certification for that vacancy and may request certification from a register, or registers, that the supervisor deems appropriate.

F. Provisional appointments. If there is no register that the supervisor deems appropriate, then the vacancy may be filled provisionally as provided for in 7 MCAR S 1.245 B.1.

1.235-315

7 MCAR S 1.2443 County-option certification.

A. Request for list of eligibles. The appointing authority may request from the supervisor names of eligibles from either the statewide original entrance register or from a sub-register for the county, a restricted area, or a district of the state,

as set forth in 7 MCAR S 1.243 A.5. The supervisor, upon receiving such requisition, shall certify the names of eligibles from the register as requested.

B. Statewide certification. If an appointing authority requests a certification of eligibles from a sub-register established for a specific locality but there are insufficient eligibles thereon, certification shall be made on a statewide basis.

7 MCAR S 1.245 Appointments.

A. Appointment from registers.

1. The employment of any person from a certification from an open-competitive register shall be deemed to be an original appointment. In selecting persons from among those certified by the supervisor for original appointment, the appointing authority shall be permitted to examine their application and reports of investigation and to interview them. Final selection and the action taken on each candidate shall be reported to the supervisor in the manner prescribed by him.

2. Promotional appointments shall be made in the same manner as original appointments as specified in 7 MCAR S 1.245 A.1., above, except that the person appointed is selected from a certification from a promotional register.

3. Trainee appointments shall be made in the same manner as original appointments as specified in 7 MCAR S 1.245 A.1., above, except that the person appointed is selected from a certification from a trainee register. A trainee appointment shall be to a specific trainee classification as provided in the classification plan and shall be for the period of training, which shall not exceed one year in duration. Trainees so appointed shall be advanced to the classification for which they are in training upon the satisfactory completion of the training program and shall then serve a probationary period in the regular classification. A trainee appointment may be terminated at any time by the appointing authority.

B. Provisional appointment.

1. Whenever in the opinion of the appointing authority there are urgent reasons for filling a vacancy and the supervisor is unable to certify eligibles from a register established as a result of an examination for the position, and no appropriate promotional register or other appropriate register exists, the appointing authority may submit to the supervisor the names of persons to fill the position pending examination and establishment of a register. If such person's qualifications are certified by the supervisor as meeting the minimum qualifications for training and experience for the position, such persons may be provisionally appointed to fill the existing vacancy until an appropriate register is

established and appointment made therefrom. No provisional appointment shall be made until the position has been allocated to a proper class and minimum qualifications established therefor in accordance with these rules nor without prior approval of the supervisor.

2. In the absence of a promotional register, a provisional promotional appointment of a permanent or probationary employee meeting the minimum qualifications may be made pending the establishment of a promotional register or the administration of a non-competitive promotional examination.

3. No provisional appointment shall be continued for more than 30 days after an appropriate register has been established for the class of positions and in no event for more than six months from the date of appointment. Successive provisional appointments of the same person shall not be permitted, and a position shall not be filled by repeated provisional appointments. Provisional appointments may be extended at the end of the six months period with the approval of the supervisor, and successive provisional appointments of the same individual to different positions and successive provisional appointments to the same position may be made in exceptional circumstances, subject to the following conditions:

a. That an examination has been publicly announced and the supervisor has found that a sufficient number of applicants are not available to assure adequate competition;

b. That continuous receipt of applications had been provided in accordance with 7 MCAR S 1.241 A.2., and the examination is to be held whenever the supervisor finds that enough applicants have filed to assure adequate competition.

4. All appointments made subsequent to the adoption of this rule but prior to the establishment of a register from which eligibles can be certified shall be regarded as provisional appointments.

C. Emergency appointment.

1. Whenever any emergency exists that requires the immediate services of one or more persons and it is not possible to obtain such persons from appropriate registers, the appointing authority may appoint a person or persons without consideration of other provisions of these rules governing appointments, except as provided in 7 MCAR S 1.263 A. Such appointments normally shall be limited to no more than 45 working days during any calendar year for the same person; however, such appointment of the same person can be extended to 70 working days with prior approval of the supervisor. Each emergency appointment shall be reported to the supervisor in the manner prescribed by him when the appointment is made.

D. Limited term appointment.

1. If an employee is needed for a limited period of not more than six months, a certification may be made by the supervisor of the names of those eligibles, in the order of their place on an appropriate register, who have indicated willingness to accept temporary employment. Certification shall be made in the manner set forth in 7 MCAR S 1.244. The duration of the limited term appointment shall be for the period of need only, and in no event shall such appointment continue for more than six months in any 12 month period. The acceptance or refusal of a limited term appointment shall not affect an eligible's standing on a register or his eligibility for appointment to a permanent position, and the period of the limited term appointment shall not constitute a part of a probationary period. Successive limited term appointments to the same position shall not be made, nor shall an employee receive continued limited term appointments.

E. Employee's appointment prior to adoption of these rules.

1. An employee on the staff of a local public health agency prior to adoption of these rules by that agency, with more than six months of continuous service and who is certified by the appointing authority as having given satisfactory service since that time may be admitted to the examination for the position held by him on the date of adoption of these rules without consideration of minimum qualifications of training and experience. Upon certification by the supervisor that he has attained a passing grade in the first examination held in accordance with 7 MCAR S 1.242, he may be appointed as a permanent employee by the appointing authority without being required to serve a probationary period.

2. Such employee, certified as having given satisfactory service, who has been transferred or promoted to a position in another class within six months prior to the adoption of these rules and before the first examination for the position currently held, shall be admitted to the examination on the basis of the minimum qualifications of training and experience for the new class that were in effect at the time of his transfer or promotion. Such an employee may, on certification by the supervisor that he has attained a passing grade in the examination for that position, be retained as a permanent employee by the appointing authority. An employee transferred or promoted as described above who fails in the examination for the position currently held by him may, on certification by the supervisor that he has attained a passing grade in the examination for the position previously held by him, be retained in that position as a permanent employee, provided that there is a vacancy in the class.

3. The services of an employee who the supervisor does not certify as having attained a passing grade in the examination for either of the positions referred to above shall be terminated within 90 days after the establishment of a register for such position or positions in accordance with these rules.

4. Such employee, certified as having given satisfactory service, who has been hired within six months before the adoption of these rules but prior to the first examination for the position held by him, shall be admitted to the examination on the basis of the minimum qualifications of training and experience for the class that were in effect at the time of his hire. Such an employee may, on certification by the supervisor that he has attained a passing grade in the examination for that position, be retained as a probationary employee by the appointing authority. An employee hired as described above who fails in the examination for the position held by him shall be terminated within 90 days after the establishment of a register for such position in accordance with these rules.

5. A new employee appointed after the adoption of these rules by a local public health agency, but prior to the holding of the first examinations under these rules shall be considered as having a provisional appointment and shall be required to compete in the examination without preference. Such new employee shall be admitted to the examination for the position on the basis of the minimum qualifications in effect at the time of his appointment.

F. Veterans' Preference.

1. Preference in the establishment of eligible registers shall be given to veterans in accordance with the provisions of Minnesota Statutes, section 43.30.

1.235-315

7 MCAR S 1.246 Probationary period.

A. Purpose. The probationary period is an essential part of the examination process and shall be used to closely observe the employee's work, to obtain the most effective adjustment of a new employee to the obligations of the position, and to remove any employee whose performance does not meet the required standard of work.

B. When required. A person employed by an appointing authority in any of the following ways shall serve a probationary period:

1. Appointment from an eligible register other than the layoff list;

2. Reinstatement of a former probationary employee or of a former permanent employee in an agency other than the last employing agency;

3. Transfer of an employee between authorities except when specifically waived in writing to the supervisor by the new employing authority prior to the date on which the transfer of a permanent employee becomes effective; or

4. Transfer or reinstatement to a position on the basis

of eligiblity from a comparable position in a similar merit system jurisdiction.

C. Probation as condition of employment. An appointing authority may effect a probationary period in an employment action in which such period is not required as specified in B. by writing this condition of appointment on the appointment report submitted to the supervisor. In no case, however, may a probationary period be required of a permanent employee who is appointed from the layoff list.

D. Duration of probationary period. The probationary period shall consist of the equivalent of the first full six months of compensated service following the date of the appointment action requiring such period, except as provided in E. Unpaid leave of ten or fewer work days during the probationary period does not affect the duration of the period.

E. Extension of probationary period. In rare or unusual circumstances or conditions that prevent the making of a full and fair determination as a basis for granting permanent status or separating the employee from the service, an extension of the probationary period for up to three months may be granted. Initiation of a request to the supervisor for extension must occur on or before the beginning of the sixth month of the probationary period and shall specify the reasons why the extension is necessary. A current evaluation of the employee's performance shall accompany the request. A copy of the request for extension and the evaluation shall be provided to the probationary employee by the appointing authority.

The supervisor's decision on the request shall be given to the agency and the employee at least ten days in advance of the end of the initial probationary period.

Each formal request for extension of the probationary period and the decision on the request shall be reported to the council at its next meeting.

F. Promotion during probation. An employee serving a probationary period may be promoted to a position in a higher class. An employee who is promoted begins a probationary period in the higher classification as of the date of that appointment.

A probationary employee who is promoted to a position in a higher class in the same occupational field shall complete his probationary period in the lower class by service in the higher position.

G. Transfer during probation. A probationary employee may be transferred from a position under one appointing authority to a position in the same class under another appointing authority if the employee was not appointed from a certification from a county register.

H. Demotion during probation. A probationary employee who

is demoted to a class of positions in the same occupational field shall have included as part of the probationary period in the lower class his period of service in the higher class unless the appointing authority writes on the report of the demotion to the merit system that a new probationary period is required in the lower class.

I. Removal during probation. A probationary employee may be dismissed by an appointing authority without the right to an appeal or hearing except as may otherwise be provided by law. The employee shall be given written notification of dismissal, including the reasons for dismissal, at least five days in advance of the date on which the dismissal becomes effective. A copy of the notification shall also be submitted to the supervisor.

A probationary employee who has permanent status in another class in the same agency and who is not granted permanent status in the new classification shall be restored to a position in the class from which he was promoted as his seniority permits or in a comparable class as these rules permit, unless the failure to grant permanent status was due to the misconduct of the employee.

When there is no position to which the employee can be restored, because of abolishment of jobs or lack of seniority, the provisions of 7 MCAR S 1.249 D. apply.

J. Completion of probationary period. The appointing authority shall submit written notice of the satisfactory completion of the probationary period to the employee and to the supervisor at least ten days in advance of the expiration of the probationary period. A rating or appraisal of the employee's performance shall accompany the notice. The employee shall then be granted permanent status in the position the day following the last day of the probationary period.

K. Violation of rules; penalty. If an appointing authority fails to implement the purpose and intent of the probationary period by appropriate action as provided in A.-J., a probationary employee who is not certified permanent in accordance with J. and is not removed or demoted but is continued in employment beyond the full six-month period shall obtain permanent status in the position by the default of the appointing authority. The payment of salary beyond the six-month probationary period shall be deemed to be evidence of the determination by the appointing authority that permanent status shall be granted to the employee. The supervisor shall enter such status on the record of the employee and shall notify the appointing authority and the employee of the change in status.

L. Reports of violations. Each instance in which permanent status is granted to an employee in accordance with K. shall be reported to the council. The council may recommend and the commissioner may take appropriate action to insure that the purpose and intent of the probationary period shall be given

effect in the appointing authority in all future appointments.

7 MCAR S 1.247 Promotions.

A. Methods of making promotions. As far as is practicable and feasible, a vacancy shall be filled by promotion of a qualified probationary or permanent employee based upon the performance of his duties, as evidenced by recorded service ratings, with due consideration for length of service and upon his capacity for the new position. The appointing authority in making a promotion, may consult with the supervisor about the promotional status of an employee. A candidate for promotion must be certified by the supervisor to possess the qualifications for the position as set forth in the specifications for the class of positions for which he is a candidate, and he shall be required by the supervisor to qualify for the new position by promotional competitive or non-competitive examination administered by the supervisor.

B. Promotion by competitive examination.

1. An employee to be eligible to compete for promotion must have permanent or probationary status and must meet the minimum qualifications of training and experience for the class of positions.

2. At the discretion of the supervisor and the appointing authority involved, a promotional competitive examination may be limited to the employees of one local public health agency or may be open to the employees of all local public health agencies. If it is determined by the secretary and executive officer for the statewide service to fill vacancies in a particular class of positions by promotional competitive examination, such examination shall be given under the direction of the supervisor. A promotional competitive examination may consist of any combination of the following: written tests, ratings of training and experience, evaluation of recorded service ratings, promotional ratings, seniority, performance tests, and oral examinations. The combination in each case and procedure for the determination of the passing grade shall be announced by the supervisor in advance of the examination and shall take into consideration approved practices.

3. All employees who received a passing grade shall be placed on a promotional register for the class of positions in order of their final ratings except as modified by 7 MCAR S 1.245 F.

4. If a promotional register and an original entrance register exist, the same number of names shall be certified from each register in accordance with 7 MCAR S 1.244. The appointing authority may make his selection from the names submitted from either register, giving such preference to present employees as the good of the local public health agency will permit.

7 MCAR S 1.248 Transfers and demotions.

A. Transfers.

1. A transfer of an employee from a position in one organizational subdivision of a local public health agency to a position of the same class in another organizational subdivision of a local public health agency may be made at any time by the appointing authority concerned.

2. Transfer of a permanent employee from a position in one local public health agency to a position of the same class in another local public health agency may be made with the approval of the appointing authorities concerned and the supervisor, subject to the provisions of 7 MCAR S 1.246 B.1.c. and B.1.d. All such transfers must be reported to the supervisor.

3. A permanent employee may be transferred from a position in one class to a position in another class, the transfer being either within one local public health agency or between local public health agencies providing that the supervisor certifies that the examination upon which appointment of the employee was based was of a character and standard to test the fitness of such employee for the position to which it is proposed to make such transfer and requires substantially similar qualifications.

B. Demotions.

1. An appointing authority may demote an employee for inefficient performance of his duties, for disciplinary reasons, or for other just causes.

2. A permanent employee shall be, before the action is taken, furnished with a statement in writing, setting forth the reasons for the demotion. He shall be permitted five days time to reply thereto, in writing, or upon request, to appear personally and reply to the appointing authority. A copy of the statement and the employee's reply, if any, shall be filed with the supervisor prior to the effective date of the demotion. The permanent employee upon written request may demand a hearing before the council in accordance with the provisions of 7 MCAR S 1.254 E.2.

3. At any time during the probationary period that an appointing authority determines that the employee's performance does not meet work standards he may demote the employee, except that no employee serving a probationary period following his transfer or promotion shall be demoted except for just cause or with his consent during the first 30 calendar days of the probationary period.

4. Seniority of an employee in the class to which he is demoted shall be limited to service in the agency and shall

consist of the combined total of his prior seniority in the class to which demotion occurs, in all higher classes, and in all other classes which the supervisor determines to be sufficiently similar to the class to which demotion occurs.

5. Any permanent or probationary employee about to be laid off shall be demoted to displace any employee with less seniority in the next lower class in which he previously served unless he elects to be laid off. In either event the name of such employee shall be placed on an appropriate layoff list and upon his written application may be placed on an appropriate reemployment list.

6. An appointing authority, with the consent of the affected employee, may demote, in lieu of layoff, a permanent or probationary employee not covered by the preceding provision. Such action shall not entitle the employee to a hearing, in the demotion, but his name shall be placed on the layoff list and upon written request may be placed on the reemployment list for the class from which he was demoted. No employees so demoted shall displace a permanent or probationary employee except in order of seniority.

1.235-315

7 MCAR S 1.249 Separation, tenure and reinstatement.

A. Resignations.

1. An employee who resigns shall present the reasons therefor in writing to the appointing authority. A copy of the resignation shall be forwarded to and recorded by the supervisor.

2. Any absence of an employee from duty that is not authorized by specific grant of leave of absence under the provisions of these rules shall be deemed an absence without leave. Any such absence shall be without pay and may be made grounds for disciplinary action. In the absence of such disciplinary action, any employee who absents himself for three days without leave may be deemed to have resigned, but such absence may be covered by a subsequent grant of leave if the conditions warrant.

B. Dismissals.

1. Employees who do not have permanent status may be dismissed at any time at the discretion of the appointing authority except those serving the first 30 calendar days of a probationary period following a transfer. Employees serving the first 30 calendar days of a probationary period following a transfer can only be dismissed for just cause.

2. No employee who has permanent status shall be dismissed from a position except for just cause. Before the action is taken, a permanent employee shall be furnished with a statement in writing setting forth reasons for the dismissal. He shall be permitted five days time to reply thereto in writing

or, upon request, to appear personally and reply to the appointing authority. A copy of the statement and the employee's reply, if any, shall be filed with the supervisor prior to the effective date of the dismissal. Any such employee who is dismissed may demand a hearing before the merit system council in the manner prescribed by 7 MCAR S 1.2541 D.

3. Any employee who willfully practices, or attempts to practice, any deception or fraud in his application, in his certificate, in his examination, or in securing his eligibility or appointment, shall, upon discovery and proof thereof, be removed and discharged. Charges alleging such deception or fraud may be initiated by the appointing authority or by the supervisor, in conformity with the provisions of this section relating to notice of discharge and hearing before the merit system council.

C. Suspension. The appointing authority may, after written notice, suspend any employee without pay for just cause for a period not to exceed 30 calendar days in any one calendar year. Suspensions of five or fewer consecutive working days or ten or fewer working days in a calendar year are not appealable to the council under the provisions of 7 MCAR S 1.2541 D.1.

D. Layoff.

1. An appointing authority may lay off an employee in the classified service by reason of abolishment of the position, lack of funds, shortage of work or other reason outside the control of the employee. No permanent employee, however, shall be laid off while any emergency, provisional, limited term or probationary employee is continued in a position of the same class in the agency. Layoff shall be made in inverse order of seniority by employment conditions in the class of work in the agency. Seniority for purposes of layoff shall be the length of service in the class from which layoff occurs in the agency.

2. If two or more persons in the class in which layoff occurs have equal seniority, the order of layoff shall be in inverse order of the date of acquisition of permanent status in the class. If a tie still remains, the order of layoff shall be determined by the average of the last two service ratings, if available, or the last service rating if only one is available and the employee with the lowest such average or rating shall be laid off first. If no service ratings are available, the order of layoff shall be determined by the appointing authority in such a way as to retain in the agency the employee(s) considered most valuable.

3. Any permanent or probationary employee about to be laid off shall be demoted to replace the employee with the least seniority in the next lower class in which that employee previously served, unless the employee elects to be laid off.

4. The appointing authority shall notify in writing the employee and the supervisor at least ten working days before the

effective date of the layoff and shall state the reason for the layoff. If the appointing authority fails to certify before the effective date thereof that the layoff was for reasons not reflecting discredit on the employee, it shall be deemed a dismissal and shall be subject to the rules regarding dismissal.

5. The names of permanent or probationary employees laid off or demoted in lieu of layoff shall be placed in order of seniority on the layoff list for the class and the agency from which the layoff took place. The affected employees shall have their names placed also on the reemployment list for the class from which the layoff took place and any other class in which they have permanent or probationary status prior to layoff.

6. Names of laid off employees will remain on the layoff list for a minimum of one year and eligibility shall be extended to a period of time equal to the employee's previous service in the merit system not to exceed five years.

7. Whenever an appointing authority submits a requisition to fill a vacancy or a new position in the agency and a layoff list exists for that agency for the class in which the position to be filled is classified, the one name highest on the layoff list shall be certified to the agency for appointment.

8. The provisions of this rule shall apply to all layoffs, except where otherwise provided in written contract between an agency and an exclusive bargaining representative.

E. *Tenure of office.* The tenure of office of every permanent employee shall be during good behavior and the satisfactory performance of his duties as recorded by his service ratings. This provision, however, shall not be interpreted to prevent the separation of an employee for cause or the separation of an employee because of lack of funds or curtailment of work or by retirement of the employee, when made in accordance with those rules.

F. Reinstatement of former permanent employee. Upon written request of an appointing authority to and with the approval of the supervisor, an employee who has successfully passed a merit examination and has acquired permanent status in a class may be reinstated to a position in the same class in the public health merit system at any time within two years after the date of his resignation in good standing. Under the same conditions a reinstatement may be made within a period of time, not to exceed five years, equivalent to the continuous period of the employee's service since January 1, 1971, in a local public health agency. Reinstatement shall be without benefit of previously acquired seniority. Upon approval of the supervisor, reinstatement may be made directly by an appointing authority, provided that there is a vacancy.

G. Reinstatement of former probationary employee. Upon written request of an appointing authority and with the approval of the supervisor, a probationary employee who has resigned in

good standing may be reinstated as a probationary employee to a position in the same class at any time within a year after the date of resignation.

H. Retirement. Any employee in the public health merit system who attains the age of 70 may be retired at the option of the appointing authority. For the purpose of these rules, the age of the employee shall be the age attained on his last birthday and shall be subject to verification.

I. Reemployment of former permanent or probationary employees. Former permanent or probationary merit system employees who voluntarily separate in good standing with a satisfactory or better separation rating may, upon request, have their names placed on a reemployment list for their last class of employment and for any other classes in which they possessed permanent status prior to separation. Requests must include which classes, locations and employment conditions the former employee is willing to consider and must be submitted to the merit system within one year of separation. A person may remain on the reemployment list(s) for up to three years and must return to the merit system within four years of separation. Former employees reemployed under the provisions of this rule must serve a new probationary period upon appointment.

7 MCAR S 1.250 Leaves of absence.

A. Applicability of minimum standards. Leave policies stated in B.-H. are minimum standards and shall apply to all employees except when otherwise negotiated by the appointing authority with an exclusive representative. At the discretion of the appointing authority, negotiated benefits may be applied to all employees of the agency.

Beyond the minimum standards listed in B.-H. the appointing authority may adopt an optional leave of absence policy to the extent allowed in I.

Agencies without an exclusive representative that adopt an optional leave policy beyond the minimum standards listed in B.-H. shall file a copy with the supervisor.

B. Jury or witness duty.

1. After notice to the appointing authority, any employee under the merit system shall be granted leave with pay for service upon a jury or for appearance before a court, legislative committee, or other judicial or quasi-judicial body as a witness in an action involving the federal government, state of Minnesota, or a political subdivision thereof, in response to a subpoena or other direction by proper authority.

2. At the option of the appointing authority the employee may be required to turn over to the agency any per diem payment received as a result of serving on a jury or as a witness in the

actions listed in 1. Moneys received as expenses shall be kept by the employee.

3. Any absence, whether voluntary or in a response to a legal order to appear and testify in private litigation, not as an employee of the county agency but as an individual, shall be taken as annual leave, as leave of absence without pay, or as a deduction from authorized accumulated overtime.

C. Leaves of absence without pay.

1. Any person holding a permanent or probationary position in the classified service of the Minnesota merit system shall be granted a leave of absence without pay on the grounds of sickness or disability and may be granted a leave of absence without pay for other good or sufficient reasons, provided that no such leave shall exceed one year. Disabilities caused or contributed to by pregnancy, miscarriage, abortion, childbirth, and recovery therefrom are, for all job-related purposes, temporary disabilities. The women so affected shall be treated the same as other persons who are not so affected but who are similar in their ability or inability to work. The appointing authority shall establish the proof required of the existence of sickness or disability and the continuance thereof during the one-year period. The appointing authority may require that the employee produce medical certification of fitness for work from a registered practicing physician before returning the employee to the job.

2. Any employee who is granted a leave of absence without pay shall be accorded thereby an unqualified right to be reinstated to the same position if the leave is for 60 calendar days or fewer. An employee who is granted a leave of absence without pay shall be accorded thereby an unqualified right to be reinstated to a position in the same class at the expiration of leave, except that when all the positions in the class previously held by the employee have been abolished, the name of the employee shall be restored to the appropriate reemployment register provided for in 7 MCAR S 1.249 D.5. If all the positions in the class are filled, the least senior employee in the class shall vacate his or her position subject to any eligibility for layoff, transfer, or demotion that may have been acquired. An employee on leave of absence, with the approval of the appointing authority and the supervisor, may be reinstated to his or her class before the expiration of the leave in the same manner. Upon certification by a registered practicing physician, the employee who is physically or mentally capable of returning to work must comply within ten working days or face termination. If such an employee cannot return to work within the specified days, the employee must notify the appointing authority and request an approval for a leave of absence.

D. Vacation leave.

1. Upon the completion of six full months of satisfactory service in the merit system, vacation leave shall accrue to a

permanent, probationary, or trainee employee for the time served at the rate of one working day for each full month of service. No vacation leave shall be accrued or granted during the first six months of service in the merit system; but upon satisfactory completion of that period, vacation leave shall accrue to a permanent, probationary, or trainee employee for the time served. Limited term and provisional employees with less than six full months of service and emergency employees shall not accrue vacation leave. Provisional employees with more than six months of service shall accrue vacation leave. Unused vacation leave shall accumulate to a total of at least 24 working days. The agency shall determine the time at which vacation leave may be taken. Vacation leave may not be used before completion of the period in which it is accrued. Part-time employees shall accrue vacation leave on a prorated basis based on hours worked in accordance with a schedule prepared by the appointing authority.

2. Vacation leave shall not accrue to an employee while in a nonpay status, except to an employee on military leave.

3. A permanent employee who is transferred or promoted from one agency to another shall be paid by the former agency for the number of working days of accrued but unused vacation leave unless the new agency, upon request of the employee, agrees to accept all or a portion of the employee's accrued but unused vacation leave.

4. Any permanent, probationary, provisional, or trainee employee with six full months of satisfactory service in the merit system who is separated by layoff, resignation, death, or otherwise, shall be paid for the number of working days of unused vacation leave accrued.

E. Sick leave.

1. Every permanent, probationary, provisional, and limited term employee shall accrue sick leave at the rate of one working day for each completed month of service, and such accrued sick leave may be used under the conditions prescribed in 2.-10.

2. Absence necessitated by employee's inability to perform the duties of his or her position by reason of illness or injury, by reason of pre-natal and post-natal care, by necessity for medical or dental care, by exposure to contagious disease under circumstances in which the health of the employees with whom associated or members of the public necessarily dealt with would be endangered by attendance on duty, or by illness in the employee's immediate family, for such period as shall be necessary. The term "immediate family" shall be limited to the employee's spouse, minor children, or parents living in the household of the employee, when the parents have no other person to provide the necessary nursing care. Within the discretion of the appointing authority, use of sick leave also may be authorized in cases of death of the spouse, children, and wards

of the employee and the brothers, sisters, parents, or grandparents of either the employee or the employee's spouse.

3. Unused sick leave shall accumulate to a total of at least 100 working days.

4. Sick leave with pay shall not accrue to emergency, hourly, or per diem employees.

5. Sick leave shall not accumulate to an employee while in a nonpay status, except an employee on military leave.

6. When sickness occurs within a period of vacation leave, the period of illness may, on presentation of a report from a registered practicing physician, be charged as sick leave and the charge against vacation leave reduced accordingly.

7. The appointing authority may require the employee to produce medical certification from a registered practicing physician attesting to the need for sick leave and attesting that the employee is fit to return to work.

8. A former merit system employee who is reinstated or reemployed in accordance with merit system rules, except as a provisional or emergency appointee, may have previously accumulated and unused balance of sick leave revived and recredited upon approval of the new appointing authority.

9. A permanent or probationary employee who is transferred or promoted from one appointing authority to another may be granted credit in the new agency for all or a portion of previously accrued but unused sick leave at the discretion of the new appointing authority.

10. Sick leave may not be used prior to completion of the period in which it is accrued. Part-time employees shall accrue sick leave on a prorated basis based on hours worked in accordance with a schedule prepared by the appointing authority.

F. Military leave. Employees who are in service in the armed forces of the state or the United States shall be entitled to leave of absence as provided for by Minnesota Statutes, section 192.261.

G. Record of leaves. Each appointing authority shall maintain a record of leaves with pay granted to employees.

H. Holidays.

1. Full-time permanent, probationary, provisional, and limited term employees whose normally scheduled work day falls on a holiday listed below shall receive time off with pay for that day. Compensatory time off shall be allowed for work done on these days except when payment is received. Emergency employees are not eligible for holiday pay. The following are holidays:

a. New Year's Day, January 1;

b. Lincoln's and Washington's Birthday, the third Monday in February;

c. Memorial Day, the last Monday in May;

d. Independence Day, July 4;

e. Labor Day, the first Monday in September;

f. Veteran's Day, November 11;

g. Thanksgiving Day, the fourth Thursday in November; and

h. Christmas Day, December 25.

2. Appointing authorities may designate one or both of the following as holidays:

a. Christopher Columbus Day, the second Monday in October; and

b. Friday after Thanksgiving.

3. When New Year's Day, Independence Day, Veteran's Day, or Christmas Day falls on Sunday, the following Monday shall be a holiday. When New Year's Day, Independence Day, Veteran's Day, or Christmas Day falls on Saturday the preceding Friday shall be a holiday.

4. Holidays which occur within the employee's vacation or sick leave period shall not be charged to the employee's vacation or sick leave time.

5. Employees must be on the payroll on the work day immediately preceding and the work day immediately following a holiday to be eligible for the holiday. For the purpose of determining eligibility for holiday pay, "on the payroll" shall mean those who are in pay status.

6. Employees who work less than full-time and intermittent employees shall be compensated for holidays on a prorated basis in accordance with a schedule approved by the supervisor.

I. Optional policy.

1. Beyond the minimum standards listed in B.-H., the appointing authority may adopt an optional leave of absence policy. The adoption of such a policy shall only be to increase the availability and use of leaves of absence to employees.

2. Funeral leave, exclusive of sick leave or vacation leave, may be granted. Each appointing authority shall prepare

written regulations governing such leave.

Funeral leave may be authorized in cases of death of the spouse, children, and wards and the brothers, sisters, parents, or grandparents of either the employee or the employee's spouse.

3. Additional holidays may be designated, with or without pay, to conform to the countywide policy.

4. Educational leave, with or without pay, may be granted for a period not to exceed two years to any permanent or probationary employee. Such leave shall be for work-related programs which are in the best interest of the agency and consistent with the agency's training and staff development plan. Such leave shall otherwise be subject to the filing requirement of A. The appointing authority may allow the employee to continue to accrue eligibility for merit increases, as in 7 MCAR S 1.2396, and such salary increase may be granted at the same time the increase would have been granted, but for the leave of absence. Educational leave with pay shall be approved by the supervisor prior to authorization.

1.235-315

7 MCAR S 1.251 Service ratings.

A. Establishment of service rating system. The supervisor, in consultation with appointing authorities, shall establish and make effective a system of service ratings designed to give a fair evaluation of the quality and quantity of work performed by employees in the public health merit system. Insofar as practicable, the system of service ratings in the local public health agencies shall be uniform. Such ratings shall be prepared and recorded for all permanent employees at regular intervals at least annually.

B. Use of service ratings. Service ratings shall be considered in determining salary advancements and in making promotions, demotions, dismissals, and in determining the order of separations due to reduction of force.

7 MCAR S 1.252 Employee training. The supervisor shall cooperate with appointing authorities, employees, and others in fostering and aiding in programs of preservice training for and inservice training of employees, to the end that the quality of services rendered to the community may be raised and that employees may be aided to equip themselves for advancement.

7 MCAR S 1.253 Other employment. No employee shall hold other public office, except as provided in 7 MCAR S 1.236 F.5., or have conflicting employment while in the employ of the appointing authority. Determination of conflicting employment shall be made by the appointing authority subject to the approval of the council.

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7 MCAR S 1.254 Appeals and hearings.

A. Appeal from examination rejection.

1. Any applicant whose application for admission to an original entrance or promotional examination has been rejected by the supervisor may appeal to the council for consideration of his qualifications. The council shall consider such appeal, if in writing, provided it shall have been received by the supervisor not later than 48 hours prior to the announced time for holding the written test. The council's decision with respect to any such appeal shall be final.

2. Applicants may be admitted to an examination by the supervisor pending a consideration of a written appeal. Admission to a written test under such circumstances, however, shall not constitute the ultimate acceptance of the applicant under consideration.

B. Review of examination ratings.

1. Any applicant who has taken an examination may appeal to the council for review of his rating in any part of such examination to assure that uniform rating procedures have been applied equally and fairly. Such appeal must be filed in writing at the office of the supervisor within 30 days after the date on which notification of the results of such examination was mailed to the applicant.

2. A rating in any part of an examination shall not be changed unless compliance with the foregoing conditions has been made and unless it is found by the supervisor and council that a substantial error has been made. The council's decision with respect to a review or change shall be final and shall be entered into its minutes. A correction in the rating shall not affect a certification or appointment which may have already been made from the register.

C. Appeal from removal from register. An eligible whose name has been removed from a register for any of the reasons specified in 7 MCAR S 1.243 D. may appeal to the council for consideration. Such appeal must be filed in writing at the office of the supervisor within 30 days after the date on which notification was mailed to the applicant. The supervisor shall refer the appeal with all pertinent information to the council. The council, after investigation, shall make its decision and the eligible shall be notified accordingly by the supervisor.

D. Appeal from allocation. Upon receipt of a notice of an original allocation or reallocation to a specified class within the classification plan, either at the time of the installation of such plan or upon revision of the plan, an employee may appeal in writing within 30 days from the date of notification of such action to the council through the supervisor requesting an additional investigation of the employee's duties and asking

that reallocation be considered. The supervisor shall make an additional investigation and a report to the council relative to the reallocation. The council shall make a study of the entire facts concerning the appeal and make recommendations to the secretary and executive officer regarding the allocation. The secretary and executive officer's decision in the matter shall be final. A copy of the secretary and executive officer's decision shall be forwarded to the appointing authority.

E. Appeal from dismissal, suspension, demotion or reduction in pay.

1. Except as otherwise provided in 7 MCAR SS 1.248, 1.249, and 1.260 D., no permanent employee under the provisions of these rules shall be removed, discharged, or suspended without pay for more than 30 days, or reduced in pay or position except for cause. In case of any such disciplinary action as enumerated above in this section, the employee, before such action is taken shall be furnished with a statement in writing specifically setting forth the reasons for such disciplinary action.

2. Such employee, upon written request to the council within 30 days after the effective date of such action, may demand a public hearing to determine the reasonableness of such action. The supervisor shall arrange such a hearing before the council, an appeal board or referee appointed by the council to hear appeals on its behalf, within 30 days of receipt of the appeal. Both the employee and his superior officer shall be notified reasonably in advance of the hearing and shall have the right to present witnesses and give evidence before the council.

3. The council, within a reasonable length of time after the hearing, shall make its recommendation in writing to the appointing authority for consideration. Within 30 days after receipt of the council's recommendation, and after consideration of that recommendation, the appointing authority shall make its decision which shall be final and duly recorded in the permanent merit system records. The appointing authority shall notify the employee promptly of its decision.

4. Any veteran under the provisions of Minnesota Statutes, section 197.46, shall not be removed except for incompetency or misconduct shown after a hearing, upon due notice, upon stated charges, in writing. The hearing shall be held before the council.

F. Appeal from denial of salary increase. Any permanent employee who has not received a salary increase for a 12 month period and who is denied a salary increase may appeal the denial of the increase to the council within 30 days following the receipt of the letter of denial. In the case of such an appeal, the council shall consider the reasons given for denial and, if such reasons take into account the merit of the performance of the employee, shall deny the hearing of the appeal. If the reasons given do not reflect on the merit of the performance of

the employee, the council shall take testimony regarding the performance of the employee and the appointing authority and the employee shall have the right to present witnesses and give evidence before the council. Within a reasonable period of time following the hearing the council shall determine whether the employee is to be reconsidered by the appointing authority for a salary increase and shall recommend that an increase be granted or not granted.

G. Investigations and appeals. The council shall receive and consider any protest by an employee or appointing authority in any manner concerned with the administration of these rules and, after such investigation and hearing or either of them as the council may deem desirable in any case, shall recommend to the secretary and executive officer such remedial action as it may deem warranted.

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7 MCAR S 1.2541 Appeals and hearings.

A. General provisions.

1. The council or appeal board or referee appointed by the council shall hear all appeals under this rule.

2. A written notice of appeal, specifying the reason or reasons for the appeal, must be submitted to the supervisor within 30 days of the action appealed or within 30 days of the date notification of the action was mailed to the affected party, whichever is later.

3. Except for appeals under D., the supervisor shall reply to the appeal, interpreting the merit system rules and applicable law relative to the issues in the appeal. All affected parties will receive copies of the response.

4. Any affected party who is dissatisfied with the supervisor's resolution may appeal that resolution and the appeal will be placed on the agenda of the next council meeting.

5. Any permanent employee under a collective bargaining agreement who appeals a dismissal, suspension, or a reduction in pay or position under the provisions of a grievance procedure in the agreement may not subsequently appeal the same action to the council.

6. All decisions shall be given within a reasonable time following the hearing and shall be in writing. Copies shall be sent to all parties involved and the merit system supervisor when final decisions are made by the appointing authority.

7. Appeals under B., C., and F. shall be pursuant to the Administrative Procedure Act, Minnesota Statutes, chapter 15, and contested case rules of the Office of Administrative Hearings, 9 MCAR SS 2.201-2.299.

B. Appeals from selection and appointment procedures.

1. Any applicant may appeal a rejection of his or her application based on qualifications or removal from a register for reasons specified in 7 MCAR S 1.243 D. The council shall review the reasonableness of such rejection or removal.

2. Any applicant who has taken an examination may appeal for review of the rating procedures in any part of the examination. The council shall review the rating procedures to see that they have been applied equally and fairly to all applicants.

3. Decisions of the council regarding appeals under 1. and 2. shall be final.

4. Admission to an examination, restoration to a register or correction of an examination rating resulting from an appeal shall not affect a certification or appointment that may have already been made.

C. Appeal from allocation. Any employee or appointing authority may appeal the allocation of a position. The council shall review all facts relating to the allocation and make a recommendation to the commissioner. The commissioner's decision shall be final.

D. Appeal from dismissal, suspension, or demotion.

1. Any permanent employee who has not appealed such action under the provisions of a grievance procedure contained in a collective bargaining agreement may appeal any dismissal, suspension of more than five consecutive working days or ten working days in a calendar year, or reduction in pay or position to the council. The council shall review the action for compliance with the procedural requirements of 7 MCAR S 1.249 and for whether the action was taken for just cause.

2. The hearing shall be held within 30 days after the supervisor receives the appeal.

3. After the hearing, the council shall make a recommendation to the appointing authority. Within 30 days of receiving the recommendation, the appointing authority shall make the final decision.

4. Any veteran covered under the provisions of Minnesota Statutes, section 197.46 shall not be removed except for incompetency or misconduct shown after a hearing upon due notice including written stated charges.

E. Appeal from denial of merit increase.

1. Any permanent employee of an appointing authority with an established policy of granting merit increases who has not received a merit increase for a 12 month period and who is

denied a merit increase may appeal the denial if the reasons given for the denial do not reflect on the merit of the employee's performance. The council shall initially determine whether or not such reasons are given. If so, the appeal shall be denied. If not, the council shall take testimony regarding the performance of the employee. Both the appointing authority and the employee shall have the right to present witnesses and give evidence.

2. The council shall recommend the appointing authority either grant or deny the merit increase. The appointing authority shall make the final decision.

F. Other appeals. Any employee or appointing authority affected by action taken in the administration of 7 MCAR SS 1.235-1.315 may appeal the action. The council shall review the actions for compliance with the rules of the Minnesota merit system and applicable law and shall recommend to the commissioner remedial action which is warranted. The commissioner's action shall be final.

7 MCAR S 1.255 Interagency operations.

A. Payroll review. The secretary and executive officer shall adopt a plan providing for the review by the supervisor of the payrolls or certified listings of employees and current salaries. Such plans shall provide for a periodic review of the payrolls or certified listings of employees and current salaries for conformity with the provisions of these rules.

B. Records and reports. The supervisor shall establish and maintain service records for each employee, showing name and classification, organizational unit, salary, changes in status, service ratings, and such other personnel information as may be considered pertinent. Every recommendation for a temporary or permanent change in the status of an employee shall be submitted by the appointing authority to the supervisor on forms prescribed by him.

C. Cooperation with merit system agencies. The supervisor, with the approval of the secretary and executive officer, may cooperate with other state, federal, or local merit system agencies operating in conformity with the standards comparable to those contained in these rules. With the approval of the secretary and executive officer, the supervisor may announce and administer joint examinations in conformity with the standards of these rules, and the registers so established shall be given recognition under these rules. With the approval of the secretary and executive officer, the supervisor may add to the end of the established eligible registers the names of persons who are on comparable registers of jurisdictions operating under standards similar to those set forth in these rules. With the same approval and under the same conditions the supervisor may recognize an appropriate register in the transfer or reinstatement of eligible employees from such recognized

agencies to comparable positions in the merit system. All persons appointed under this rule shall be required to serve a six months probationary period.

7 MCAR S 1.256 Effective date. These rules shall become effective on formal adoption by the Minnesota State Board of Health.

7 MCAR S 1.260 Salary adjustments and increases.

A. Availability of funds. Before salary increases and adjustments are made in accordance with these rules or in accordance with a negotiated contract or agreement, the local public health authority shall have in its records and carry in its minutes a definite statement that funds for this purpose are available.

B. Adjustments to be made in accordance with merit system official compensation plan.

1. In agencies where there is not a negotiated salary schedule, adjustments in the rates of pay of incumbents of positions, in order to conform to a newly adopted or currently effective compensation plan, shall be in accordance with the following provisions except as provided for in 7 MCAR S 1.239 B.1. and B.6.

a. If the rate of pay of employees is below the minimum of the range prescribed for their class of positions on the merit system compensation plan selected by the local public health authority, the rate shall be adjusted to that minimum.

b. If the rate of pay of employees is at or above the new minimum salary adopted for their class, the employee may receive the general adjustment adopted, but if their class was adjusted to a greater extent than the general adjustment granted employees they may receive a further adjustment as provided in 7 MCAR S 1.239 D.6. as long as such further adjustment would not place them over the new maximum salary for their class.

c. In those unique situations where local public health authorities determine the general adjustment adopted is inappropriate for their employees based on extraordinary circumstances in their geographic area, such local public health authorities may give a different adjustment, other than the general adjustment adopted; provided, however, such local public health authorities file with the supervisor the new salary steps by class and a salary conversion table as provided for in 7 MCAR S 1.315. Such adjustments shall at least place employees at the minimum salary for their class on the salary schedule adopted by the local public health authorities and shall not be over the maximum salary.

d. Employees may be granted salary adjustments over

the maximum salary prescribed for their class, only if such an adjustment is adopted, following the annual salary public hearing and then only in the amount adopted for their class.

e. If the rate of pay of an employee is higher than the maximum of the range prescribed for his/her class of positions, the rate may remain the same as long as the employee retains the same position.

f. If the rate of pay of an employee falls between the minimum and maximum of the range prescribed for his/her class but does not correspond with any intervening steps in the range, due to the adoption of a general adjustment, such rate may remain the same. In the case of subsequent merit increases, such employee shall be placed back on a step in the range for his/her class of positions.

2. The general adjustment recommended for incumbents is eight percent for employees on the professional, health services support, clerical, and building maintenance salary schedules.

3. Intra-agency salary differentials between employees in the same class of positions, between employees in different classes of positions in the same occupational field, and between occupational fields in the same agency are recognized as important factors in the maintenance of satisfactory morale. If the general adjustments result in the reduction of the differentials between employees in the same class of positions or between employees in different classes of positions in the same occupational field, adjustments may be made that will insofar as practicable, maintain such differentials within the limits of the new plan. In maintaining such differentials, the appointing authority shall take into consideration the length of service and quality of performance of the employee affected.

C. Adjustments to be made in accordance with negotiated salary schedules. In agencies where there is an exclusive representative and a negotiated salary schedule for employees in the bargaining unit, adjustments in the rates of pay of these employees shall follow the wording of the contract or agreement.

D. Merit increases.

1. Increases from the minimum on the official merit system compensation plan or on any negotiated salary schedule or on any salary schedules filed with the supervisor pursuant to 7 MCAR S 1.260 B.1.c.,shall be by successive intervening steps of pay for the class, with due consideration for length of service and quality of performance. When adjustments pursuant to 7 MCAR S 1.260 B.1.f. result in employees no longer being on a salary step as published in 7 MCAR S 1.314 for their class, any subsequent merit increases shall be to an appropriate step on 7 MCAR S 1.314 for their class.

2. Upon the satisfactory completion of the probationary period, an employee may be considered for a merit increase.

3. A merit increase for each employee not at the maximum for his/her class of positions shall be considered at least once each 12 month period unless otherwise negotiated through a contract or agreement by the appointing authority and the exclusive representative. In the event that an increase is not granted, the reasons for the denial of the increase shall be reported, in writing, to the employee and to the merit system supervisor.

4. Except as otherwise negotiated by the appointing authority and the exclusive representative, a merit increase shall not be granted until the employee has served six months at the rate of pay from which an increase is proposed, except that in case of exceptionally meritorious service or abnormal employment conditions that result in staff losses and shortages of available qualified persons, a merit increase of more than one step in the range or at less than a six month interval may be permitted. In each case, however, the facts upon which the merit increase is based shall be recorded in the official minutes of the local public health authority and reported to the merit system supervisor.

5. An extraordinary merit increase within the agency's salary range may be granted upon accrual of 15 additional credits in a field or fields pertinent to the employee's class. The proposed increases shall be submitted to the supervisor for approval before it becomes effective. In each case the employee's transcript of coursework shall accompany the proposed salary increase.

E. Salary decreases.

1. Except as otherwise negotiated by an agency and the exclusive representative, a salary decrease within the range prescribed for the class may be made only for just cause. A permanent employee shall be notified of the intention to effect a reduction in pay and the reasons for the action at least ten calendar days prior to the date on which the reduction becomes effective. A copy of the notice shall be sent to the supervisor. A permanent employee whose salary is reduced may request a hearing as provided in 7 MCAR S 1.254 E.

2. Contract or agreement provisions whereby a salary adjustment or salary increase is negotiated for a set period of time do not fall within the provisions of 7 MCAR S 1.260 E.1.

1.235-365

7 MCAR S 1.261 Salary computation provisions for full and part-time employment, vacation and sick leave pay upon termination, partial pay periods, overtime pay and part payment from another source.

A. Pay periods. The length of pay periods is at the discretion of the appointing authority or may be negotiated when there is an exclusive representative.

B. Full-time and part-time employment.

1. All rates prescribed by 7 MCAR SS 1.314 and 1.315 shall be standard rates for full-time employees except as otherwise negotiated for employees in a bargaining unit in an agency where there is an exclusive representative or under the provisions of 7 MCAR S 1.2395 B.3. If employment in a position is on a part-time or intermittent basis, only the proportional part of the rate for the time actually employed shall be paid. Such time may be paid on an hourly, working-day or proportion of a month basis. The agencies using 7 MCAR S 1.314 shall use the table prepared in accordance with 7 MCAR S 1.315 in computing such payment.

2. Those agencies with an exclusive representative who negotiate different salary schedules from those shown in 7 MCAR S 1.314 under the provisions of 1. or those agencies operating under the provisions of 7 MCAR S 1.2395 B.3. shall file within ten days after the signing of the contract such schedules with the supervisor. Attached thereto shall be a table similar in format, computation, and information to the table provided for in 7 MCAR S 1.315. The table shall show monthly rates with appropriate conversion to hourly rates and to daily rates based on the number of working days and paid holidays in the month, and payment by payroll period for full-time work if such payment is made on other than a monthly basis.

C. Payment for less than a full payroll period. The amount of salary paid for a period less than a full payroll period to an employee shall be determined on the basis of the number of hours and days the employee worked in the payroll period. Agencies shall use the table provided for in 7 MCAR S.1.315 in computing this salary. Those agencies with an exclusive representative who have negotiated different salary schedules and those agencies operating under the provisions of 7 MCAR S 1.260 B.1.c. shall use their table prepared in accordance with 7 MCAR S 1.315 in computing this salary.

D. Part payment from another source. When part of the compensation of a local public health employee regularly is paid from another source, such as federal, state, city or county governmental departments, or from a different fund or account outside the control of the local public health authority, the total salary from all governmental sources combined shall not exceed the amount payable at the maximum rate for the class of position involved on the compensation plan adopted by the agency.

E. Compensation for vacation and/or sick leave upon separation.

1. An employee who has permanent status in a local public health agency in some class and who is separated from the agency shall be paid for accumulated, unused vacation leave in accordance with 7 MCAR S 1.250 D.4., on the basis of the appropriate daily or hourly rate as shown on the table prepared in accordance with 7 MCAR S 1.315. This is illustrated by the

following examples:

An employee who earns $844 a month and is paid $388 on a bi-weekly payroll ($38.80 daily rate) works eight days in the payroll period and terminates her employment. She has 11 days of vacation accumulated. Daily rate of $38.80 X 19 days (eight regular working days plus 11 days of vacation) = $737.20.

An employee who earns $844 a month and is paid on a monthly basis works eight days in the month which has 22 working days in it and terminates her employment. She has 11 days of vacation accumulated. Daily rate of $38.36 (for 22 day month) X 19 days (eight regular working days plus 11 days of vacation) = $727.70.

2. The amount of vacation pay due shall be added to the salary earned by the employee for time worked in the last pay period of employment and made in the form of a single lump sum payment.

3. Compensation for sick leave payment, in cases where payment is made on termination, shall be in the same manner as for vacation leave under 2.

F. Overtime compensation. Except for the provisions of the Minnesota Fair Labor Standards Act, no additional compensation shall be paid for overtime, whether in the discharge of duties of the position or for the duties of another position, except in an emergency in which the local public health authority orders such overtime; or when such overtime is otherwise approved in advance by the local public health authority or its designee; or as may be otherwise negotiated. Rates of pay for this overtime work shall be decided by the local public health authority and it shall be discretionary with the local public health authority whether the employee shall have compensatory time off or overtime pay, except as provided in the Minnesota Fair Labor Standards Act or as modified through contractual agreement in those agencies where employees have an exclusive representative. When payment is made for overtime, the rate and the number of hours worked shall be shown in the "Remarks" column on the payroll report.

7 MCAR S 1.262 Appointment, promotions, demotions, transfers and reinstatements.

A. Appointment.

1. The entrance salary for any new employee whether an original appointment, provisional appointment, or emergency appointment, shall be at the minimum salary for the class of positions to which the employee is appointed, except when appointments are permitted above the minimum in accordance with 7 MCAR S 1.2394.

2. An employee who is provisionally employed at a rate of pay higher than the minimum of the range prescribed for the

class shall not be reduced in pay at the time of appointment from a register to the class.

B. Promotions.

1. Employees who are promoted shall have their salaries raised to the minimum rate of pay for the new class. If their salaries before promotion fall within the range of the new class but not on any step within that range, the salaries shall be adjusted to the next higher step.

2. Employees granted salary increases after having been promoted may be permitted to retain that increase when returned to a lower class, if their salaries do not exceed the maximum salary for the lower class.

C. Demotions. An employee who is demoted except in accordance with 7 MCAR S 1.238 D. and whose salary is above the maximum rate for the lower class shall be reduced in salary to at least the maximum rate for the new class. If the former salary is within the salary range for the lower class, the same salary may be continued. An employee whose position is reclassified downward in accordance with 7 MCAR S 1.238 D. and remains in the same position may retain the former salary if it is above the maximum salary rate for the lower class but shall be ineligible to receive any further increases except those subsequently provided in the new classification.

D. Transfers. An employee who is transferred may be paid the same salary that he received prior to transfer. If an employee's salary prior to transfer falls within the salary range of the class to which the employee is transferring, but is not on a salary step in that range, the employee's salary may be increased to the next higher step in the range. It shall not be decreased.

E. Reinstatements. A former employee who is reinstated or re-employed may be paid the same salary that he last received in the same class of position if it coincides with a step in the current salary range for the class, or if it does not coincide, at the next higher step.

7 MCAR S 1.263 Local public health agency regulations. Any variation from the compensation plan adopted by the local public health authority shall be in accordance with the provisions of the merit system rules (see 7 MCAR S 1.239 B.).

7 MCAR S 1.314 Compensation plan (public health) 1982. The tables in A.-D. list salary steps in monthly salary amounts for the specified classes of positions.

A. Professional and administrative.

1. Plan A.

a. Class of positions.

	1	2	3	4	5	6	7	8	9
Asst. Dir. of Envir. Health	1696	1777	1854	1939	2026	2117	2213	2316	2421
Asst. Dir. of Pub. Hlth. Nurs.	1549	1620	1696	1777	1854	1939	2026	2117	2213
Business Administrator	1549	1620	1696	1777	1854	1939	2026	2117	2213
Business Supervisor	1136	1187	1241	1299	1358	1420	1485	1549	1620
Dir. of Envir. Health	1939	2026	2117	2213	2316	2421	2532	2645	2770
Dir. of Pub. Hlth. Nurs. I	1549	1620	1696	1777	1854	1939	2026	2117	2213
Dir. of Pub. Hlth. Nurs. II	1696	1777	1854	1939	2026	2117	2213	2316	2421
Home Care Coordinator	1358	1420	1485	1549	1620	1696	1777	1854	
Medical Technologist	1241	1299	1358	1420	1485	1549	1620		
Public Health Educator I	1241	1299	1358	1420	1485	1549	1620	1696	
Public Health Educator II	1549	1620	1696	1777	1854	1939	2026	2117	
Public Health Nurse	1299	1358	1420	1485	1549	1620	1696		
Public Health Nurse (Team Leader)	1358	1420	1485	1549	1620	1696	1777		
Public Health Nutritionist	1420	1485	1549	1620	1696	1777	1854	1939	
Registered Nurse (A.A. Deg., 3 yr. Dip., or B.S. Deg.)	1241	1299	1358	1420	1485	1549			
Sanitarian I	1241	1299	1358	1420	1485				
Sanitarian II	1358	1420	1485	1549	1620	1696	1777	1854	
Sanitarian III	1485	1549	1620	1696	1777	1854	1939	2026	2117

Sanitarian IV	1620	1696	1777	1854	1939	2026	2117	2213	2316
School Health Coordinator	1299	1358	1420	1485	1549	1620	1696	1777	
Senior Public Health Nurse	1420	1485	1549	1620	1696	1777	1854		

2. Plan B.

a. Class of positions.

	1	2	3	4	5	6	7	8	9
Asst. Dir. of Envir. Health	1777	1854	1939	2026	2117	2213	2316	2421	2532
Asst. Dir. of Pub. Hlth. Nurs.	1620	1696	1777	1854	1939	2026	2117	2213	2316
Business Administrator	1620	1696	1777	1854	1939	2026	2117	2213	2316
Business Supervisor	1187	1241	1299	1358	1420	1485	1549	1620	1696
Dir. of Envir. Health	2026	2117	2213	2316	2421	2532	2645	2770	2897
Dir. of Pub. Hlth. Nurs. I	1620	1696	1777	1854	1939	2026	2117	2213	2316
Dir. of Pub. Hlth. Nurs. II	1777	1854	1939	2026	2117	2213	2316	2421	2532
Home Care Coordinator	1420	1485	1549	1620	1696	1777	1854	1939	
Medical Technologist	1299	1358	1420	1485	1549	1620	1696		
Public Health Educator I	1299	1358	1420	1485	1549	1620	1696	1777	
Public Health Educator II	1620	1696	1777	1854	1939	2026	2117	2213	
Public Health Nurse	1358	1420	1485	1549	1620	1696	1777		
Public Health Nurse (Team Leader)	1420	1485	1549	1620	1696	1777	1854		
Public Health Nutritionist	1485	1549	1620	1696	1777	1854	1939	2026	

Registered Nurse (A.A. Deg., 3 yr. Dip., or B.S. Deg.)	1299	1358	1420	1485	1549	1620			
Sanitarian I	1299	1358	1420	1485	1549				
Sanitarian II	1420	1485	1549	1620	1696	1777	1854	1939	
Sanitarian III	1549	1620	1696	1777	1854	1939	2026	2117	2213
Sanitarian IV	1696	1777	1854	1939	2026	2117	2213	2316	2421
School Health Coordinator	1358	1420	1485	1549	1620	1696	1777	1854	
Senior Public Health Nurse	1485	1549	1620	1696	1777	1854	1939		

3. Plan C.

a. Class of positions.

	1	2	3	4	5	6	7	8	9
Asst. Dir. of Envir. Health	1854	1939	2026	2117	2213	2316	2421	2532	2645
Asst. Dir. of Pub. Hlth. Nurs.	1696	1777	1854	1939	2026	2117	2213	2316	2421
Business Administrator	1696	1777	1854	1939	2026	2117	2213	2316	2421
Business Supervisor	1241	1299	1358	1420	1485	1549	1620	1696	1777
Dir. of Envir. Health	2117	2213	2316	2421	2532	2645	2770	2897	3028
Dir. of Pub. Hlth. Nurs. I	1696	1777	1854	1939	2026	2117	2213	2316	2421
Dir. of Pub. Hlth. Nurs. II	1854	1939	2026	2117	2213	2316	2421	2532	2645
Home Care Coordinator	1485	1549	1620	1696	1777	1854	1939	2026	
Medical Technologist	1358	1420	1485	1549	1620	1696	1777		
Public Health Educator I	1358	1420	1485	1549	1620	1696	1777	1854	
Public Health									

Educator II	1696	1777	1854	1939	2026	2117	2213	2316	
Public Health Nurse	1452	1516	1583	1656	1734	1814	1894		
Public Health Nurse (Team Leader)	1516	1583	1656	1734	1814	1894	1982		
Public Health Nutritionist	1549	1620	1696	1777	1854	1939	2026	2117	
Registered Nurse (A.A. Deg., 3 yr. Dip., or B.S. Deg.)	1387	1452	1516	1583	1656	1734			
Sanitarian I	1358	1420	1485	1549	1620				
Sanitarian II	1485	1549	1620	1696	1777	1854	1939	2026	
Sanitarian III	1620	1696	1777	1854	1939	2026	2117	2213	2316
Sanitarian IV	1777	1854	1939	2026	2117	2213	2316	2421	2532
School Health Coordinator	1420	1485	1549	1620	1696	1777	1854	1939	
Senior Public Health Nurse	1583	1656	1734	1814	1894	1982	2068		

B. Health services support personnel.

1. Plan A.

a. Class of positions.

	1	2	3	4	5	6	7	8	9
Animal Warden	887	929	973	1017	1063	1109	1161		
Bookkeeper	929	973	1017	1063	1109	1161	1212	1269	1327
Home Health Aide	712	741	777	813	849	887			
Home Health Aide Coordinator	973	1017	1063	1109	1161	1212	1269		
Inspector I	995	1039	1084	1136					
Inspector II	1084	1136	1187	1241	1299	1358	1420		
Laboratory Technician	849	887	929	973	1017	1063	1109		
Licensed Practical Nurse	950	995	1039	1084	1136	1187			

Medical Laboratory Assistant	887	929	973	1017	1063	1109	1161		
Nutrition Assistant	929	973	1017	1063	1109	1161	1212	1269	
Public Health Aide	596	625	654	683	712	741	777		

2. Plan B.

a. Class of positions.

	1	2	3	4	5	6	7	8	9
Animal Warden	929	973	1017	1063	1109	1161	1212		
Bookkeeper	973	1017	1063	1109	1161	1212	1269	1327	1387
Home Health Aide	741	777	813	849	887	929			
Home Health Aide Coordinator	1017	1063	1109	1161	1212	1269	1327		
Inspector I	1039	1084	1136	1187					
Inspector II	1136	1187	1241	1299	1358	1420	1485		
Laboratory Technician	887	929	973	1017	1063	1109	1161		
Licensed Practical Nurse	995	1039	1084	1136	1187	1241			
Medical Laboratory Assistant	929	973	1017	1063	1109	1161	1212		
Nutrition Assistant	973	1017	1063	1109	1161	1212	1269	1327	
Public Health Aide	625	654	683	712	741	777	813		

3. Plan C.

a. Class of positions.

	1	2	3	4	5	6	7	8	9
Animal Warden	973	1017	1063	1109	1161	1212	1269		
Bookkeeper	1017	1063	1109	1161	1212	1269	1327	1387	1452
Home Health Aide	777	813	849	887	929	973			
Home Health Aide Coordinator	1063	1109	1161	1212	1269	1327	1387		
Inspector I	1084	1136	1187	1241					

Inspector II	1187	1241	1299	1358	1420	1485	1549	
Laboratory Technician	929	973	1017	1063	1109	1161	1212	
Licensed Practical Nurse	1039	1084	1136	1187	1241	1299		
Medical Laboratory Assistant	973	1017	1063	1109	1161	1212	1269	
Nutrition Assistant	1017	1063	1109	1161	1212	1269	1327	1387
Public Health Aide	654	683	712	741	777	813	849	

C. Clerical.

1. Plan A.

a. Class of positions.

	1	2	3	4	5	6	7	8
Clerk I	616	645	676	704	734	766	801	839
Clerk II	704	734	766	801	839	877	917	959
Clerk III	784	821	857	895	937	982	1027	1073
Clerk-Typist I	645	676	704	734	766	801	839	877
Clerk-Typist II	704	734	766	801	839	877	917	959
Clerk-Typist III	784	821	857	895	937	982	1027	1073
Clerk-Steno I	676	704	734	766	801	839	877	917
Clerk-Steno II	766	801	839	877	917	959	1004	1049
Clerk-Steno III	821	857	895	937	982	1027	1073	1119
Swbd. Operator I	704	734	766	801	839	877	917	959
Swbd. Operator II	748	784	821	857	895	937	982	1027

2. Plan B.

a. Class of positions.

	1	2	3	4	5	6	7
Clerk I	704	734	766	801	839	877	917
Clerk II	801	839	877	917	959	1004	1049

Clerk III	895	937	982	1027	1073	1119	1172
Clerk-Typist I	734	766	801	839	877	917	959
Clerk-Typist II	801	839	877	917	959	1004	1049
Clerk-Typist III	895	937	982	1027	1073	1119	1172
Clerk-Steno I	766	801	839	877	917	959	1004
Clerk-Steno II	877	917	959	1004	1049	1094	1147
Clerk-Steno III	937	982	1027	1073	1119	1172	1223
Swbd. Operator I	801	839	877	917	959	1004	1049
Swbd. Operator II	857	895	937	982	1027	1073	1119

3. Plan C.

a. Class of positions.

	1	2	3	4	5	6	7
Clerk I	766	801	839	877	917	959	1004
Clerk II	877	917	959	1004	1049	1094	1147
Clerk III	982	1027	1073	1119	1172	1223	1281
Clerk-Typist I	801	839	877	917	959	1004	1049
Clerk-Typist II	877	917	959	1004	1049	1094	1147
Clerk-Typist III	982	1027	1073	1119	1172	1223	1281
Clerk-Steno I	839	877	917	959	1004	1049	1094
Clerk-Steno II	959	1004	1049	1094	1147	1198	1252
Clerk-Steno III	1027	1073	1119	1172	1223	1281	1340
Swbd. Operator I	877	917	959	1004	1049	1094	1147
Swbd. Operator II	937	982	1027	1073	1119	1172	1223

D. Building maintenance. Employees in the classes specified in 1. and 2. who are required to work for a period of at least five hours after 6 p.m. on a regularly scheduled basis may be paid a shift differential in the amount of one salary step above their normal day-work rate.

1. Plan A.

a. Class of positions.

	1	2	3	4	5	6	7
Custodian	683	708	735	768	801		
Janitor	801	834	870	907	947	986	1027

2. Plan B.

a. Class of positions.

	1	2	3	4	5	6	7
Custodian	801	834	870	907	947		
Janitor	947	986	1027	1074	1119	1166	1218

1.235-315

7 MCAR S 1.315 Provisions for computing monthly, hourly, less-than-full-time, bi-weekly, and four week salary rates; salary conversion tables. The supervisor shall publish a salary conversion table as part of the Minnesota merit system manual. The table shall list all existing salary rates listed in 7 MCAR S 1.314. For those salary rates, the supervisor shall calculate hourly, daily and payroll period salaries for each of the salary rates listed. This table shall be based on an eight hour day, 40 hour week and 2088 hour year. Agencies with a normal work schedule which varies from an eight hour day, 40 hour week or 2088 hour year or agencies with payroll periods other than once every two weeks, every four weeks, or every month, shall supply the supervisor with a salary conversion table.

CHAPTER TWENTY: MHD 316-340

Communicable Diseases

MHD 316 REPORTABLE DISEASES

(a) **Physician to Report.** When called to a case, suspected case, or death from any of the following diseases, the attending physician, within 24 hours, shall provide the local health officer with the information outlined in the form in paragraph (b) below. In areas where there is no local health officer, the information shall be reported directly to the Division of Personal Health Services, Minnesota Department of Health. Diseases preceded by an asterisk shall also be reported immediately to the Minnesota Department of Health either by the local health officer or by the attending physician.

Amebic Dysentery
*Anthrax
*Botulism
Brucellosis (Undulant Fever)
Chickenpox (only patients over 16 years of age)
*Cholera
*Diphtheria
Encephalitis (all types)
Food poisoning, or foodborne illness
Hepatitis — A (formerly Infectious Hepatitis)
Hepatitis — B (formerly Serum Hepatitis)
Lead Poisoning
*Leprosy
Leptospirosis
Malaria
Measles (Rubeola)
Meningitis (all infectious types)
Meningococcemia
Mumps
*Ophthalmia Neonatorum
*Plague
*Poliomyelitis
*Psittacosis
*Rabies (animal and human cases and exposed persons)
Rheumatic Fever
Rubella and Congenital Rubella Syndrome
*Rocky Mountain Spotted Fever
Salmonellosis (including Typhoid)
Shigellosis (Bacillary Dysentery)
*Smallpox
*Tetanus
*Trichinosis
Tuberculosis
Tularemia
*Typhus Fever
Whooping Cough (Pertussis)
Yellow Fever

(Note: Some of the above changes represent rearrangements in order, such as Typhoid Fever.)

(b) **Disease Report Form.** Reports that are required in (a) above to notify health officials of certain diseases shall contain as much of the following information as is known:

MINNESOTA DEPARTMENT OF HEALTH
DISEASE REPORT CARD

As required by Public Health Law, I report to the health officer a case of

Disease _____ Lab. Confirmed? Yes No (circle one)

Patient's Name _____ Age _____ Sex: M F (circle one)

Address _____ City or Township _____ County _____

Phone _____ Occupation _____ Place of Work or School _____

Date of Onset of First Symptom _____ Date of Report _____

Physician _____ Phone _____

Diagnostic Laboratory Findings _____

_____

Possible Source(s) of Infection _____

☐ Check here if additional disease report cards needed. How many?

☐ Check here if other supplies needed. What? How much?

(c) **Unusual Case Incidence.** Any unusual pattern of cases or increased incidence of any illness beyond the expected number of cases in a given period, which may indicate an outbreak, epidemic, or related public health problem associated with one or more reportable diseases in (a) above, shall be reported by telephone by the attending physician as soon as possible to the local health officer or to the Division of Personal Health Services, Minnesota Department of Health.

(d) **No Physician.** When no physician is in attendance, it shall be the duty of the head of the household, or other person in charge of any institution, school, hotel, boarding house, camp, dairy farm, or pasteurization plant, or any other person having knowledge of any individual believed to have or suspected of having any disease, presumably communicable, to report immediately the name and address of any such person to the local health officer or if there is no local health officer, to the Division of Personal Health Services, Minnesota Department of Health.

(e) **Reports to State.** Within 24 hours of receipt of such information or other knowledge of a case, the local health officer shall forward same to the Minnesota Department of Health, Division of Personal Health Services, 717 Delaware Street S. E., Minneapolis, Minnesota, 55440, after transcribing essential information for permanent local record.

MHD 317 QUARANTINE PLACARD — RESPONSIBILITY FOR REMOVAL

(a) No person or persons shall alter, deface, remove, destroy, or tear down any posted notice relating to a communicable disease. The occupant or person having possession or control of a building upon which such a notice has been posted, shall be held responsible for the unauthorized removal of such notice, and shall, within twenty-four (24) hours after the destruction

or unauthorized removal of such notice, notify the local health officer of such removal or destruction.

MHD 318 CASES OCCURRING IN HOTELS

(a) Any person who is infected with diphtheria, epidemic influenza, scarlet fever, smallpox, trachoma, tuberculosis, typhoid fever, or other communicable disease, and is residing in a common lodging house, or hotel shall be removed therefrom under the supervision of the local health officer, to a suitable hospital or place of quarantine, if necessary, in order to prevent exposure of other persons to infection. In such cases, if an infected person cannot be removed without danger to his or her health, the local health officer shall make provisions for the care of such individual in the house where he or she may be found and may cause other persons in the house to be removed therefrom after being submitted to the necessary disinfection.

MHD 319 FAILURE TO DISINFECT PREMISES

(a) Whenever the order or direction of the local health officer requiring disinfection or cleansing of articles, premises, or apartments shall not be complied with, he shall cause a placard in words and form as follows, to be placed upon the door of such an apartment or premises, to wit:

NOTICE

..... is a communicable disease.

These apartments have been occupied by a .....

..... patient and may be infected. They must not be occupied until the order of the health officer directing their renovation and disinfection has been complied with.

This notice must not be removed under penalty of law except by the health officer or an authorized officer.

(b) **Disinfection of Premises and Bodily Discharges.** It shall be the duty of a person afflicted with a communicable disease or having charge of such a patient;

(1) to dispose of any bodily discharge so that no offense or danger will be caused to other persons,

(2) to prevent access of flies, insects, vermin, or pets to the patient or to infectious material,

(3) to disinfect or destroy furnishings, bedding, or other articles, under the direction of the health officer, when necessary for the protection of others.

MHD 320 MILK AND OTHER FOOD FROM INFECTED PREMISES.

No milk, cream, butter, or other food or food products liable to be eaten without being cooked after last handling shall be offered for sale or given to any party or delivered to any creamery, butter factory, store, shop or

market from a house where a case of diphtheria, dysentery (amebic or bacillary), poliomyelitis, scarlet fever, epidemic sore throat, smallpox, typhoid fever, paratyphoid fever exists, nor shall any person resident in such house handle in any capacity milk or milk products offered for sale. The sale of such foods or food products is forbidden from farm premises or other premises where any of the diseases mentioned exist except under the following conditions:

Those having to do with the food or food products shall eat, sleep and work wholly outside of the house or part of the house in which the patient is isolated, and shall in no way handle anything or person whatever, coming from or connected with the house or part thereof in which the patient is isolated, nor shall those under isolation in the house handle any person or thing connected with the food or food products.

MHD 321 SPECIAL PRECAUTIONS DURING EPIDEMIC. During an epidemic of communicable disease, the meeting, assembling or gathering together of persons in the health district, or part thereof, where such epidemic prevails, or the communicating of persons living therein with others, when such assembling or communicating is done in such a way as to endanger the public health and facilitate the spread of the epidemic, is hereby prohibited.

The executive officer of the Minnesota State Board of Health shall whenever an epidemic of communicable disease exists in any part of the State, notify the local health officer as to what meetings, assemblings or gatherings of persons and what forms of communication between them will be prohibited, and thereupon such local health officer shall cause to be conspicuously posted in the territory a notice as follows:

"**Notice of Epidemic.** An epidemic of communicable disease existing in the territory included within ..... and the executive officer of the Minnesota State Board of Health having notified me that the following meetings, assemblages or gatherings of persons therein, and the following forms of communication between people living therein and others are prohibited by the regulations of the Minnesota State Board of Health, to-wit: .....
.....

Notice is hereby given that the meeting, assembling or gathering of persons or communicating between them as aforesaid is unlawful, and offenders will be prosecuted.

Dated:

.....
Local Health Officer."

MHD 322—REPORTING OF SICK SCHOOL CHILDREN

(a) The person in charge of a school shall exclude from school all children who 1. return to school after an illness of unknown cause, 2. appear to be in ill health, 3. have lice or other vermin. The parents of such children shall be notified of the reason for exclusion and such cases shall be referred to the family physician, the school physician or the health officer. Children shall not be readmitted until they obtain a certificate from the health officer or his authorized agent.

(b) Each school physician or local health officer shall make a medical examination of all pupils referred to him under Reg. , and such other examinations of pupils, teachers, and janitors, and of school buildings, as in his opinion, the protection of public health, the efficiency of the school, or the welfare of the individual may require, and shall make a written report and appropriate recommendations to the school officials and the local health officer.

(c) **Permits to Reattend School.** A person having a communicable disease (see list under Regulation MHD 316) or any other transmissible affection (tonsillitis, mumps, conjunctivitis, impetigo contagiosa, itch, ringworm, etc.) or a parasitic infection (lice or other vermin) or any person residing in a house in which any such disease exists, or has recently existed, shall be excluded from attending any public, private, or parochial school, church, or Sunday school, or any public or private gathering whatsoever, until the health officer of the sanitary district concerned shall have given his permission for such attendance.

(d) No parent, master or guardian of a child or minor, having the power and authority to prevent, shall permit any such child or minor to attempt to attend school in violation of the provisions of Regulation MHD 322.

(e) **Closure of Private Schools.** No private boarding school or institutional school of any type where all or part of the pupils are housed within the institution shall be closed because of the presence of a communicable disease without prior notice to the State Board of Health by telephone or telegraph. No child, teacher, or employee of said school or institution shall leave the sanitary district in which the school is located without permission of the local health officer or the State Board of Health.

MHD 323 TRANSFER OF PATIENTS. A patient in the communicable stage of diphtheria, measles, meningitis (meningococcus), scarlet fever, epidemic sore throat, smallpox (typhoid fever, paratyphoid fever, whooping cough, or other dangerous communicable disease, may be transferred from one city, village, or township to another when permission has been secured from the health officers of the respective jurisdictions from which and to which the patient is moved, and from the State Board of Health. Such transfer shall be made in a manner not dangerous to the public health.

MHD 324 SECURING LABORATORY SPECIMENS FROM TYPHOID AND OTHER GERM CARRIERS. Any person suspected of being in a condition such that disease may be spread through his or her bodily excretions or discharges, shall on request of local health officer or an authorized agent of the State Board of Health submit to the State Board of Health, specimens of such bodily excretions or discharges, in manner and amount, at such intervals and under such supervision as prescribed by the State Board of Health. If deemed necessary by the local or State Board of Health for the control of spread of infection, supervision of the collection of specimens shall include temporary hospitalization at public expense.

MHD 325 CONTACTS. At the discretion of the local health officer, persons exposed to any communicable disease may be held in isolation, or may be required to report to him at reasonable intervals.

326-392

MHD 326 ADDITIONAL CONTROL MEASURES FOR CERTAIN COMMUNICABLE DISEASES

(a) **Anterior Poliomyelitis.** Cases of poliomyelitis shall be isolated for

one week from the date of onset, or duration of fever if longer. Children in the house and persons associated with the patient may, at the discretion of the health officer, be kept under observation for up to two weeks after last exposure.

(b) **Anthrax.** No person shall manufacture, have, keep, offer for sale, sell, distribute or give away, in the State of Minnesota, any shaving brush in which horsehair is used in whole or in part.

(c) **Chickenpox**

(1) All Cases of reported chickenpox in persons of sixteen (16) years of age or over, shall be examined by the local health officer, who shall record whether the patient has been successfully vaccinated against smallpox, or not.

(2) **Attendance at School.** Children having chickenpox shall be excluded from school for seven (7) days from the first appearance of the exanthem.

(d) **Diphtheria**

(1) The local health officer shall post in a conspicuous place upon the entrance to premises where diphtheria exists, a notice in words and form as follows:

DIPHTHERIA

exists on these premises.

All persons except attending physicians are forbidden to go into or away from this house, or to carry anything away from the house without the permission of the health officer.

The occupant of this house will be held responsible for the unauthorized removal of this card.

By order of

.....19.... .....

(Date) Health Officer

(2) So-called laryngeal croup and membranous croup, shall be classed, quarantined and cared for as diphtheria.

(3) In suspicious cases of sore throat the same notice shall be posted with the word "suspected" placed above the word "diphtheria."

(4) **Laboratory Examinations**

(aa) **The health officer, personally, or through the attending physician, shall take nose and throat cultures** from all doubtful or suspected cases and contacts and submit them to one of the laboratories of the State Board of Health for bacterial diagnosis.

If the laboratory diagnosis is **"Reserved. Send another specimen,"** no change shall be made in the notice.

If the laboratory diagnosis is **"Diphtheria,"** the word "suspected" alone shall be removed from the notice, as provided for under Regulation MHD 326(d)(3).

If the laboratory diagnosis is **"No diphtheria bacilli found,"** and a clinical diagnosis of diphtheria still cannot be made, the health officer may raise the quarantine.

(bb) In all **cases diagnosed "Diphtheria," "Laryngeal Croup"** or **"Membranous Croup,"** upon clinical findings, or **"Diphtheria"** upon laboratory findings, **two consecutive negative sets of separate nose and throat cultures are required for the removal of all restrictions.** Cultures from patient should be sent at least once a week after recovery, but before raising quarantine separate nose and throat cultures from each member of the household shall be submitted to one of the laboratories of the State Board of Health. Quarantine of household shall be raised and all restrictions of individuals removed at once upon obtaining "for release" two consecutive negative sets of separate nose and throat cultures from patient and all infected members of household, and one set of negative cultures from all other members of household.

If any member of household (patients or others) **continues to carry diphtheria bacilli,** quarantine of the household shall be raised six weeks (42 days) after the subsidence of clinical symptoms in the last case, but **restrictions** of infected members of household and others **must be continued as provided for under Regulation MHD 326(d), 6.**

(5) All members of a household where diphtheria exists shall be quarantined unless the patient is entirely isolated in a portion of the house used for no other purpose and is in charge of a reliable attendant.

If proper isolation obtains and the **laboratory diagnosis** on nose and throat cultures from members of the household employed at gainful occupations is **"No diphtheria bacilli found,"** such persons may be released from quarantine, provided they make a declaration in writing to the health officer that they will not come in contact with the patient, the patient's room or anything or any person coming in contact with the patient or the patient's room. The health officer shall issue written permits of release which may be revoked if the above provisions are not complied with.

PERMIT TO REATTEND SCHOOL

(6) **Patients or others remaining infected longer than six weeks** following subsidence of clinical symptoms in the last case, shall not be permitted to attend any public, private, or parochial school, church, or Sunday school, or any public or private gathering, until two consecutive negative sets of separate nose and throat cultures have been reported in accordance with Regulation 10824.

All children in the household shall be subject to the above restrictions unless isolation of the infected persons obtains, when the health officer shall issue written permit which may be revoked if conditions are not complied with.

The health officer may give permission for persons remaining infected longer than six weeks to go to his office or that of his authorized agent for the purpose of having cultures taken.

7. Persons associated with a case and wishing to leave the premises before quarantine is raised, shall be separated from the patient and shall have nose and throat cultures taken by the health officer or attending physician. If the laboratory diagnosis is **"No diphtheria bacilli found,"** the person may be released from quarantine. After fatal cases, the members of the household shall not be released from quarantine until the above measures have been carried out.

(8) **All cultures must be taken by a physician or sanitary inspector** and cultures for release of quarantine shall be taken with at least twenty-four (24) hours intervening. All cultures must be submitted to one of the laboratories of the State Board of Health or to a laboratory having the official endorsement of said board. Reports on cultures examined elsewhere will not be officially recognized.

(e) **Encephalitis.** The patient's room shall be carefully screened throughout the course of the active disease if any flies or insects are about. All cases of encephalitis shall be considered as of the epidemic type, transmissible by vectors, unless another diagnosis is determined. For the welfare of the patient the patient may be isolated during the course of the active disease.

(f) **Measles**

(1) Persons having measles shall be confined to their home premises from the time of diagnosis until five (5) days after the appearance of the rash.

(g) **Meningitis (Meningococcus).** Every case of meningitis shall be classed as of meningococcus type and cared for accordingly until proved to be otherwise. Cases of meningococcus meningitis shall be isolated for at least 7 days after the first symptoms appear. Children in the house, and persons associated with the patient shall be kept under observation for 7 days after last exposure.

(h) **Rabies.** When any person has been attacked by an animal suspected of being or known to be rabid, the attending physician or the health officer in communication with the Division of Disease Prevention and Control, Minnesota Department of Health, shall determine as soon as practicable the advisability of said person receiving preventive treatment. The offending animal shall not be killed unless it cannot safely be secured. The secured animal shall be observed for symptoms for a period of ten days. If the animal on the tenth day shows clinical symptoms suggestive of rabies, the observation period shall be extended.

(i) **Scarlet Fever, Scarlatina and Epidemic Sore Throat.** A person having scarlet fever, scarlatina, or epidemic sore throat (streptococcal) shall be isolated until clinical recovery, or no less than seven days from onset. Isolation may be terminated after 24 hours after treatment with penicillin provided therapy is continued for 7 to 10 days. Alternative therapy with erythromycin may be utilized in patients sensitive to penicillin.

(j) **Smallpox**

(1) **Quarantine Signs.** The local health officer shall post in a conspicuous place upon the entrance to premises where smallpox exists, a notice in words and form as follows:

SMALLPOX

exists on these premises

Smallpox patients must not leave the house until after the removal of the warning card.

Every person exposed to smallpox, who cannot show evidence of a recent successful vaccination or a recent attack of smallpox, must be vaccinated within three (3) days of first exposure or be isolated twenty-one (21) days after last exposure.

Only those protected by vaccination are allowed to go into or from this house.

The occupants of this house will be held responsible for the unauthorized removal of this card.

By order of

.....19.... .....

(Date) Health Officer

(2) All members of a household where smallpox exists shall be quarantined until released by the local health officer under the following provisions:

(aa) Before release of a smallpox patient the skin must be free of scabs and the dark-colored plaques, often present under the outer layer of skin of the palms of the hands and the soles of the feet; the patient must take a full bath and shampoo the hair, and all clothing and other articles exposed to infection must be disinfected as directed by the local health officer;

(bb) Persons, not protected by a recent successful vaccination or an attack of smallpox, residing on premises where smallpox exists or directly exposed by association with a case of smallpox, who refuse to be vaccinated shall be isolated and shall not be permitted to leave the premises until twenty-one (21) days after last exposure;

(cc) Persons who are protected by a recent successful vaccination, or an attack of smallpox, or who submit to vaccination within three (3) days after first exposure to smallpox, may be given written authorization by the local health officer to go into and from the premises under quarantine for smallpox.

(3) **Vaccination**

(aa) **Voluntary Public Vaccination.** Whenever smallpox shall be epidemic in Minnesota and in the judgment of the Secretary of the State Board of Health, vaccination shall be necessary to control such disease not only in those health districts where cases of smallpox actually exist, but also in those districts where no smallpox cases are present, then and in such case the health officer of each municipality or the chairman of the board of supervisors of each town shall arrange for the free voluntary vaccination of all of the inhabitants of the health district over which the local board of

health has jurisdiction, provided that the governing body of such municipality or town shall appropriate money therefor. The expense thereof shall constitute an item incident to the control of a communicable disease and shall be deemed an incident to the establishment, enforcement, and release of quarantine, and one-half thereof shall be recoverable from the proper county as provided in Minnesota Statutes 1911, Section 145.05.

(bb) **Vaccination in State Institutions.** A successful vaccination must be required of all officers and employees in state institutions when such individuals are brought into contact in any way whatever with the wards of the institution.

(cc) **Smallpox in Schools.** If smallpox prevails in a community, or if the disease appears in a school, all unvaccinated teachers and pupils must be excluded from school for a period of three weeks unless vaccinated within three days of first exposure. Failing to comply with this requirement, the school must be closed for a period of three weeks.

(dd) If smallpox appears in any class in any college in Minnesota, all unvaccinated teachers and students in the class must be excluded from school work for a period of three weeks unless vaccinated within three days of first exposure. Failing to comply with this requirement, the classes attended by such teachers or students must be discontinued for a period of three weeks.

(k) **Trachoma**

(1) **Upon receipt of a report of trachoma the health officer shall investigate** the case and if the disease is trachoma or suspected trachoma, he shall give written directions for the continuous treatment of the disease and for the precautions to be taken to prevent its spread to other persons unless the case is under the care of a competent physician and adequate precautions are being taken.

(2) **If the circumstances in any case of trachoma or suspected trachoma, require it,** the patient shall be removed to a hospital or other suitable place and there shall be quarantined and treated during the active, infectious period of the disease.

(3) **No person affected with trachoma, or suspected trachoma, shall attend school** without a written permit from the health officer, certifying that the disease is under control and that no dangerous eye discharge exists.

(l) **Tuberculosis**

(1) **Reporting of Cases.** Any licensed physician and surgeon called upon, under the provisions of Chapter 479, Minnesota Session Laws 1941, to make a physical examination of an applicant for employment in any state institution under the direction of the Department of Public Welfare—

(aa) Shall submit to the superintendent of the institution in which employment is sought, for reading by the institution's consulting roentgenologist an X-ray film of the applicant's chest.

(bb) Shall submit to the Minnesota Department of Health, Division of Disease Prevention and Control, for laboratory examination a specimen of any abnormal discharge, as from the lungs or air passages, glands, bones, sinuses, or other source in the applicant which might be suspected of being tuberculosis in nature.

(cc) Shall fill out in full the official examination form furnished by the Department of Public Welfare, giving detail of all findings and indicate thereon the presence or absence of tuberculous infection and disease based upon such findings.

(2) **Placarding.** If proper precautions are not being taken by the patient or those in charge of the patient, the local health officer shall post in a conspicuous place on the entrance to premises where a case of pulmonary or glandular tuberculosis in the infectious stage exists, a notice in words and form as follows:

WARNING

TUBERCULOSIS

exists on these premises.

Posted by order of

.....19.... .....
(Date) Health Officer

This notice is posted only when proper precautions are not being taken for the protection of the public health.

(3) **Handling Milk or Food Products.** No person affected with pulmonary or glandular tuberculosis in the infectious stage, shall handle in any capacity milk, cream, butter, other food or food products likely to be eaten without being cooked after handling, if such foods are to be offered for sale.

(4) **Infectious Period.** The infectious stage of pulmonary or glandular tuberculosis, for the purpose of these Regulations shall be considered as the period or periods following a positive clinical diagnosis of tuberculosis, or the demonstration of tubercle bacilli in the sputum or discharge, during which there is cough with expectoration, or during which there is a discharge thru the mouth or externally, from the affected glands.

(5) **Quarantine of Incorrigibles.** A person ill with tuberculosis who neglects or refuses to obey the instructions of the State Board of Health or the local health officer in matters relating to the protection of others against the disease shall be placed under quarantine in a suitable place and shall not be permitted to leave such place until such time as the danger of infecting others no longer exists.

(m) **Typhoid Fever**

(1) The patient's room shall be carefully screened throughout the course of the disease and during convalescence, if any flies or insects are about.

(2) **Handling Milk or Other Foods.** No person convalescent from typhoid fever or paratyphoid fever, or suffering from "walking typhoid," or proven by proper laboratory tests to be a carrier of bacillus typhosus or bacillus paratyphosus, shall be permitted to handle in any capacity milk, cream, butter, other food or food products, liable to be eaten without being

cooked after handling, if such foods are offered for sale, until the local health officer, with the approval of the State Board of Health, shall state in writing, with the circumstances indicated, that danger of infection from such person no longer exists.

(3) **Water Supplies.** Any drinking water supply known to be a positive or probable source of typhoid fever or other disease, shall be condemned either by the local board of health or by the State Board of Health, and when so condemned, shall not be used again as a drinking water supply until declared safe by the condemning party.

REPORTING OF CASES IN HOSPITALS AND SANATORIA

(4) On discharge from any hospital or sanatorium of any person suffering or convalescent from typhoid fever or paratyphoid fever or of any person known to be a carrier of typhoid organisms or paratyphoid organisms, it shall be the duty of the superintendent of such hospital, or sanatorium to report the discharge in writing to the Division of Disease Prevention and Control of the Minnesota Department of Health within a period of twenty-four hours, giving the destination of such person.

(n) **Venereal Diseases**

(1) **Syphilis and Gonorrhoea to be Reported.** Syphilis, gonorrhoea, and chancroid, hereinafter designated venereal diseases, are hereby declared to be contagious, infectious, communicable, and dangerous to the public health.

(2) It shall be the duty of every person who makes a diagnosis of, or gives treatment for, a case of syphilis, gonorrhoea, or chancroid, to report immediately to the State Board of Health on a form supplied for the purpose, the name and address, age, sex, color, occupation, marital status, and probable source of infection of such diseased person together with such other information as may be required; provided, that, except as required in Regulation 10850, the name and address need not be reported; and provided further, that physicians in a city of the first class, where required by ordinance to report such cases to the local board of health, may be exempted from reporting such cases direct to the State Board of Health, but the local health officer shall make returns of all such cases reported to him to the State Board of Health once a month on blanks furnished for that purpose by said Board.

In reporting such cases the patient shall be identified by the serial number on the report: this serial number shall be made part of the physician's record of the case. It shall be the duty of all physicians or others treating or examining persons venereally diseased, to keep a record, including the name and address of all persons diagnosed by them as infected with any venereal disease. This regulation shall apply to all physicians, superintendents or managers of hospitals, dispensaries, and charitable or penal institutions, and all other persons treating or examining cases of venereal disease.

(3) **Reporting Cases by Name.** The name and address of a patient having a venereal disease shall be reported under the following conditions:

(aa) When a person applies to a physician or other person for diagnosis or treatment of syphilis, gonorrhoea, or chancroid, it shall be the duty of the physician or person so consulted to inquire of, and ascertain

from the person seeking such diagnosis or treatment, whether such person has theretofore consulted with, or been treated by any other physician or person, and if so, to ascertain the name and address of the physician or person so consulted. It shall be the duty of the applicant for diagnosis or treatment to furnish this information, and a refusal to do so, or a falsification of the name and address of such physician or person consulted by such applicant, shall constitute a violation of these regulations. It shall be the duty of the physician or other person whom the applicant then consults, to notify the State Board of Health of such change on form supplied by it for the purpose. Should the physician or other person previously consulted fail to receive notice within two weeks after the last date upon which the patient was instructed by him to report for further examination or treatment, that the patient has changed physicians, it shall be the duty of such physician or person to report the name and address of such venereally diseased person to the State Board of Health.

(bb) If an attending physician or other person knows or has good reason to suspect that a person has syphilis, gonorrhoea, or chancroid, and is so conducting himself or herself as to expose other persons to infection, or is about so to conduct himself or herself, he shall notify the State Board of Health of the name and address of the diseased person and the essential facts of the case.

(4) **Instruction by Physicians.** It shall be the duty of every physician and of every other person who examines or treats a person having syphilis, gonorrhoea, or chancroid, to instruct such person in measures for preventing the spread of such disease, and inform him of the necessity for treatment until cured, and to give him a copy of the circular of information provided for this purpose by the State Board of Health.

(5) **Duty of Health Officers.** All local health officers are hereby directed to use every available means to ascertain the existence of, and immediately to investigate, all known or suspected cases of syphilis, gonorrhoea, or chancroid, within their respective districts and to ascertain the sources of such infections. In such investigations said health officers are hereby vested with full power of inspection, isolation, or quarantine, and disinfection of all infected persons, places, and things. As such inspectors said local health officers are hereby directed to make such examinations of persons reasonably suspected of having syphilis, gonorrhoea, or chancroid, as may be necessary for carrying out these regulations, provided, however, that all personal examinations must be made by a competent, regularly licensed physician. Owing to the prevalence of these diseases among prostitutes and persons associated with them, all persons arrested and charged with offenses against public morals and decency, shall be considered within the class to which this regulation applies.

(6) **Quarantine of Dangerous Cases.** Local health officers are authorized and directed to quarantine persons who have, or are reasonably suspected of having syphilis, gonorrhoea, or chancroid, whenever, in the opinion of said local health officer, or the State Board of Health, or its Executive Officer, quarantine is necessary for the protection of the public health. In establishing quarantine the health officer shall designate and define the limits of the area in which the person known to have, or reasonably suspected of having, syphilis, gonorrhoea, or chancroid, and his attendant, are to be quarantined and no persons, other than the attending physician, shall enter or leave the area of quarantine without the permission of the local health officer.

No one but the local health officer, or Executive Officer of the State Board of Health, or the authorized agent of one of them, shall terminate said quarantine, and this shall not be done until the diseased person has become non-infectious.

The local health officer shall inform all persons who are about to be released from quarantine for venereal disease, in case they are not cured, what further treatment should be taken to complete their cure. Any person not cured before release from quarantine shall be required to sign the following statement after the blank spaces have been filled to the satisfaction of the health officer:

I, ... residing at .....
hereby acknowledge the fact that I am at this time infected with .....
and agree to place myself under the medical care of .....
.....(name of phy. or clinic) within ..... hours, and that I will remain under treatment of said physician or clinic until released by the health officer of ..... or until my case is transferred with the approval of said health officer to another regularly licensed physician or an approved clinic.

I hereby agree to report to the health officer within four days after beginning treatment as above agreed, and will bring with me a statement from the above physician or clinic of the medical treatment applied in my case, and thereafter will report as often as may be demanded of me by the health officer.

I agree, further, that I will take all precautions recommended by the health officer to prevent the spread of the above disease to other persons, and that I will not perform any act which would expose other persons to the above disease.

I agree, until finally released by the health officer, to notify him of any change of address and to obtain his consent before moving by abode outside his jurisdiction.

.....
Signature

.....
Date

All persons signing the above agreement shall observe its provisions and any failure so to do shall be a violation of these regulations.

(7) **Violation.** It shall be a violation of these regulations for any infected person knowingly to expose another person to infection with any of the said venereal diseases or for any person knowingly to perform an act which exposes another person to infection with venereal disease.

(8) **Sale of Remedies.** No druggist, pharmacist or other person shall sell, give away, prescribe or administer to any person, any drug, medicine or preparation thereof, intended to be used for the treatment, relief or cure of any venereal disease, except upon written prescription of a duly licensed physician.

(9) **Prostitution.** Prostitution is hereby declared to be a prolific source

of syphilis, gonorrhoea, and chancroid, and the repression of prostitution is declared to be a public health measure. All health officers are therefore directed to cooperate with the proper officers whose duty it is to enforce laws directed against prostitution, and otherwise to use every proper means for the repression of prostitution.

(10) **Certificates of Freedom from Venereal Diseases.** Physicians, health officers, and all other persons are prohibited from issuing certificates of freedom from venereal disease, providing this rule shall not prevent the issuance of necessary statements of freedom from communicable diseases, written in such form or given under such safeguards as will prevent their use in solicitation for sexual intercourse. Such statements shall not be used or exhibited for solicitation for immoral purposes.

(11) **Privacy of Reports.** All information and reports concerning persons having, or reasonably suspected of having, venereal disease shall be inaccessible to the public and shall not be disclosed, except insofar as publicity may necessarily attend the performance of duties imposed by these regulations and by the laws of the state or of the United States.

(12) **Examination of Suspects.** All persons reasonably suspected of having a venereal disease shall submit to an examination as shall be deemed necessary by the State Board of Health, provided that where such examination is of a personal nature it shall be made only by a licensed physician.

It shall be the duty of every person attending a case of venereal disease, or suspected case of venereal disease, to secure specimens for examination when required to do so by the State Board of Health.

All laboratories making tests for syphilis and gonorrhoea shall require the physician's serial identification number of his case and, in event of a positive finding, shall forward a report of said finding with patient's number to the State Board of Health.

(13) **Length of Treatment.** All persons infected with a venereal disease shall continue under treatment or proper observation until no longer able to transmit the infection. In the case of gonorrhoea this shall be until all clinical and microscopic evidence is negative.

In the case of syphilis this shall be until all clinical and laboratory evidence is negative and sufficient treatment to reasonably insure a cure has been taken.

In the case of chancroid this shall be until all ulcerations are completely healed.

(14) The parent or guardian of a minor affected with venereal disease shall be responsible for the compliance by such minor with the requirements of the rules and regulations relating to venereal disease.

(15) **Placarding Dangerous Cases.** Whenever a case or suspected case of venereal disease is found on premises used for immoral purposes, or whenever a case of venereal disease is found upon premises where it can not be properly isolated or controlled, or where the infected person will not consent to removal to a hospital or sanatorium where he or she can be properly isolated or controlled during the period of infectiousness, the health officer or representative of the State Board of Health shall put in a conspicuous place on the entrance to the premises where such venereal disease exists, a notice in words and form as follows:

WARNING

VENEREAL DISEASE

Exists on These Premises
Posted by order of

.....19.... .....
(Date) Health Officer

Such notice shall be printed in black bold face type upon a red card with the words "Venereal Disease" in letters not less than three inches high.

(16) **Quarantine of Dangerous Cases.** A person affected with a venereal disease who neglects or refuses to obey the instructions of the State Board of Health or the local health officer in matters relating to the protection of others against the disease shall be placed under quarantine in a suitable place and shall not be permitted to leave such place until such time as the danger of infecting others no longer exists.

(o) Ophthalmia neonatorum.

(1) Definition. Any condition of the eye or eyes of an infant, independent of the nature of the infection, in which there is any inflammation, swelling, or redness in either one or both eyes of any such infant, either apart from, or together with, any unnatural discharge from the eye or eyes of any such infant within two weeks of the birth of such infant, shall be known as ophthalmia neonatorum.

(2) Prophylaxis. The licensed health professional in charge of the delivery at the time of the birth of any newborn both eyes of any such infant, either apart from, or together with, any unnatural discharge from the eye or eyes of any such infant within two weeks of the birth of such infant, shall be known as ophthalmia neonatorum.

(2) Prophylaxis. The licensed health professional in charge of the delivery at the time of the birth of any newborn infant shall instill or have instilled, within one hour of birth or as soon as possible thereafter, a one percent solution of silver nitrate, or tetracycline ointment or drops, or erythromycin ointment or drops.

(3) Treatment. A licensed health professional who is not a licensed physician but who is in charge of the care of a newborn infant shall immediately bring to the attention of a licensed physician every case in which symptoms of inflammation develop in one or both eyes of an infant in his or her care.

(4) Objections. If a parent objects or both parents object to the prophylactic treatment of a newborn infant and the health professional has honored the objection, the health professional shall retain a record of the objection.

(p) **Whooping Cough (Pertussis).** Persons having whooping cough shall be confined to their home premises for a period of at least three weeks after first symptoms.

(q) **Cancer—Cancer Statistical Research Service.** There shall be established in the Department of Health a Cancer Statistical Research Service which shall be operated with the assistance of an advisory committee to be appointed by the State Board of Health. Superintendents of hospitals, sanatoriums, rest homes, nursing homes, and any institution, place, building or agency in which any accommodation is maintained, furnished or offered for the hospitalization of the sick or injured or care of any aged or infirm persons requiring or receiving chronic or convalescent care, and physicians whose principal field of medical service is dermatology, and physicians whose principal field of medical activity is pathology in Minnesota shall upon request of the executive officer of the Department of Health, prepare and forward to the Department of Health every month, or as often as requested, a detailed record of all cases of malignant disease having been in their institution during that period or seen by them professionally. These reports shall be made on forms to be provided by the Department of Health. In lieu of reports made on these special forms, pathologists may submit copies or summaries of their routine reports. The information reported shall be accumulated, classified and analyzed, and from such data studies shall be made of the incidence of tumors of various types in the state, the procedures instituted in the care of such tumors, and the effectiveness of the different methods of treatment on tumors. The informational and statistical results of such studies shall be made available to the physicians of the state at frequent intervals. A follow-up information service shall also be established for the purpose of completing hospital case records where subsequent data on a tumor case is obtained. Provided, however, that all information reported to the Department of Health pursuant to this regulation shall be treated as confidential with respect to the identity of any person appearing in a report, and, further, that the Department of Health will make no direct or indirect approach to any patient named in a report, or relative of such patient, until the consent of the physician designated in the case shall have first been obtained.

MHD 327 ANNUAL TUBERCULIN TESTING FOR EMPLOYEES OF SCHOOL DISTRICTS, PRIVATE OR PAROCHIAL SCHOOLS, DAY CARE CENTERS, AND NURSERY SCHOOLS. Unless an employee has previously shown a positive reaction to a standard intradermal tuberculin

test as certified by a physician, the employees of all school districts and the employees of all private or parochial schools, day care centers, and nursery schools shall be required to have a standard intradermal tuberculin test to show freedom from tuberculosis within one year prior to employment, and annually thereafter. If the tuberculin test is negative, the employee shall be considered free from tuberculosis. The State Board of Health may require more frequent testing if employees are exposed to a known active tuberculosis case or cases.

MHD 328 ANNUAL EXAMINATIONS OF ALL EMPLOYEES SHOWING POSITIVE REACTIONS. All employees showing positive reaction to the standard intradermal tuberculin test shall have such additional examinations as are necessary to enable their physician to certify their freedom from tuberculosis. These examinations may include any or all of the following considerations: History; physical examination; chest x-ray; additional skin test, laboratory examinations including smear and culture. Minimum requirement shall be a report by a roentgenologist of a satisfactory negative 14 x 17 inch chest x-ray taken within 60 days of employment and annually thereafter for duration of employment.

MHD 329 STANDARDS FOR COMMUNITY VENEREAL DISEASES CONTROL CLINICS

(a) **Purpose:** Gonorrhea is epidemic in Minnesota as it is in other parts of the United States and the incidence of syphilis is increasing. Effective control of these venereal diseases as well as the othr sexually transmitted diseases requires:

(1) An adequate number of readily accessible and strategically located community clinics to facilitate and encourage individuals to seek diagnosis and treatment;

(2) The location and treatment of sexual contacts of diagnosed cases to prevent further spread and to identify asymptomatic carriers of the infection;

(3) Effective arrangements to assure that personal information regarding sexual contacts and suspects is fully protected; and

(4) Public education to assure that individuals are aware of what to do when venereal infection is suspected.

(b) **Objective:** The objective of these regulations is to assure that community venereal disease control clinics maintain acceptable standards relating to medical diagnosis and treatment of gonorrhea, syphilis and the other sexually transmitted diseases, confidentiality of personal information, interviewing and counseling of patients, contact investigation activities and public education.

(c) **Definitions:**

(1) **Board** means the State Board of Health.

(2) **Department** means the Minnesota Department of Health.

(3) **Venereal disease** means an acute, asymptomatic or chronic infection caused by Neisseria gonorrhoeae or Treponema pallidum.

(4) **Other sexually transmitted diseases** means an acute or chronic infection caused by organisms other than the causative agent of gonorrhea or syphilis which can be passed venereally and includes, but is not limited to chancroid, granuloma inguinale, lymphogranuloma venereum, candidiasis, trichomoniasis, pythirus pubis and herpes virus related diseases.

(5) **Contact** means a person named by an infectious patient as someone with whom he has had sexual relations during a time frame in which the disease could have been transmitted.

(6) **Suspect** means a person other than a contact who for legitimate public health reasons is in need of an examination for venereal disease.

(d) **Venereal Disease Control Clinics:**

(1) **Operation.**

(i) **Facilities:** Venereal disease control clinics shall provide facilities which shall include at least an examination room or rooms equipped as determined necessary by the licensed physician responsible for the diagnostic and treatment procedures conducted by the clinic and a private interview room or area to assure the full protection of personal information for the counseling of infected patients.

(ii) **Staffing:** The supervision of the venereal disease control clinic shall be by a licensed physician. Day to day clinic service may be performed by a registered nurse and/or a physician's assistant, under a physician's written standing orders specifying diagnostic and therapeutic procedures authorized to be performed by registered nurses and/or qualified trained assistants. The written standing orders shall be signed by the supervising physician. The supervising physician shall be available for consultation with the staff, but need not be present in the clinic when patients are being examined and treated.

(iii) **Records:**

(aa) Venereal Disease clinics shall maintain appropriate medical records relative to patients seen in the facility.

(bb) All positive laboratory findings shall be immediately reported to the Department on forms provided for that purpose.

(cc) All diagnosed and/or treated cases of veneral disease shall be immediately reported to the Department on forms provided for that purpose.

(iv) **Confidentiality:** Locked files shall be provided for medical records. Only clinic staff with a need to review the records shall have access to medical records. All transactions shall be held in confidence, except for required reporting to the Department.

(v) **Diagnostic Procedure:**

(aa) Patients shall have an appropriate physical examination which includes history of previous venereal disease symptoms, darkfield examination of all suspicious lesions, serology, cervical culture of all female patients, smear or culture of all male patients and search for the presence of clinical manifestations of either venereal disease or other sexually transmitted disease.

(bb) All laboratory tests procedure must be acceptable to the Department. A portion of patients serum reactive to serologic test for syphilis

and all throat culture suspected to be Neisseria gonorrhoeae shall be sent to the State laboratory for confirmation.

(vi) **Treatment:**

(aa) All diagnosed cases shall be treated with treatment regimens currently recommended by the therapy advisory committee of the United States Public Health Service.

(bb) All clinically negative contacts to infectious syphilis and to gonorrhea shall receive prophylactic treatment.

(vii) **Patient Interviewing and Counseling:**

(aa) All diagnosed venereal disease patients in the infectious stage shall be interviewed and, when appropriate, reinterviewed for contacts and suspects to their infection.

(bb) All patients presenting themselves to community venereal disease clinics shall receive appropriate counseling related to their infection.

(cc) All information obtained in the interviewing and counseling process shall be regarded as confidential medical information and shall not be disclosed, except as required by the performance of duties required by these regulations.

(2) **Investigation**

(i) Venereal disease clinics shall provide investigative service to assure that patients within their jurisdiction who have not completed their evaluation and therapy and have not returned, as well as contacts of gonorrhea cases are located and report for examination.

(ii) Patients outside of the clinic's area of jurisdiction who have not completed their evaluation and therapy and have not returned, as well as contacts to infectious syphilis and gonorrhea shall immediately be reported to the Department on forms provided for that purpose.

(3) **Public Education.** Venereal disease clinics shall provide appropriate venereal disease information and educational materials in a conspicuous place within the facility.

(4) **Grant-in-Aid**

(i) **Application:**

(aa) The Department may make grants-in-aid directly to local health agencies for the purpose of establishing and/or maintaining venereal disease control clinics. Grants-in-aid may also be made indirectly in the form of drugs. Application shall be made in accordance with Departmental instructions and on forms provided for that purpose. Grants shall be limited to a maximum of one year subject to the availability of funds.

(bb) The application shall present a plan that extends health care services to areas of the community that are currently underserved, with special consideration given to areas with concentrations of persons of high risk. Applicants may propose a multi-county service system where the population base in a single county is less than 50,000.

(cc) Rates of reimbursement for described services shall be mutually agreed upon by the Department and the grantee.

(dd) **Affirmative Action—Civil Rights:** The Department's affirmative action program extends to all organizations receiving financial assistance from the Department. Therefore, grantees shall include a statement of compliance with this plan in the grant-in-aid application.

(ee) The application shall include an endorsement from the appropriate governmental boards (city or county commissioner) and shall be submitted for review and comment to the appropriate areawide Comprehensive Health Planning Agency.

(ii) **Fiscal Accountability:**

(aa) The grantee shall maintain adequate financial records pertaining to all services relating to the grant. These records shall be available to the Department at all reasonable times during the duration of the grant.

(bb) The grantee shall submit to the Department on a quarterly basis a narrative report of progress and a claim for reimbursement of expenditures describing how grant funds were expended for that period.

(cc) The grantee shall keep and make available all fiscal records relating to the grant-in-aid until the completion of the fiscal audit of the grant, or for three years after its termination, whichever is earlier.

(iii) **Location Participation:**

(aa) Funds provided by the Department through grants-in-aid to supplement resources of the applicant. The application shall show the amount of local matching resources that are available for venereal disease control service and shall describe a mechanism whereby an annually increasing share of the cost of the proposed project will be assumed by the applicant.

(bb) The use of qualified volunteers to perform services required by these regulations under the supervision of a licensed physician shall be permitted. Their time may be listed as in-kind funding and considered part of the local funding.

DEPARTMENT OF HEALTH

RULES RELATING TO THE TERMINATION OF PREGNANCY*

Chapter Twenty-One §§ 1.351 - 1.352

§ 1.351 Internal records of the ambulatory facility.**

A. Patient records. The pregnancy termination facility shall keep a signed consent form of each patient undergoing a pregnancy termination procedure.

§ 1.352 Reports to the Commissioner of Health.***

A. Statistical reports. Each ambulatory facility shall submit a written compilation of statistical data quarterly to the Commissioner of Health on such forms and in such manner as the Commissioner may prescribe.

B. Reporting terminations. An ambulatory facility shall report all pregnancy terminations performed by its staff as follows:

1. By the 10th of each month all pregnancy terminations performed in the ambulatory facility during the preceding month shall be reported on forms prescribed by the Commissioner which shall include but not be limited to the following items:

* These rules, MHD 341 - 365 (formerly MHD 271 - 290) 7 MCAR §§ 1.341-1.365, were declared unconstitutional, except for the provisions printed herein, in Hodgson v. Lawson, Civ. No. 4-74-155 (D. Minn., March 7, 1977).

**The applicable definitions to the rules printed herein from MHD 342 (7 MCAR § 1.342) are as follows:

(a) "Termination of pregnancy," "pregnancy termination" or "termination procedure," shall mean administering to a woman any medicine, drug, substance, or thing whatever, or the employment upon her of any instrument or other means whatever, with intent to induce or procure the miscarriage of such a woman.

(b) The term "abortion" is not used in these regulations, since it also applies to spontaneous early terminations of pregnancy. These regulations do not apply to spontaneous abortions.

(f) "Ambulatory facility" shall mean any institution, place or building, or part thereof, including hospital outpatient services, devoted primarily to, as determined by the Department, the maintenance and operation of facilities for the performance of procedures designed to terminate a pregnancy on an outpatient basis irrespective of whether the entire structure is devoted primarily to this purpose.

***Pursuant to Laws of 1977, ch. 305, §§ 39 and 45, references to the State Board of Health have been deleted and Commissioner of Health has been substituted therefor.

Patient's city, county and state of residency
Census Tract for City of Minneapolis and City of St. Paul
Patient or Chart No.
Age
Race
Marital Status
Number of Living Children
Facility Name
Facility Address
Number of Previous Induced Pregnancy Terminations Patient
Estimate of Gestational Age
Date of Pregnancy Termination
Type of Termination Procedure

2. All surgery-related or anesthesia-related complications which result in morbidity or death of a patient shall be reported in writing to the Commissioner within 15 days from the notification to the ambulatory facility of the morbidity or death of the patient.

3. The Commissioner shall ensure and maintain confidentiality of all individual pregnancy termination records.

DEPARTMENT OF HEALTH

RULES RELATING TO THE CERTIFICATION AND REGULATION OF HEALTH MAINTENANCE ORGANIZATIONS

Chapter Twenty-Two: 7 MCAR §§ 1.366 – 1.380

§ 1.366 Authority, scope and purpose. These rules are promulgated pursuant to Minn. Stat. §§ 62D.03, subd. 4(m); 62D.04, subd. 1(c); 62D.04, subd. 1(d); 62D.04, subd. 1(g); 62D.06, subd. 2; 62D.08, subd. 1; 62D.08, subd. 3; 62D.08, subd. 3(e); 62D.12, subd. 2(g); and 62D.20 relating to health maintenance organizations in particular, and Minn. Stat. §§ 15.0411-15.0413 relating generally to the promulgation of administrative rules and regulations. These rules and all future changes herein apply to all health maintenance organizations operating in the State of Minnesota at the time of their adoption and to all health maintenance organizations hereafter certified, and are promulgated to carry out the Health Maintenance Act of 1973 and to facilitate the full and uniform implementation and enforcement of that law.

§ 1.367 Definitions.

A. All terms used herein which are defined in Minn. Stat., ch. 62D, shall have the meanings attributed to them therein. For the purposes of these regulations the terms defined herein shall have the meanings given to them.

B. "Accepted Actuarial Principles" means those prevailing statistical rules relating to the calculation of risks and premiums or prepayment charges of health maintenance organizations, prepaid group practice plans or commercial health insurance carriers.

C. "Act" means the Health Maintenance Act of 1973, Laws of 1973, ch. 670, Minn. Stat., ch. 62D.

D. "Complaint" means any written enrollee grievance against a health maintenance organization or provider arising out of the provision of health care services, and which has been filed by an enrollee or his representative in accordance with 6 MCAR § 1.370 and is not or is not yet the cause or subject of an enrollee election to litigate.

E. "Comprehensive Health Maintenance Service" means a group of services which includes at least all of the types of services defined below:

1. "Emergency care" means professional health services immediately necessary to preserve life or stabilize health.

2. "In-patient hospital care" means necessary hospital services affording residential treatment to patients. Such services shall include room and board, drugs and medicine, dressings, nursing care, x-rays, and laboratory examination, and other usual and customary hospital services.

3. "In-patient physician care" means those health services performed, prescribed or supervised by physicians within a hospital, for registered bed patients therein, which services shall include diagnostic and therapeutic care.

4. "Outpatient health services" means ambulatory care including health supervision, preventive, diagnostic and therapeutic services, including diagnostic radiologic service, treatment of alcohol and other chemical dependency, treatment of mental and emotional conditions, provision of prescription drugs, and other supportive treatment.

5. "Preventive health services" means health education, health supervision including evaluation and follow-up, immunization and early disease detection.

F. "Governing body" means the board of directors, or if otherwise designated in the basic organizational document and/or bylaws, those persons vested with the ultimate responsibility for the management of the corporate entity that has been issued a certificate of authority as a health maintenance organization.

G. "In area services" are those services provided within the geographical areas served by the health maintenance organization as described in its application for a certificate of authority and any subsequent changes therein filed with the Commissioner of Health.*

H. "Out of area health care services" are those services provided outside of the health maintenance organization's geographic service area, as such area is described in the health maintenance organization's application for a certificate of authority, and any subsequent changes therein filed with the Commissioner of Health.

I. "Provide" as that word is used in Minn. Stat. § 62D.09, means to send by United States postal service, by alternative carrier, or by other method to the place of residence or employment of each enrollee or, if such enrollee is a member of a specified group covered by a health maintenance contract, to the office of the authorized representative of any such group.

J. "Formal procedural requirements" means those rules governing the conduct of administrative hearings applicable to and affecting the rights, duties and privileges of each party of a "contested case," as such term is defined and as such rules are set forth in Minn. Stat., ch. 15.

K. "Enrollee copayment provisions" means those contract clauses requiring charges to enrollees, in addition to fixed, prepaid sums, to supplement the cost of providing covered comprehensive health maintenance services; "enrollee copayment provisions" also means the difference between an indemnity benefit and the charge of a provider for health services rendered.

*Pursuant to Laws of 1977, ch. 305 §§ 39 and 45, references to the State Board of Health have been deleted and Commissioner of Health has been substituted therefor.

L. "Summary of current evidence of coverage" means written notice to be provided to enrollees by every health maintenance organization as prescribed in the Act. Such notice shall describe changes in health maintenance contract coverage but need not necessarily be specific as to changes respecting the coverage of any individual enrollee.

M. "Open enrollment" means the acceptance for coverage by health plans of group enrollees without regard to underwriting restrictions, and coverage of individual or non-group enrollees with regard only to those underwriting restrictions permissible under Minn. Stat. § 62D.10, subd. 2, and subd. 4.

N. "Underwriting restrictions" means those internal predetermined standards within a health maintenance organization which specify and exclude from coverage certain health conditions or persons with certain health conditions which, if such persons or conditions were enrolled or covered, would obligate the health maintenance organization to provide a greater amount, kind or intensity of service than that required by the general population or that contemplated in the process of setting the prepayment amount.

O. "Period of confinement" means a period of time specified in a health maintenance contract relating to the amount of days of inpatient hospital care and defining a period during which an enrollee may not receive any inpatient hospital care in order to become entitled to a renewed period of hospital coverage. This term means the same as "spell of illness" and similar terms as they may be used in provisions to limit hospital care.

§ 1.368 Contents of application. Application for certificates of authority shall be submitted on forms provided by the Commissioner of Health which shall include, but not be limited to the matters covered in this rule.

A. Disclosure in applications. Each application for a certificate of authority shall include disclosure of the following:

1. Any contractual or financial arrangements between members of the board of directors/principal officers and the health maintenance organization including:

a. A description of any obligations, specified by contract or otherwise, to be met by each party in accordance with any such arrangement; and

b. A listing of the dollar amounts of any consideration to be paid each party in accordance with any such arrangements.

2. Any financial arrangements between members of the board of directors/principal officers and any provider or other person, which provider or other person also has a financial relationship with the health maintenance organization. This disclosure shall include:

a. A description of the obligations to be met by each party in accordance with any such arrangements;

b. A listing of the dollar amounts of the consideration to be paid each party in accordance with any such arrangements; and

c. A listing and description of any circumstances under which a director/principal officer is employed by or engages in a substantial commercial or professional relationship with any provider/other person.

B. Insurance. Each application for a certificate of authority shall attach pertinent documents, including copies of insurance contracts, in verification of compliance with §§ 62D.04, subd. 1(f), 62D.05, 62D.12, subd. 4 and subd. 9, and 62D.13 of the Act with respect to assumption of risks and insurance against risks.

C. Financial responsibility. Each application shall state which option for demonstrating financial responsibility has been elected pursuant to § 62D.04, subd. 1(e) of the Act and any pertinent documents which demonstrate financial responsibility shall be attached to the application.

D. Statistics. The application shall detail procedures established to develop, compile, evaluate, and report statistics which shall include the collection and maintenance of at least the following data:

1. Operational statistics sufficient to meet the requirements of § 62D.08, subd. 3(a) of the Act relating to annual financial reports:

2. Gross utilization aggregates, including hospital discharges, surgical hospital discharges, hospital bed days, outpatient visits, laboratory tests and x-rays.

3. Demographic characteristics, including the age and sex of enrollees;

4. Disease-specific and age-specific mortality rates;

5. Enrollment statistics compiled in accordance with § 62D.08, subd. 3(b) of the Act.

E. Provider agreements. The application shall include copies of all types of agreements with providers by virtue of which enrollees will receive health care from the providers, and a description of any other relationships with providers who might attend enrollees together with a statement describing the manner in which these other relationships assure availability and accessibility of health care.

F. Other requirements. Each application must also include documentation and/or evidence of compliance with all of the requirements of the Act and these regulations, and the Commissioner of Health may require such other information in applications for certificates of authority as the Commissioner feels is necessary to make a determination on the application.

§ 1.369 Operating requirements and requirements for issuance of a certificate

of authority. Each health maintenance organization must submit the information required in Minn. Stat., ch. 62D and 7 MCAR § 1.368 and the Commissioner must find that each health maintenance organization meets the statutory requirements and the standards of these rules before the Commissioner may issue a certificate of authority. The failure of an operating health maintenance organization to comply with the requirements is proper basis for disciplinary action under Minn. Stat. §§ 62D.15-62D.17.

A. Insurance. A health maintenance organization may provide for the payment for the cost of emergency services, out of area services or other services which go beyond the minimum services required herein through a policy of insurance.

B. Financial responsibility. In making its determination of financial responsibility, the Commissioner will apply the following guidelines as appropriate:

1. A reasonable period of time for the continued availability of health care services is sixty (60) days.

2. Financial soundness can be demonstrated by showing the capacity of the applicant to produce a cash flow sufficient to cover normal operating expenses for sixty (60) days, plus all initial organizational and promotional expenses.

3. Adequate working capital can be shown by the availability of an amount of money sufficient to cover normal operating expenses for sixty (60) days, plus any and all initial organizational and promotional expenses.

4. The comparability to the charges for similar services used by other health maintenance organizations and other health delivery systems will be used in considering the proposed schedule of charges.

5. A determination of financial responsibility shall include consideration of a health maintenance organization's insurance coverage of its own risks and the risks it may bear in agreeing to provide services to enrollees relative to the organization's own financial reserves and surplus. These considerations must give full force and effect to Minn. Stat. §§ 62D.04, subd. (1)(f); 62D.05, subd. 3; 62D.12, subd. 4 and subd. 9; and 62D.13, 7 MCAR §§ 1.368 B. and 1.369 A.

C. Comprehensive health maintenance services. All health maintenance organizations shall provide comprehensive health maintenance services to enrollees.

1. Minimum services. Such comprehensive health maintenance services shall include but need not be limited to:

a. Provisions for emergency in area health care services which shall (1) be available twenty-four (24) hours a day, seven (7) days a week; (2) be

provided either directly through health maintenance organization facilities or through arrangements with other providers; (3) be provided by a physician and other licensed and ancillary health personnel, as appropriate, readily available at all times; and (4) be covered for enrollees requiring such services but who, for reasons of medical necessity and not convenience, are unable to obtain them directly from the health maintenance organization in which they are enrolled or from providers or other persons with whom the health maintenance organization in which they are enrolled has arrangements for the provision of services.

b. Provisions covering out-of-area services which must include out-of-area emergency care;

c. All in-patient hospital care except as exclusions or limitations are hereafter permitted;

d. All in-patient physician care except as exclusions or limitations are hereafter permitted;

e. All outpatient health services except as exclusions or limitations are hereafter permitted;

f. Procedures for providing preventive health services.

2. Permissible limitations and/or exclusions. Permissible limitations upon and/or exclusions from those comprehensive health maintenance services required in 7 MCAR § 1.369 C.1. may include:

a. Limitations upon and/or exclusions of the provision of corrective appliances and artificial aids;

b. Limitations upon and/or exclusions of cosmetic surgery;

c. Limitations upon and/or exclusion of dental services;

d. Limitations upon and/or exclusions of routine refractions and the fitting and provision of contact lenses and eyeglasses;

e. Limitations upon and/or exclusions of ambulance transportation;

f. Limitations upon and/or exclusions of hemodialysis or other procedures for treatment of chronic renal failure, of organ transplants, and/or experimental procedures, to the extent that such procedures, treatments or services are not covered by a policy of insurance, a nonprofit health service plan contract, or other program of coverage;

g. Limitations upon and/or exclusions of custodial and/or domiciliary care;

h. Limitations upon and/or exclusions of care for injuries incurred

while on military duty, to the extent that such care is, in fact, covered or available in another program of coverage.

i. Limitations upon and/or exclusions of home health care services;

j. Limitations upon and/or exclusion of services and other items not prescribed, recommended or approved by a physician that is providing services through the enrollee's health maintenance organization or a provider to whom such physician has referred the enrollee, except in a situation where for reason of medical necessity and not convenience the enrollee is unable to obtain needed health care from the health maintenance organization, such as in emergency or out-of-area situations;

k. Limitation upon/or exclusion of those maternity services which relate to a conception occurring prior to the effective date of coverage of the enrollee;

l. Limitations upon outpatient treatment of mental and emotional conditions and alcohol and other chemical dependency, except there may be no limitation applied to diagnosis and referral to sources of care;

m. Limitations upon the provision of prescription drugs, except during hospitalization;

n. Such limitations or exclusions on inpatient hospital care as defined in 7 MCAR § 1.367 E.2. and required in 7 MCAR § 1.369 C.1.c., as are specifically authorized below. Each health maintenance organization may have:

(1) Limitations upon the number of days of inpatient hospital care, depending on the nature of the coverage, which at least correspond with the following minimum provisions:

(a) For health maintenance contracts issued to a specified group or groups, the coverage may be limited to 365 days of care in a given period of confinement for a condition arising from a single illness or injury, provided that if this coverage is exhausted the benefit must be renewed, or a new period of confinement commenced, upon the occurrence of a separate illness or injury or upon the passage of no more than 90 days without utilization of inpatient hospital care; and provided further, that if an enrollee group rejects in writing such limits of coverage in favor of lesser limits, the coverage may be limited to no less than 180 days, with no more than 90 days between periods of confinement.

(b) For individual health maintenance contracts, the coverage may be limited to 90 days of care in a given period of confinement for a condition arising from a single illness or injury, provided that if this coverage is exhausted the benefit must be renewed or a new period of confinement commenced, upon the occurrence of a separate illness or injury or upon the passage of no more than 90 days without utilization of inpatient hospital care.

(c) For inpatient hospital care out of the service area of the health maintenance organization as defined in 7 MCAR § 1.369 E.2. and 7 MCAR § 1.367 H. and as required in 7 MCAR § 1.369 C.1.b., the coverage may be limited to 60 days of care in each contract year.

These provisions relate to the aggregate number of days of both acute care and convalescent care, both of which must be rendered to enrollees by the health maintenance organization, but which may be limited, as indicated. These provisions do not relate to custodial or domiciliary care which may be limited or excluded completely pursuant to 7 MCAR § 1.369 C.2.g., nor do these provisions allow limitations or exclusions relative to the spectrum of service during a covered day, which is provided for below.

(2) Limitations upon and/or exclusions of television, telephone and similar convenience or amenity items available in connection with inpatient hospital care but which are not medically necessary as a part of the care of the enrollee; and limitations upon and/or exclusions of inpatient hospital care, for those conditions or under those circumstances where inpatient physician care is also limited or excluded, provided that inpatient physician care and hospital care may not be so limited or excluded beyond a limitation or exclusion otherwise explicitly authorized in 7 MCAR § 1.369 C.2.

(3) Limitations upon and/or exclusion of private room accommodations.

(4) Limitations upon inpatient treatment for alcohol and other chemical dependency and inpatient treatment for mental and emotional conditions, provided that a health maintenance organization must provide for treatment for alcohol and other chemical dependency in a licensed residential primary treatment program or hospital for up to the greater of 28 days or a number of days equivalent to 20 percent of the other inpatient hospital care coverage; and provided further, that a health maintenance organization must provide for inpatient treatment for mental and emotional conditions of at least 30 days in each contract year.

o. Those conditions that are subject to underwriting restrictions when the imposition of such restrictions is otherwise proper, provided that underwriting restrictions may only relate to pre-existing chronic health conditions, and those acute conditions for which an applicant is being treated at the time of the proposed enrollment.

3. Copayments, limitations, exclusions and restrictions on service. In addition to the limitations and exclusions allowed in 7 MCAR § 1.369 C.2., a health maintenance organization may impose copayments for services or goods provided and may impose certain restrictions on services. Any such provisions must clearly be stated in the evidence of coverage in compliance with Minn. Stat. § 62D.07, subd. 3(b) and comply with the following standards:

a. Limitations and exclusions. There may be no limitations or exclusions other than those allowed by the statutes or in rules promulgated pursuant to Minn. Stat. § 62D.20. Where exclusions are allowed, it is the express

policy of the Commissioner of Health to favor limitations rather than exclusions and the Commissioner may limit the extent of limitations and/or exclusions which may be included in any health care plan to ensure that comprehensive health care services are reasonably available to enrollees. The standard of reasonableness shall be applied in full consideration of the general concept that a health maintenance organization must provide comprehensive health maintenance services in exchange for a single prepaid sum.

b. Restrictions. Reasonable restrictions other than limitations, exclusions and copayments are permissible. These include, but are not limited to restrictions on the frequency or length of time a health maintenance service is provided (example: repeated, frequent physical exams), or the denial of a service that is not reasonably required to maintain the enrollees in good health (example: physical exams requested only for the protection or convenience of third parties). The standard of reasonableness shall be applied in full consideration of the general concept that a health maintenance organization must provide comprehensive health maintenance services in exchange for a single, prepaid sum.

c. Copayments. Reasonable copayments, as defined in 7 MCAR § 1.376 K., are allowed. Any amount or form of copayment shall be deemed reasonable when imposed on services which, pursuant to 7 MCAR § 1.369, may be excluded completely, provided that the copayment is not greater than the cost or charge of that particular service. Furthermore, copayments, either on specific services or in the aggregate, may be imposed on out-of-area services and emergency care by providers who do not have arrangements with the health maintenance organization in the form of a reasonable "deductible," plus a twenty-five percent (25%) "coinsurance" feature, plus all charges which exceed a specified annual aggregate amount not less than $25,000.00.

The standard of reasonableness, in all circumstances, shall be applied in full consideration of the general concept that a health maintenance organization must provide comprehensive health maintenance services in exchange for a single, prepaid sum.

No copayment may be imposed on preventive health care services as defined in 7 MCAR § 1.367 E.5., including administration of immunization, well-baby care, periodic screening and prenatal care, provided that this prohibition shall not be construed to prevent a copayment on maternity services in general, which may include prenatal care.

Copayments may not exceed twenty-five percent (25%) of the costs or charges for a particular service, except those copayments imposed upon services which may be excluded completely, out-of-area and emergency care described previously in this section, preventive health care services, and prescription drug benefits.*

*Copayments imposed upon prescription drug benefits shall be reasonable under the general provisions described in this section.

4. Subrogation and coordination of benefits. The health maintenance organization may require an enrollee to reimburse it for the reasonable value of health maintenance services provided to an enrollee who is injured through the act or omission of a third person or in the course of employment to the extent the enrollee collects damages or workman's compensation benefits for the diagnosis, care and treatment of his injury. The health maintenance organization may be subrogated to the enrollee's rights against the third person or the enrollee's employer to the extent of the reasonable value of the health maintenance services provided including the right to bring suit in the enrollee's name. The health maintenance organization may also provide in its evidences of coverage for coordination of benefits, whereby the health maintenance organization is entitled to determine whether and to what extent an enrollee has indemnity or other coverage for the services or goods provided to the enrollee or benefits paid on behalf of the enrollee by the health maintenance organization, to establish standard for priorities among those obligated to provide services or indemnification, to refer to other, prior sources of care, and to enforce the health maintenance organization's right to recover under those standards. Provided, however, no health maintenance organization may recover the value of services rendered from an enrollee beyond any amount actually received by the enrollee in indemnification for the value of services rendered by the health maintenance organization.

D. Availability and accessibility. Applicants shall be in compliance with § 62D.04, subd. 1(a) of the Act when, upon review of an application for a certificate of authority, the Commissioner of Health is satisfied that:

1. Comprehensive health care services will be provided directly by the applicant, through arrangements with other providers, or in compliance with 7 MCAR § 1.369 A.

2. Provider staff patterns and ratios of physicians, paramedical and ancillary health personnel to potential enrollees will be in accordance with acceptable professional practices and will reasonably meet anticipated enrollee needs;

3. The applicant will comply with the requirements set forth in 7 MCAR § 1.369 C.1.a. and b. regarding the provision of emergency and out-of-area services; and

4. The applicant's geographic location and hours of operation will facilitate the reasonable delivery of health care services to potential enrollees. In assessing this standard of reasonable delivery of services, the Commissioner of Health may consider the utilization patterns of the existing health care delivery system in the proposed geographic area.

E. Quality evaluation. Arrangements for an ongoing evaluation of the quality of health care shall include, but not necessarily be limited to, provisions for:

1. Meeting the standards of quality review set forth in the Social Security Amendments of 1972, 42 U.S.C. 1320(c); and

2. An ongoing internal peer review system; and

3. A defined set of standards and procedures in selecting providers to serve enrollees, and as to the selection of individual providers, the retention of records relative to the number of persons scrutinized in this system and the number of providers screened who were rejected under the described procedures.

4. The Commissioner of Health or each health maintenance organization may also conduct enrollee surveys of the enrollees of each health maintenance organization to ascertain enrollee satisfaction as a part of the overall quality evaluation program.

F. Statistics. Each health maintenance organization shall establish and maintain procedures to develop, compile, evaluate, and report statistics which shall include the collection and maintenance of at least the following data:

1. Operational statistics sufficient to meet the requirements of § 62D.08, subd. 3(a) of the Act relating to annual financial reports;

2. Gross utilization aggregates, including hospital discharges, surgical hospital discharges, hospital bed days, outpatient visits, laboratory tests and x-rays.

3. Demographic characteristics, including the age and sex of enrollees;

4. Disease-specific and age-specific mortality rates;

5. Enrollment statistics compiled in accordance with § 62D.08, subd. 3(b) of the Act.

G. Effective date of operating requirements. When changes are required in existing evidences of coverage or health maintenance contracts in order to implement the provisions of these rules, such changes shall be implemented upon the renewal date of such documents commencing with the first renewal after 180 days after the effective date of these rules. New contracts or evidences of coverage to be implemented after 180 days after the effective date of these rules must be in compliance with these rules upon implementation.

§ 1.370 Governing body; consumer members; enrollee participation; complaint system.

A. Selection of governing body.

1. Non-consumer members of the governing body shall be selected in accordance with procedures set forth in each health maintenance organization's basic organizational document and/or bylaws.

2. The basic organizational document and/or bylaws shall also provide a reasonable procedure by which the enrollee directors are to be elected. Such procedure must include notification:

a. To those entitled to vote for enrollee directors of the time, place, and method by which such nomination and election is to be conducted at least two weeks prior to the nomination and election;

b. To those entitled to vote for enrollee directors of the names of consumer nominees, a general description of their backgrounds and a description of the method by which a ballot may be cast;

c. To all enrollees of the results of such election including a general description of the backgrounds of the enrollee directors, to be given not later than at the time of issuance of the next annual summary of information to enrollees.

3. Consumer representatives on the governing body must be enrollees at the time of their election and during their term of office. Should a consumer representative be removed for failure to meet this qualification or for any other reason set forth in the bylaws, he may be replaced only until the next election by another consumer elected by the remaining consumer representatives on the governing body.

4. The terms below which appear in Minn. Stat. § 62D.02, subd. 10 will be defined as follows in determining whether or not an enrollee is a consumer:

a. A "Licensed health professional" is any person licensed under Minnesota Statutes to provide or administer health services.

b. A "Health care facility" is any hospital, nursing home, or boarding care home required to be licensed as such under Minn. Stat. § § 144.50 to 144.56 or 144.583.

c. A "Substantial financial interest in the provision of health care services" is a person's receipt or right to receive not less than twenty-five (25) percent of his gross annual income directly from the rendering of health service.

d. A "Substantial managerial interest in the provision of health care services" is a person's supervisory or administrative responsibilities as an employee of a health care facility.

B. Enrollee opinion. The Commissioner of Health will review the proposed mechanism for affording enrollees an opportunity to express their opinions on matters of policy and operation to see if it reasonably provides such an opportunity. Permissible alternatives to those mechanisms described in § 62D.06, subd. 2 of the Act may include but are not limited to one or more of the following:

1. Permitting enrollees to attend, after prior reasonable notice, and express their opinions at certain regular meetings of the governing body or special meetings called for the express purpose of affording enrollees an opportunity to express their opinions;

2. Creating a special committee of the governing body which will hold meetings on at least a quarterly basis and which will be open to all enrollees to express their opinions;

3. Designating a special administrative office within the health maintenance organization, responsible directly to the governing body, which will be open to enrollees to express their opinions on a regular basis;

4. Creating enrollee councils, representing enrolled groups and groups of individual enrollees which will be afforded a reasonable opportunity to meet with the governing body or its designee to express enrollee opinion; and

5. Such other mechanisms as the Commissioner may authorize or approve.

C. All enrollees who are contract holders, without regard to any membership or other status in the health maintenance organization corporation, must be afforded the opportunity to participate in the nomination and election of the consumer board members pursuant to Minn. Stat. § 62D.06, subd. 1. All enrollees must be afforded the benefits of the enrollee opinion mechanisms and the complaint system. For the purpose of this rule, a "contract holder" is the member of the covered group through which coverage is acquired, such as the employed person in an employment group, or in the case of an individual contract, is the person named in the contract as the covered person, as distinguished from others who may be covered as dependents of the covered person.

D. Requirements for compliant system. Health maintenance organization complaint system procedures for the resolution of written, enrollee complaints concerning the provision of health care services shall be considered reasonable and acceptable to the Commissioner of Health if they:

1. Establish mechanisms through which written enrollee complaints may be filed by and presented by the enrollee or his authorized representative, and considered and retained by the health maintenance organization;

2. Provide for informal discussions, consultations or conferences between the enrollee complainant and a person with the authority to resolve or recommend the resolution of the complaint within thirty (30) days after it is filed;

3. Provide for hearings:

a. At which any complaint not otherwise resolved shall be considered within ninety (90) days after it is filed;

b. At which a person or persons with authority to resolve or recommend the resolution of the complaint shall preside;

c. Which shall include the receipt of testimony, explanations or other information from enrollees, staff persons, administrators, providers or

other persons, as is deemed necessary by the presiding person or persons for a fair appraisal of the complaint; and

d. From which concise, written notice of all findings shall be given the complainant within thirty (30) days of the conclusion of any such hearing.

4. Provide for impartial arbitration of any complaint which is unresolved by the mechanisms set forth in 7 MCAR § 1.370 D.2. and/or 3. pursuant to a procedure approved by the Commissioner subject to Minn. Stat., ch. 572. The impartial arbitration procedure shall specify the method by which the neutral arbitrator(s) shall be mutually selected by the parties to the arbitration, the costs of the procedure and how they shall be borne. The arbitrator(s) shall be required to render an award within thirty (30) days from the date of closing the hearings unless otherwise mutually agreed by the parties, and judgment upon the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof in accordance with Minn. Stat., §§ 572.16 and 572.21.

5. Provide for giving notice to all enrollees of the existence and operation of said complaint system.

6. Provide for any other procedures approved by the Commissioner of Health.

E. Other processing of complaints. A health maintenance organization need not utilize those procedures described in 7 MCAR § 1.370 D. as to any written and filed enrollee complaint which is processed by the health maintenance organization's legal counsel or liability insurer, provided that such other processing:

1. Fairly considers the rights of all parties to the complaint;

2. Is accompanied by a concise written record of all findings and recommendations arising therefrom, a copy of which record shall be given the enrollee complainant within thirty (30) days of the conclusion of any such processing; and

3. Results in the resolution of the complaint or an enrollee election to litigate within ninety (90) days of its filing.

F. Records of complaints. Every health maintenance organization shall maintain a record of each complaint filed with it during the prior three years. The record shall, where applicable, include:

1. The complaint or a copy thereof and the date of its filing.

2. A brief written summary of the outcome of all informal discussions, consultations or conferences held relative to each complaint and the date or dates on which each such informal discussion, consultation or conference

occurred. Such summary shall include an acknowledgment by those participating in the form of their signatures.

3. The date or dates of any hearing and a copy of the hearing findings given the enrollee complainant.

4. The dates of commencement and conclusion of another processing conducted in accordance with 7 MCAR § 1.370 E.; and a copy of the concise written record of all findings and recommendations arising therefrom, which record shall include an acknowledgment by those participating in the form of their signatures.

5. The date of submission of any complaint to arbitration; a copy of the arbitrator's decision; and the date of the decision.

6. A brief written summary, including the filing date, of each complaint which becomes a subject of litigation; a brief written summary, with dates, of the findings or outcome of any prior processing held relative to the complaint; and a brief written statement describing the outcome of the complaint or claim as determined in litigation.

G. Complaint Reports. Every health maintenance organization shall submit to the commissioner of health, along with its annual report, a report on the experience of its respective complaint system during the immediately preceding calendar year. Such reports shall include at least the following information:

1. the name and location of the reporting health maintenance organization;

2. the reporting period in question;

3. the name of the individual(s) responsible for the operation of the complaint system;

4. the total number of written complaints received by the health maintenance organization;

5. the total number of written complaints received, classified as to whether they were principally medical care, psychosocial, or coverage-related in nature, or classified according to a classification most suited to the characteristics of the particular health maintenance organization, unless unduly burdensome;

6. the number of enrollees by whom or for whom more than one written complaint was made and the total number of such complaints; and,

7. the total number of written complaints resolved to the enrollee's apparent satisfaction.

§ 1.371 Annual reports. In addition to all other information specified in the Act, every health maintenance organization shall include in its annual report to the Commissioner of Health the following:

A. The results of any and all elections conducted during the preceding calendar year relative to consumer representation on the health maintenance organization's governing body.

B. A copy of the health maintenance organization's most recent information summary provided to its enrollees in accordance with § 62D.09 of the Act.

C. A description of the method and results of the system to evaluate the quality of health services. Such evaluation shall include, but not necessarily be limited to, study of the quality of care for at least one disease condition or age group.

D. A schedule of prepayment charges made to enrollees during the preceding year and any changes which have been implemented or approved up to the reporting date.

§ 1.372 Other provisions.

A. Termination of coverage.

1. Justification. In addition to those reasons specified in § 62D.12, subd. 2 of the Act, a health maintenance organization may, upon thirty (30) days notice, cancel or fail to renew the coverage of an enrollee if such enrollee:

a. Knowingly gives false, material information at the time of enrollment relative to his health status, provided such cancellation or non-renewal is made six (6) months of the date of enrollment.

b. Moves out of the geographic service area filed with the Commissioner, provided such cancellation or non-renewal is made within one (1) year following the date the health maintenance organization was provided written notification of the address change.

2. Notice.

a. In any situation where thirty (30) days notice of cancellation or non-renewal of the coverage of a specified group plan or of the coverage of any individual therein is required, notice given by a health maintenance organization to an authorized representative of any such group shall be deemed to be notice to all affected enrollees in any such group and satisfy the notice requirement of the Act;

b. The notice requirement of § 62D.12, subd. 2 shall be deemed to be satisfied in the event of voluntary enrollee or voluntary group cancellation or non-renewal of coverage, including such voluntary cancellation manifested by the enrollee's failure to pay the prescribed prepayment amount.

c. The notice requirement of § 62D.12, subd. 2, of the Act shall not compel a health maintenance organization to provide health care services beyond a date for which payment therefore may not reasonably be expected to be received.

3. a. A health maintenance organization may terminate enrollees who are covered dependents in a family health maintenance contract upon the at-

tainment by the dependent enrollee of a limiting age as specified in the contract. Provided, however, that no health maintenance contract may specify a limiting age of less than eighteen years of age. Provided further that if any health maintenance contract provides for the termination of coverage based on the attainment of a specified age it shall also provide in substance that attainment of that age shall not terminate coverage while the child is (a) incapable of self-sustaining employment by reason of mental disability or physical handicap, and (b) chiefly dependent upon the enrollee for support and maintenance, provided proof of incapacity and dependency is furnished by the enrollee within 31 days of attainment of the age, and subsequently as required by the health maintenance organization, but not more frequently than annually after a two year period following attainment of the age.

B. Insurance terminology. Except as it relates to the name of any health maintenance organization, § 62D.12, subd. 3 of the Act shall not be construed to prohibit the use of the words cited or described therein if such usage is incidental to the text of any health maintenance organization contract or literature, enhances the accuracy or understanding thereof, and is not deceptive or misleading.

C. Maximum enrollment. The maximum number of enrollees permitted a health maintenance organization shall pertain to current enrollment at any single point in time.

D. Enrollment discrimination. A health maintenance organization which refuses to enroll recipients of medical assistance or medicare because of its good faith inability to qualify for such payments because of state or federal requirements shall not be deemed to be discriminating against any such recipients.

E. Certificate of need. For the purpose of complying with § 63D.22, subd. 6 of the Act, any health maintenance organization intending to modify the construction of or construct a health care facility as defined in 7 MCAR § 1.370 A.4.b. shall be deemed to be an "applicant," as such term is defined in Section 201(b), Minnesota State Planning Agency Certificate of Need Act Rules and Regulations, 1971.

F. Use of funds. All income of a health maintenance organization, however derived, including refunds, dividends or rebates on its insurance policies or nonprofit health service plan contracts, shall be considered part of its net earnings and subject to the provisions of Minn. Stat. § 62D.12, subd. 9.

G. Fees. Every filing submitted to the Commissioner by a health maintenance organization subject to Minn. Stat. §§ 62D.01 to 62D.29 (the Health Maintenance Act of 1973) shall be accompanied by the following fees:

1. For filing an application for a Certificate of Authority, $250.00.

2. For filing each annual report, $50.00.

3. For filing an amendment to a Certificate of Authority, $25.00.

4. For each examination, $125.00 per eight hour day.

5. For all other filings, $25.00.

§ 1.373 Open enrollment.

A. Effective date. Open enrollment requirements shall be implemented by an existing health plan within a one year period commencing July 1, 1975. Health plans formed after the effective date of the Act, shall implement such requirements within a one year period to commence twenty-four (24) months after beginning operation as a health plan.

B. Scope.

1. The requirements of § 62D.10, subd. 2 of the Act shall apply to those health plans which offer non-group contracts.

2. The requirements of § 62D.10, subd. 3 of the Act shall apply to those health plans which offer group contracts.

3. Health plans offering non-group and group contracts shall be subjected to § 62D.10, subd. 2, of the Act, with respect to their non-group and to § 62D.10, subd. 3, with respect to their group contracts.

C. Notice.

1. All health plans offering group plans shall provide for reasonable and timely notice of open enrollment provisions to prospective group enrollees or their representatives, including the dates of annual open enrollment and the manner in which to enroll. Such notice shall be given at least fifteen (15) days and not more than forty-five (45) days prior to the commencement of each annual open enrollment period.

2. All health plans offering individual enrollments shall advertise the dates of their open enrollment and the manner in which to enroll in at least one newspaper of general distribution in the geographical area served by the plan. The advertisement shall run on at least two occasions at least 15 days and at most 45 days before the beginning of the open enrollment period. The advertisement shall be of sufficient size to reasonably apprise readers of the availability of the open enrollment period.

D. Waiver. The requirements of § 62D.10 may be waived or the imposition of necessary underwriting restrictions may be authorized upon a written application to the Commissioner stating the grounds for the request.

1. The Commissioner shall determine whether or not compliance with the requirement for open enrollment would:

a. Contravene the maximum enrollment limitation of 500,000 enrollees imposed by the Act;

b. Prevent a health plan from competing effectively with other health plans or with commercial health insurers for the enrollment of new members or for the retention of current members;

c. Result in a health plan incurring unreasonably high expenses in relation to the value of the benefits or services it provides;

d. Jeopardize the availability or adequacy of a health plan's working capital and any required surpluses or reserves; or

e. Endanger the ability of a health plan to meet its current and future obligations to enrollees.

2. In making this determination the Commissioner of Health shall:

a. Consider information supplied by a health plan in its application for the waiver or underwriting restrictions;

b. Be permitted access to all health plan records pertinent to such application;

c. Consider prevailing practices and standards relating to the financing and delivery of health care service in the community; and

d. Consider any comments submitted by the Commissioner of Insurance or any interested party.

§ 1.374 Periodic filings.

A. Filing requirements. Required filings will be acted upon at the next official meeting of the Commissioner of Health following the filing date, provided the filing date is at least fifteen (15) days before said meeting. Exceptions to the requirement for filing fifteen (15) days in advance of a meeting will be made upon the filing of a statement of urgency and the circumstances involved.

B. Provider agreements. The provisions of Minn. Stat. § 62D.08, subd. 1 shall apply to any substantive modification in any agreement with providers as described and required for filing in 7 MCAR § 1.368 E.

C. The filing of any contracts or evidences of coverage pursuant to Minn. Stat. § 62D.07 or § 62D.08, subd. 1, shall be accompanied by sufficient evidence on cost of services on which copayments are geing imposed so as to allow the Commissioner of Health to determine the impact and reasonableness of the copayment provisions.

D. Service area. The filing of amendments to an H.M.O.'s geographic service area pursuant to Minn. Stat. § 62D.08, subd. 1, and § 62D.03, subd. 4(i) must contain sufficient supporting documentation of service area, facility and personnel availability and accessibility to allow a determination of compliance with 7 MCAR § 1.369 D.

E. Upon receipt of any filing under Minn. Stat. §§ 62D.07, 62D.08, subd. 1 or 7 MCAR § 1.374, the Commissioner of Health may request such additional data as is reasonably necessary to determine legal propriety of the filed material. Failure of a health maintenance organization to provide such data as required by 7 MCAR § 1.374 or requested by the Commissioner pursuant to this rule shall result in disapproval of the filing.

§ 1.375 Improper practices.

A. It shall be an improper practice for a health maintenance organization to advertise or market its operation by making qualitative judgment or statements concerning any health professional who provides services for a health maintenance organization.

B. A health maintenance organization shall not enroll a person who resides outside the health maintenance organization's defined service area,

unless the health maintenance organization provides the enrollee with written notice of the consequences of his special enrollment.

§ 1.376 Planning grants.

A. Submission of an application.

1. Applications shall be submitted on forms prescribed by the Commissioner of Health which shall address but need not be limited to:

a. Name and address of the applicant corporation and a copy of the corporation's Articles of Incorporation.

b. Names, addresses, occupations and place of employment of the members of the governing body of the applicant corporation.

c. Description of the proposed geographic area and population groups.

d. Objectives, work plans, methods and budget which would be used in the proposed project. The description of these items shall include but not be limited to the following four health maintenance organization planning elements:

(1) Proposed enrollee groups and system of market analysis.

(2) Potential ability of the applicant to develop a viable and financially sound health maintenance organization.

(3) Potential availability and cooperation of providers.

(4) Proposed organizational structure of the health maintenance organization.

e. Applicant's description of the need for the project in the proposed geographic area of population groups.

f. Any other information which would be necessary to enable the Commissioner of Health to evaluate the application consistent with the provisions of this rule and any applicable legislation. Failure to submit all information requested may result in rejection of the application.

2. Applications shall be submitted on or before deadlines prescribed by the Commissioner of Health. Such deadlines shall be announced by the Commissioner at least thirty days prior to the date the application is due.

3. Announcement of the application process and deadlines shall be made to individuals and groups including but not limited to Minnesota area-wide comprehensive health planning agencies as defined in Minn. Stat. § 145.72, subd. 5, as amended, or any successor agency, Minnesota health

maintenance organizations and other individuals and groups which have requested an application in writing within the last twelve months.

B. Review of application.

1. Applications shall be submitted by the Commissioner of Health for review and comment to any areawide comprehensive health planning agency or successor agency having jurisdiction over all or part of the proposed service area of the applicant. The review and comment report shall be considered by the Commissioner as long as such report is made to the Commissioner within sixty days from when the grant application was submitted to such agency. The agency report shall address at least the items covered in 7 MCAR §§ 1.376 B.2.a. to i., 7 MCAR § 1.376 B.3., and Minn. Stat. § 62D.28.

2. The Commissioner of Health shall consider the following factors in determining the organizations which shall receive planning grants, the amount of money to be awarded and the terms and conditions for issuance of such planning grants. The order of the factors has no priority significance.

a. Extent to which the applicant exhibits knowledge of activities necessary to develop a health maintenance organization.

b. Prospects for support from proposed enrollees.

c. Prospects for cooperation from area providers.

d. Qualifications of the persons responsible for the organization to conduct planning.

e. Unmet health needs of the proposed service area.

f. Consistency with other health planning goals in the community.

g. Ability of the organization to obtain additional or continued planning, development and operating funds.

h. Lack of other health maintenance organizations or of health maintenance organizations of this proposed organizational model in the geographic area.

i. Ability to comply with Minn. Stat. § 62D.28 (1974).

3. With respect to applications for continuation grants, in addition to the factors in the paragraph above, the Commissioner of Health shall consider the ability of the applicant to satisfactorily complete its stated objectives and the likelihood that continued state funding could contribute to development of a health maintenance organization.

C. Awarding of grants. Within ninety days of the deadline for submission of the application, the Commissioner of Health shall inform the applicant in

writing of its decision and the reasons therefor. The award of grant monies shall be conditioned upon the applicant's compliance with 7 MCAR § 1.376 D.

D. Operation of grant projects.

1. No grant monies shall be distributed by the Commissioner of Health until the grantee complies with this section. If the applicant does not comply with this section within thirty days of receipt of the Commissioner's decision to award the grant, the Commissioner may revoke such award. Each grantee shall enter into a grant agreement with the Commissioner which shall include but not be limited to the following assurances by the grantee:

a. The grantee shall maintain adequate fiscal control and fund accounting procedures including records pertaining to grant awards, obligations, unobligated balances and expenditures. Accounting records shall be supported by source documentation.

b. The Minnesota Department of Health and Minnesota Legislative Auditor shall be permitted access to records maintained in accordance with the grant project at any time either of these State agencies deems necessary.

c. The grantee shall agree to accept supervision, consultation and follow-up provided by the Minnesota Department of Health to accomplish the goals and objectives of the grant.

d. The grantee shall submit quarterly progress reports and financial reports according to a schedule and forms established by the Commissioner of Health.

e. The grantee shall maintain a policy and shall implement a procedure of equal employment opportunity in accordance with the State of Minnesota Affirmative Action Policy and Titles VI and VII of the Civil Rights Act of 1974. The grantee shall furnish information relative to the affirmative action policy and programs to the State upon request.

f. The grantee shall comply with all additional terms and conditions established by the Commissioner of Health which are consistent with the provisions of the Act and these rules.

2. Prior approval from the Minnesota Department of Health shall be obtained for revision of objectives or the budget whenever:

a. The revision results in substantial change in the objectives of the grant-supported project.

b. The cumulative amount of transfers among/between expense categories exceeds or is expected to exceed ten percent of the grant budget.

E. Termination of a grant.

1. The Commissioner of Health may terminate any grant project if there is evidence of any one of the following:

a. Failure to comply with 7 MCAR § 1.376 D.

b. Substantial inability to complete objectives and work plan described in the grantee's application.

c. Use of the State health maintenance organization planning funds for activities not described in the application or revisions approved by the Department.

2. If a grant is to be terminated prior to the date originally specified in the grant award, the Commissioner of Health shall inform the grantee in writing of its intent to terminate the grant, giving the reasons therefor and the date on which termination will be effective.

§ 1.377 General provisions.

A. Definitions. In addition to the definitions in Minn. Stat. §§ 62D.02, 62E.02 and 7 MCAR § 1.367, the terms and phrases defined in this section have the meaning given them.

1. "Applicable employer" applies to any person, partnership, association, trust, estate, corporation or political subdivision which:

a. During the calendar quarter preceding the date of request pursuant to 7 MCAR §§ 1.377 C. or 1.377 F., employed in Minnesota an average number of not less than 100 employees, other than employees engaged in seasonal employment as defined in Minn. Stat. § 268.07, subd. 5;

b. Offers, or on whose behalf there is offered, in the calendar quarter preceding the date of request pursuant to 7 MCAR §§ 1.377 C. or 1.377 F., a health benefits plan to its eligible employees, whether purchased from an insurer or a health maintenance organization or provided directly by the applicable employer on a self-insured basis;

c. Has received a written request for inclusion in the health benefits plan from a health maintenance organization in the manner prescribed by 7 MCAR § 1.377 C. Such a written request is not required before applicability to employers who do not offer an accident and health insurance option but are otherwise included under this definition.

One ceases being an applicable employer for a particular calendar quarter in which either:

(1) one fails to employ 100 persons as in paragraph a. above; or,

(2) one ceases to offer a health benefits plan to employees during a calendar quarter as in paragraph b. above.

2. "Collective bargaining agreement" means an agreement entered into between an employer, who is required by any State or Federal law to negotiate health benefits with employees in a bargaining unit and to produce a written agreement evidencing the result of such bargaining, and the bargaining representative of its employees.

3. "Designee" means any person or entity authorized to act on behalf of an applicable employer or group of applicable employers to offer an accident and health insurance policy, health maintenance contract, or self-insured health benefits plan, to the applicable employer's eligible employees.

4. "Eligible employee" means an employee who meets the terms and conditions established by an applicable employer, or its designee to participate in an existing health benefits plan.

5. "Existing health benefits plan" means either:

a. Any contract or agreement between an applicable employer, or its designee, and a health maintenance organization or an insurer which provides for payment for, or provision of, medical, surgical or hospital care; or

b. Any self-insured program made available by the applicable employer which provides for payment for, or provision of, medical, surgical or hospital care.

A plan shall be deemed an "existing health benefits plan" when it is subject to the terms of a collective bargaining agreement which specifically mandates health benefits or identifies the health maintenance organization or insurer which is to be contracted with for health benefits.

6. "To offer a health benefits plan," as the phrase is used in Minn. Stat. § 62E.17, subd. 1, means to make participation in an existing health benefits plan available to eligible employees, or to such employees and their eligible dependents, where a financial contribution is made by the employer on behalf of such employees.

B. Applicability to employers.

1. An employer, who, prior to the effective date of these rules, offered a dual option of either an accident and health insurance policy or health maintenance organization contract and continues to make a dual option available, shall not be considered to be an "applicable employer" for purposes of these rules.

2. If an employer has executed a written agreement with an insurer and health maintenance organization to offer a dual option at the next renewal of the health benefits contract, the employer shall not be considered to be an "applicable employer" for the purposes of these rules.

3. An employer who offers an accident and health insurance option

and is not requested in writing by a health maintenance organization shall not be deemed to be an "applicable employer" subject to offering the health maintenance organization option and shall not be deemed in violation of this law.

4. Nothing in these rules shall prevent an employer from seeking out a health maintenance organization or insurer in order to offer the dual option without being subject to these rules.

C. Request to employer for dual option inclusion by a health maintenance organization. A request for dual option inclusion in an employer's health benefits plan by a health maintenance organization shall be received by the employer or the employer's designee not less than 120 days in advance of the renewal date of the existing health benefits plan, unless the employer or its designee waives this time requirement. The request shall:

1. Be in writing, dated and directed to the specific employer, or the employer's designee.

2. Provide evidence that the health maintenance organization has a certificate to operate a health maintenance organization in Minnesota.

3. Describe the service area of that health maintenance organization filed with the Commissioner of Health according to Minn. Stat. § 62D.03, subd. 4(i).

4. Describe the location of facilities where health services are provided or will be provided, and give the days and hours of operation of those facilities. The provision for listing of days and hours of operation shall be waived for health maintenance organizations which provide health services through more than twenty (20) ambulatory health care locations.

5. Include sample contracts to be entered into between the health maintenance organization and the employer, or its designee. The health maintenance organization shall specify the final contract at least 30 days prior to the group open enrollment.

6. State the proposed schedule of charges to be required for various categories of enrollment. After the request is submitted to the employer but at least 30 days prior to the group open enrollment, the schedule of charges may be adjusted by the health maintenance organization in consideration of demographic and other information provided by the employer.

7. Provide a copy of the most recent annual financial statement of health maintenance organization.

8. Include sample copies of marketing brochures and membership literature.

D. Substitution of another health maintenance organization. If the applicable employer or its designee, subject to 7 MCAR § 1.377 C., selects one or

more other health maintenance organization which may not have made a request under 7 MCAR § 1.377 C., but is willing to be included in the health benefits plan, the applicable employer is not required to include the option of enrollment in the specific health maintenance organization which initiated the request for inclusion.

E. Multiple health maintenance organization options. An applicable employer, or its designee, may include in the health benefits plan offered to its employees, the option of enrollment in other health maintenance organizations which the applicable employer or its designee may decide to offer.

F. Obligation to offer the accident and health insurance option. An applicable employer shall offer an accident and health insurance policy to eligible employees and their dependents at the next renewal of the existing health benefits contract. The applicable employer may choose any insurer which operates pursuant to Minn. Stat. chs. 62A or 62C.

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§ 1.378 Offer of the dual option to employees.

A. Collective bargaining.

1. For those employees whose existing health benefits plan is offered through collective bargaining agreement, the dual option shall be subject to the collective bargaining process, when a new collective bargaining agreement is negotiated or if such agreement is automatically renewable, on its anniversary date.

2. If the collective bargaining representative rejects all the new dual option alternatives, the employer shall not be considered to be an applicable employer for the purposes of these rules until the next renewal date of the existing health benefits plan. If more than one dual option request is forwarded to the collective bargaining representative, the employer may specify that no more than one of the dual option alternatives be selected.

3. The applicable employer shall be required to make dual option available to employees not subject to collective bargaining at the next renewal date of the contract covering those employees.

B. Renewal date. The employer's obligation to offer a dual option to employees shall be applicable on the first renewal of the existing health benefits plan. In the case of an existing health benefits plan that has no fixed term, the contract shall be treated as renewable on the anniversary date of the contract or the renewal of the collective bargaining agreement, at the discretion of the employer. If the applicable employer is self-insured, the fiscal year shall be considered the term of the existing health benefits plan.

C. Group enrollment period. An applicable employer who offers the option of enrollment with an insurer or health maintenance organization pursuant to 7 MCAR § 1.377 C. or F., shall provide for a group open enrollment period in which dual option is offered. During the first time dual option is

made available, the health benefits plan alternatives shall be presented to each eligible employee with the requirement that an affirmative written selection be made by each employee among the alternatives included in the health benefits plan.

D. Selection by new employees or transferees. The opportunity to select among the options within a health benefits plan shall be made available to new employees and employees who have been transferred to a new geographic location at the time the employees are eligible to participate in the health benefits plan, regardless of whether this coincides with the open enrollment period. At the time such employees are eligible to participate in the health benefits plan, such opportunity shall be presented to such employees with the requirement that they make an affirmative written selection among the alternatives included in the health benefits plan.

E. Access to employees. The applicable employer shall provide each health maintenance organization or insurer which is included in its health benefits plan under 7 MCAR § 1.377 C. or F. with fair and reasonable access, at least thirty days prior to and during the group enrollment period, for the purpose of presenting and explaining its program. This accessibility shall include, at a minimum, the opportunity for distribution of educational literature, brochures, announcements of meetings and other relevant printed materials to each eligible employee. This information shall be free of untrue or misleading statements, as prohibited by Minn. Stat. § 62D.12, subd. 1 and § 72A.17 to § 72A.321. In no event shall the access to eligible employees provided to a new option under 7 MCAR § 1.377 C. or F. be more restrictive than that provided offerers of alternatives in the health benefits plan, whether or not the representatives of the other alternatives elect to avail themselves of such accessibility.

F. If, following completion of the first annual enrollment period and before the actual effective date, less than twenty-five employees select an option offered in accordance with 7 MCAR § 1.377 C. or F., then the applicable employer, health maintenance organization under 7 MCAR § 1.377 C. or insurer under 7 MCAR § 1.377 F., may choose not to provide such new option. If the new option is cancelled due to this clause, the applicable employer shall re-open the enrollment process and shall permit each eligible employee to select among the remaining options in the health benefits plan, without penalty to the employees.

§ 1.379 Employer contribution for dual option alternative.

A. The monetary contribution by an applicable employer for dual option added pursuant to 7 MCAR § 1.377 C. or F. shall be based on terms no less favorable than the terms on which contributions to the existing health benefits plans are based. In no event shall the employer's contribution be less in absolute dollar amount per employee for the new dual option alternative than the employer's current contribution for the existing health benefits plan, unless the same absolute dollar amount of the current contribution would exceed the schedule of charges of the new dual option alternative. The appli-

cable employer shall use payroll deduction to collect the eligible employee's contribution toward health benefit coverage if such a payroll deduction system is used under the existing health benefits plan.

B. The amount of the applicable employer's contribution shall be determined in a manner consistent with the following factors:

1. The amount of the applicable employer's contribution shall not be reduced on the basis of administrative expenses of the applicable employer or its designee associated with offering the dual option.

2. The amount of the applicable employer's contribution may exclude such portions of the contribution allocated to benefits other than medical, surgical and hospital care (e.g., life or disability insurance) for which eligible employees and their eligible dependents will continue to be covered, regardless of selection of the dual option alternative.

C. If the amount of the applicable employer's contribution for health benefits is fixed by a collective bargaining agreement or by a contract with eligible employees, the amount so determined shall constitute the applicable employer's obligation for contribution toward the health maintenance organization prepayment charge or accident and health insurance premium on behalf of an eligible employee and his or her eligible dependents.

D. Where the applicable employer's contribution for health benefits is determined by a collective bargaining agreement, but the amount so fixed includes contribution for benefits in addition to health benefits, the applicable employer or its designee shall determine the portion of such employer's contribution applicable to health benefits in accordance with this section.

E. In the absence of a collective bargaining agreement or employer-employee contract specifying contribution for health benefits, the applicable employer's contribution on the behalf of eligible employees and their eligible dependents, unless otherwise agreed to by the health maintenance organization or insurer and the applicable employer or its designee, shall be based upon the total costs of such health services offered to Minnesota employees for the most recent period for which experience is available, reduced by such amounts identified in accordance with paragraph B.2. of this rule. Such cost determination shall be consistent with paragraph A.

§ 1.380 Dual option on a self-insured basis.

A. The requirement for offering an accident and health insurance policy in these rules shall be satisfied if the employer pays claims under a health benefits plan which includes all the mandated benefits required by Minn. Stat. chs. 62A or 62C. For the purposes of these rules, the self-insured plan need not be otherwise approved by the commissioner of insurance.

B. The requirements for offering a health maintenance organization contract in these rules shall be satisfied if the employer provides health services

which include all the comprehensive health maintenance services required by Minn. Stat. ch. 62D. For the purposes of these rules, the employer-operated health maintenance organization need not be otherwise authorized by the Commissioner of Health to perform health maintenance organization functions.

MINNESOTA CODE OF AGENCY RULES

RULES OF THE DEPARTMENT OF HEALTH

1982 Reprint

All rules as in effect on September 15, 1982

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For Table of Contents See Volume 39A.

FOREWORD

Minnesota Statute (1971) Sections 245.78, 252.28, and 257.081 to 257.123 provide for regulation by the Department of Public Welfare of residential facilities and services for persons with certain disabilities. The Statute permits the incorporation of rules and regulations suggested by the Commissioner of Health.

These regulations have been developed pursuant to a cooperative agreement with the Minnesota Department of Public Welfare, under which the Department of Public Welfare regulates the habilitative, rehabilitative, and social service programs provided to residents of these facilities and the Board of Health, under provisions of Minnesota Statute (1971) Section 144.56 (STANDARDS), establishes a Supervised Living Facility (SLF) as a facility, licensed by both the Minnesota Department of Health and the Minnesota Department of Public Welfare, in which appropriate programs and services are provided. These regulations establish minimum standards as to the construction, equipment, maintenance, and operation of supervised living facilities insofar as they relate to sanitation and safety of the buildings, and to the health, treatment, comfort, safety, and well-being of the persons accommodated for care, except for standards of the Department of Public Safety, which has the exclusive jurisdiction to enforce state fire and safety standards.

The purpose of a Supervised Living Facility is to provide a residential, home-like setting for persons who are mentally retarded, adult mentally ill, chemically dependent, or physically handicapped and who are able to live safely under supervision provided through programs licensed by the Department of Public Welfare.

Supervised Living Facilities are facilities in which certain services are provided. Among these services are the provision of meals, lodging, housekeeping services, health services, and other services, provided either by staff or by residents under supervision, but in all cases, in accordance with sanitary standards which must be observed in a group situation to prevent the creation of unsanitary conditions which endanger the health of individual residents and staff.

Of concern to the Board of Health is that residents are provided appropriate services in a safe, sanitary and healthful setting. Germane to this concern is the necessity for a procedure which will effectively ascertain at the time of admission of the resident and periodically thereafter, that persons admitted to a Supervised Living Facility are persons who have handicaps that prevent or limit independent living, but who are not in need of continuing medical or nursing care. This procedure is implemented through program licensure by the Minnesota Department of Public Welfare.

Individualized ongoing evaluation is provided through licensed programs to help each resident reach his maximum level of functional capabilities. Periodic evaluation of residents by representatives of the State Board of Health are made to assure that the needs of the residents do not exceed these services which the licensee is authorized to provide.

Supervised Living Facilities may, but are not required to provide treatment, educational training, personal care, or sheltered workshop services on a 24 hour-a-day basis. Some of these services may be provided to resi-

dents either by having the service brought into the facility or by assuring that the resident receives appropriate services elsewhere.

The range of services required by residents of Supervised Living Facilities includes services for persons who are dependent for reasons other than degenerative processes of aging as well as services for persons young or old, who are living and working in the community or are in transition from residential to independent community life.

In all cases, only those facilities will receive and retain licensure as Supervised Living Facilities that can demonstrate to the satisfaction of the State Board of Health that:

(a) functional services are provided in safe, healthful, and sanitarily operated and maintained buildings; and

(b) only those persons are accepted as residents whose needs can be met by the facility directly or in cooperation with other resources with which there is evidence of acceptable agreements or arrangements.

CHAPTER TWENTY-THREE: MHD 391-401

REGULATIONS FOR CONSTRUCTION, EQUIPMENT, MAINTENANCE, OPERATION AND LICENSURE OF SUPERVISED LIVING FACILITIES

MHD 391 DEFINITIONS

(a) "Supervised Living Facility" means a facility in which there is provided supervision, lodging, meals and in accordance with provisions of Rules of the Department of Public Welfare, counseling and developmental habilitative or rehabilitative services to five or more persons who are mentally retarded, chemically dependent, adult mentally ill, or physically handicapped.

(b) "Health and Safety Component" means those elements of a facility which influence all residents including, but not limited to, physical plant design, general sanitation, nutritional requirements, medication handling procedures and practices relating to health, such as provisions for health care arrangements, emergency medical care and physician's orders.

(c) The term "Board", as used in these regulations, means the "Minnesota State Board of Health." The term "Department" means the "Minnesota Department of Health."

(d) "Ambulatory" means the ability to walk independently and at least negotiate any barriers such as ramps, doors, stairs, corridors, etc., without assistance as may be necessary to get in and out of the facility.

(e) "Mobile" means the ability to move from place to place with the use of devices such as walkers, crutches, wheelchairs, wheeled platforms, etc.

(f) "Non-ambulatory" means the inability to walk independently.

(g) "Non-mobile" means the inability to move independently from place to place.

(h) "New construction" as used in these regulations means the erection of new buildings or the alterations of or additions to existing buildings commenced on or after the effective date of these regulations.

(i) "Resident" means an individual who receives service from a supervised living facility.

(j) "Physically handicapped" encompasses those orthopedic, incoordinative, sight and hearing disabilities that result in the significant reduction of mobility, flexibility, coordination, or perceptiveness and that, singly or in combination, interfere with the individual's ability to live independently; that are not the result of the normal aging process that are considered to be chronic conditions.

302-392

7 MCAR S 1.392 General provisions.

A. Facility license. A license shall be issued by the board to an applicant who satisfactorily meets all requirements contained in these regulations.

1. The license is valid for one year.

2. Separate licenses are required for facilities maintained on separate premises, even though operated by the same ownership.

3. A separate license shall not be required for separate buildings maintained by the same owner on the same premises, unless such buildings represent different classifications.

4. Each license shall be conspicuously posted in the facility.

5. Facilities which have been determined by the state fire marshal to be out of compliance with fire safety requirements of the state fire marshal are not eligible for licensure by the board.

6. Each license shall specify the maximum allowable number of residents that may be lodged in the facility.

B. Licensure procedure.

1. Application for a facility license to establish or operate a supervised living facility shall be made in writing and submitted on forms provided by the department. The application for a new facility or for a change in classification shall include a copy of the proposed program or other acceptable indication from the Department of Public Welfare pertaining to the types of residents who are to be served by the facility.

2. If the applicant is a corporation, the applicant shall furnish the department names and addresses of the governing body and names of current officers of the corporation.

3. In addition to the documents required in B.2. above, out-of-state corporations shall furnish the department with a copy of the certificate of authority to do business in Minnesota.

4. Existing buildings and new construction shall be reviewed and approved by the department prior to licensure. Review includes submission of construction drawings and specifications for new construction and alterations.

5. Each application for either an initial or renewal license to operate a supervised living facility within the meaning of Minnesota Statutes, sections 144.50 to 144.56 and these regulations shall be accompanied by a fee based upon the formula established in 7 MCAR S 1.701, Exhibit I. A bed must be

licensed if it is available for use by residents. If the number of licensed beds is increased during the term of the license, $12 for each additional bed shall be paid. There shall be no refund for a decrease in licensed beds.

6. Initial and renewal licenses issued pursuant to Minnesota Statutes, sections 144.50 to 144.56 and these regulations shall be issued for the calendar year for which application is made and shall expire on December 31 of such year. License renewals shall be applied for on an annual basis. Applications for license renewal shall be submitted no later than December 31 of the year preceding the year for which application is made. Any application for an initial license submitted after November 1 shall be considered as an application for the following year; provided, however, that a license may be issued and be effective prior to January 1 of the year for which application is made without payment of fees for two years.

C. Building classification. For considerations of licensure, construction and major renovation, supervised living facilities are classified as follows:

1. Class A supervised living facilities include homes for ambulatory and mobile persons who are capable of taking appropriate action for self-preservation under emergency conditions as determined by program licensure provisions. Class A supervised living facilities shall be in conformance with provisions of chapter 13 of the 1973 Edition of the Uniform Building Code, as amended for Group H occupancies. Physically handicapped persons shall be housed at the street level.

2. Class B supervised living facilities include homes for ambulatory, non-ambulatory, mobile, or non-mobile persons who are not mentally or physically capable of taking appropriate action for self-preservation under emergency conditions as determined by program licensure provisions. Class B supervised living facilities shall be in conformance with provisions of chapter 9 of the 1973 Edition of the Uniform Building Code, as amended for Group D occupancies.

D. Waivers. A supervised living facility may request in writing a waiver of a specific regulation. The request for a waiver must cite the regulation in question, reasons for requesting the waiver, the period of time the licensee wishes to have the regulation waived, and the equivalent measures planned for protecting the health and safety of residents and staff. Waivers granted by the board shall specify in writing the time limitation and required equivalent measures to be taken to protect the health and safety of residents and staff.

E. Program license. All applicants for licensure must have received or have applied for a program license from the Minnesota Department of Public Welfare under provisions of rules 34, 35, 36, or 80 before the supervised living facility license is issued by the board.

F. Staff. At all times that residents are up and about in the facility, there shall be at least one responsible person awake, dressed, and up and about in the facility. The responsible person shall be at least 18 years of age and capable of performing required duties in supervision of residents. This person shall be immediately accessible to all residents in the facility and shall be the person to whom residents can report injuries, symptoms of illness, and emergency situations. Facilities that accept persons who are not capable of adequate judgment in taking action for self-preservation, must assure that there is, additional to the requirement above, adequate staff on duty on a 24 hour a day basis to provide:

1. necessary physical services for activities of daily living;

2. maintenance of an appropriate personal hygiene program for each resident; and

3. for appropriate movement of residents to safe harborage within the facility, or evacuation from the facility, in the case of fire or other emergency situation.

G. Residents. Supervised living facilities may accept as residents such persons as are described in MHD 391(a), but may not accept as residents, nor provide lodging to any of the following persons:

1. persons who have or are suspected of having a communicable disease or a disease endangering the health of other residents;

2. persons who require nursing care as defined in State Board of Health Regulations, Chapter Five, MHD 44(a), except for brief episodic periods.

H. Resident register. A register shall be kept in a separate bound book, listing in chronological order the dates and names of all persons admitted to and discharged from the facility. This register shall be available to department employees for inspection.

I. Census data. Records shall be kept of admissions, discharges, deaths, and transfers of residents and shall be available for inspection by department employees.

J. Staff health. The licensee shall assure that:

1. All staff shall, prior to employment and annually thereafter, show freedom from tuberculosis by a report of either a standard Mantoux tuberculin test or a chest x-ray. If the Mantoux test is positive or contra-indicated, a chest x-ray shall be taken. The results of these tests shall be reported in writing and made a part of the staff member's personnel record;

2. Any staff member with a communicable disease shall not

be permitted to work in the facility until such time that a physician certifies that the staff member's condition will permit his return to work without endangering the health of other staff and residents;

3. The facility administrator may require that a staff member have a medical examination when a reasonable suspicion of communicable disease exists; and

4. Personnel records shall be available for inspection by department employees.

K. Resident death. When a resident dies:

1. The date, time and circumstances of the resident's death shall be recorded in the resident's record;

2. If the resident dies in the facility, the coroner's office shall be notified;

3. Personal belongings shall be handled in a responsible and legal manner; and

4. Records of a deceased individual shall be retained for a period of three years following death.

L. Effective date. These regulations shall become effective January 1. 1975.

MHD 393 PHYSICAL PLANT

(a) **Building.** Every building, structure, or enclosure utilized by the supervised living facility shall be kept in good repair and so maintained as to protect the health, comfort, safety, and well-being of persons accommodated. Buildings housing physically disabled residents shall have a plan

[1]"Examples of nursing care: bedside care, including administration of medications, irrigations and catheterizations, applications of dressings or bandages; rehabilitative nursing techniques; and other treatments prescribed by a physician which require technical knowledge, skill, and judgement as possessed by a registered nurse."

acceptable to the Board with reasonable target dates for the removal of or the reduction of architectural barriers consistent with the resident program.

(b) **Floors.** The floors of all rooms, hallways, bathrooms, store rooms, and all other spaces used or traversed by residents and staff shall be of such construction as to be easily cleaned, shall be smooth, and shall be kept clean and in good repair. Cleaning of floors shall be so done as to minimize the raising of dust and the exposure of residents thereto. The safe use of rugs, carpets or natural stone, which can be kept clean, is permitted. Abrasive strips to reduce or prevent slipping shall be used where slippery surfaces present a hazard.

(c) **Walls and Ceilings.** The walls and ceilings of all rooms, halls and stairways shall be kept clean and in good repair.

(d) **Lighting and Ventilation.** Lighting levels, measured 30 inches above the floor, shall not be less than 20 footcandles for all resident use areas, and not less than five footcandles for exit stairways, mechanical equipment, and storage areas.

An area shall be considered well ventilated when excessive heat, odors, fumes, vapors, smoke, or condensation is reduced to a level barely perceptible to the normal senses. Air replacement vents shall be designed to permit the entrance of an equal volume of displaced air and to prevent the entrance of insects, dust or other contaminating materials.

Toilet rooms shall be well ventilated by natural or mechanical methods. Interior toilet rooms, central toilets serving more than four persons, and soiled utility rooms shall be provided with mechanical exhaust ventilation.

During seasons when weather conditions require tempering of make-up air, adequate equipment shall be provided to temper the make-up air. Every gas-fired or oil-fired room heater and water heater and other heating appliance shall be vented to the outside air.

(e) **Space Arrangements and Requirements.** Provision of appropriate space and arrangements thereof for sleeping, dining, recreation, and other common use areas for activities or training shall be in conformance with the residents' mobility needs and with the program licensure requirements of the Department of Public Welfare.

(1) Minimum areas for residents' dining and living areas shall be ten and 20 square feet respectively per resident, or 30 square feet total per resident when the area is used for a combination thereof. Common use areas for use by non-ambulatory mobile residents require an increase of 50 percent. This increase applies also to dining areas serving disabled residents who require assistance with eating.

(2) Single bedrooms for ambulatory residents shall provide at least 70 square feet of useable floor space with a side dimension of not less than seven feet.

(3) Multi-bedrooms for ambulatory residents shall provide at least 60 square feet per person of useable floor space for each resident. There shall be at least three feet between beds placed side by side and at least one foot between beds placed end to end. In each case, there shall be at least three feet of unobstructed space between ends of beds where such space is used for resident or staff access.

(4) Single bedrooms for non-ambulatory residents shall provide at least 100 square feet of useable floor area with a side dimension of not less than nine feet. Mobility space at the end and one side of each bed shall be not less than four feet.

(5) Multi-bedrooms for non-ambulatory, non-mobile residents shall provide at least 80 square feet of useable floor space for each resident. Multi-bedrooms for active, non-ambulatory, mobile residents, shall provide at least 100 square feet per adult resident. Mobility space at the end and one side of each bed shall be not less than four feet.

(6) Bedrooms for non-ambulatory, mobile residents shall have adequate accessible space for storage of wheelchairs and other prosthetic or adaptive equipment for daily out-of-bed activity or acceptable similar storage space shall be provided outside the bedroom readily and handily accessible to the resident.

(7) Bed arrangements shall be compatible with the physical and programmatic needs of the residents. Beds shall be located so as to avoid drafts from windows and excessive heat from heat sources.

(8) Level ceilings in sleeping rooms shall not be less than seven feet in height. In sleeping rooms with sloped ceilings only the areas with vertical wall heights of five feet or more shall be included in the required useable floor areas. At least one-half of the useable floor area must have a ceiling of the required height.

(9) Bedrooms shall be provided with a private enclosed space for each resident's belongings, preferably built-in. Such space shall be accessible and adjustable for use by each resident in conformance with program requirements.

(10) Bedrooms shall be exterior rooms with at least one window which is easily opened to the outside. In existing construction, the bedroom window area shall be at least one-tenth of the floor area and not less than nine square feet. The window sill shall not be more than three feet above the floor. Bedrooms with floor level located below the grade at the outside wall shall have floors and walls adequately sealed to prevent leakage or dampness from underground and surface runoff water. In new construction, the floors shall be located at or above the outside grade level.

(f) **Beds.** Each resident shall have an individual bed. Adult beds shall be at least 36 inches wide. Each bed shall have good springs and a clean, firm, comfortable mattress. Beds shall be of suitable construction and dimensions to accommodate persons using them, and shall be able to accommodate siderails if necessary.

(g) **Bedding and Linen.** All beds provided for residents shall be supplied with suitable pillowcases and under and top sheets. All bedding, including mattresses, mattress pads, quilts, blankets, pillows, sheets, spreads and all bath linen shall be kept clean. Bedding, including mattresses, mattress pads, quilts, blankets, pillows, bed and bath linen which is worn out or unfit for further use shall not be used. Bedding shall be appropriate to the season. Pillowcases, sheets and bath linen, after being used by one resident, shall be washed before they are used by another resident.

Clean bed linen shall be furnished at least once each week, or more frequently to maintain cleanliness, and at least a clean washcloth and a clean

towel or appropriate paper service shall be available each day to each resident.

(h) **Room Furnishings.** All equipment, fixtures, furniture and furnishings, including windows, draperies, curtains and carpets, shall be kept clean and free of dust, dirt, vermin, and other contaminants and shall be maintained in good order and repair. Each resident shall be provided with appropriate individual furniture, including a chest of drawers, an individual closet with clothes racks and shelves, unless built in, a mirror, and table or desk, where appropriate. Tilted mirrors or equivalent provisions shall be available to mobile non-ambulatory residents. There shall be accessible private storage space for clothing in the bedroom area for each resident. Each resident shall have individual racks or other drying space for washcloths and towels.

(i) **Toilets and Baths.** Every facility shall be equipped with adequate and conveniently located toilet rooms for its employees and residents. Water closets, lavatories and bath tubs or showers for residents shall be available on each inhabited floor or in each resident unit when not provided for each individual bedroom.

(1) Water closets and lavatories shall be provided in the ratio of at least one toilet[1] and at least one lavatory for every eight residents, or fraction thereof.

(2) At least one bath tub or shower shall be available for every eight residents, or fraction thereof.

(3) Toilets, bath tubs and showers used by residents shall provide for individual privacy unless specifically contraindicated by program needs.

(4) Toilet and bathing areas and fixtures shall approximate normal patterns found in residential construction, except where special requirements are applicable for handicapped persons or for special program needs.

(5) All toilet and bathing areas, facilities, and fixtures shall be kept clean and in good repair and shall be well lighted.

(6) Toilet rooms shall be well ventilated by natural or mechanical methods.

(j) **Insect and Rodent Control.** Every facility shall be so constructed or equipped as to prevent the entrance, harborage or breeding of flies, roaches, bedbugs, rats, mice and all other insects and vermin. Cleaning, renovation, or fumigation by licensed pest control operators for the elimination of such pests shall be used when necessary.

(k) **Water Supply.** A safe and adequate supply of water shall be provided. The water supply system shall be located, constructed and operated in accordance with the standards of the Board.[2]

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[1]Additional water closets or space for commodes may be required by specific programs.

[2]Construction Code for Water Wells MHD 169-178. Available from Documents Section, 140 Centennial Bldg., St. Paul, Minn. 55155. For information, contact Division of Environmental Health, Minnesota Department of Health, 717 Delaware Street. S.E., Minneapolis, Minnesota, 55440.

(l) **Plumbing.** All systems of plumbing shall be installed in accordance with the provisions of the Minnesota Plumbing Code.[1]

(m) **Sewage Disposal.** All liquid waste shall be disposed of in an approved public sewage system or in a sewage system which is designed, constructed, installed and operated in accordance with the Standards and Regulations of the Board[2] and the Minnesota Pollution Control Agency.

MHD 394 FOOD HANDLING PRACTICES[3]

Any food service provided in a Supervised Living Facility shall be in accordance with the provisions of the Minnesota State Board of Health Regulations MHD 161 - 170 governing food and beverage service establishments.[4] Wherever the food service in a Supervised Living Facility is limited to serving ten residents or less, or where the main meals of the day are not prepared in the facility, certain variances from the requirements may be granted by the Board. These variances may include, but not be limited to, substitution of certain domestic type equipment for commercial type. When food is catered into a Supervised Living Facility, it shall be obtained from a source acceptable to the Board and transported, handled and served in accordance with provisions of applicable regulations of the Board.

MHD 395 NUTRITION

(a) **Frequency of Meals.** There shall be not more than 14 hours between a substantial evening meal and breakfast. Where residents are not routinely absent from the facility for work or other purposes, at least three meals shall be made available at regular times during each 24 hour period.

(b) **Quality and Variety.** Foods and beverages shall be palatable, of adequate quantity and variety, attractively served at appropriate temperatures and prepared by methods which conserve nutritional value.[5] Food services shall recognize and provide for the physiological, cultural, emotional and developmental needs of each resident. All meals provided shall be planned, prepared and served by persons who have received instruction in food handling techniques and practices.

(c) **Dietary Service.** The food and nutritional needs of residents shall be met in accordance with their needs and shall meet the dietary allowances, as stated in the Recommended Dietary Allowances, National Academy of Sciences, 7th Edition 1968. Providing each resident the specified servings per day from each of the following five food groups will satisfy this requirement.

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[1]Minnesota Plumbing Code MHD 120-MHD 135. Documents Section, 140 Centennial Bldg., St. Paul, Minnesota, 55155. For information on compliance, contact the Division of Environmental Health, Minnesota Department of Health.

[2]Standards for Design of Soil Absorption Type Sewage Disposal Systems for Public Establishments 1962, Chapters Seven and Eight. Available from Minnesota Department of Health, Division of Environmental Health.

[3]It is recommended that the Department's food handling guide entitled "Information for Food Service Personnel in Hospitals and Related Care Facilities" be made readily available for reference by all food service personnel.

[4]Requirements of Lodging Establishments and the Requirements for Food and Beverage Establishments. Available from Documents Section, 140 Centennial Building, St. Paul, Minn. 55155.

[5]It is recommended that dishes be used rather than compartment trays.

(1) Meat or Protein Group. Two or more servings per day.

A serving of meat or protein is defined as:

2-3 ounces cooked (equivalent to 3-4 ounces raw) of any meat without bone, such as beef, pork, lamb, poultry, or variety meats such as liver, heart and kidney

2 slices prepared luncheon meat

2 eggs

2 ounces of fresh or frozen cooked fish or shellfish or ½ cup canned fish

1 cup cooked navy beans

(2) Milk Group. Two or more servings per day. A serving is defined as 8 ounces (one cup) of milk. A portion of this amount may be served in cooked form, such as cream soups, desserts, etc.

1 ounce of cheese for ¾ cup milk

¾ cup cottage cheese for ⅓ cup milk

½ cup ice cream for ¼ cup milk

(3) Vegetable Group. Three or more servings per day, one of which is deep green or yellow. A serving is defined as ½ cup.

(4) Fruit Group. Two or more servings per day, one of which is citrus (i.e. orange, grapefruit) or tomato. A serving of citrus fruit or tomato is defined as:

1 medium orange or 4 ounces of orange juice

½ grapefruit or 4 ounces of grapefruit juice

1 large tomato or 8 ounces of tomato juice

(5) Cereal and Bread Group. Three to four servings per day of whole grain or enriched products. A serving is defined as:

1 slice bread

½ cup cooked cereal

¾ cup dry cereal

½ cup macaroni, rice or noodles

(d) **Menu Planning.** All menus, including special diets, shall be planned, dated and available for review for a minimum of one week in advance. Notations shall be made of any substitutions in the meals actually served and these shall be of equal nutritional value. Records of menus and of foods purchased shall be filed for six months. A reasonable variety of foods shall be provided. A file of tested recipes, adjusted to a yield appropriate for the size of the facility, shall be maintained on the premises.

(e) **Modified Diets.** If the facility accepts or retains individuals in need of medically prescribed therapeutic diets, there shall be evidence that such diets are provided as ordered by the attending physician.

MHD 396 HEALTH SERVICES

Health services shall be utilized to maintain an optimal general level of health and to maximize function, prevent disability, and promote optimal development of each resident.

(a) **Emergency Medical Services.** The licensee shall make arrangements for appropriate medical services for medical emergencies.

(b) **Admission Health Assessment.** Applicant residents shall have a general medical history and physical examination by a physician within 30 days preceding admission or within three days after admission. The licensee shall require a statement from the examining physician that the applicant, at the time of admission, is free of communicable disease. A report of the physical examination and the statement from the physician shall be provided to the licensee and shall be kept in the resident's health record. The report shall include appropriate instructions for meeting special needs, such as diet or medications.

(c) **Child Health Assessment.** Resident children (infancy through 17 years) shall have health assessments periodically as recommended by the Council on Pediatric Practice, American Academy of Pediatrics, **Standards of Child Health Care** (Evanston, Illinois: 1972.) Periodic assessment shall include an evaluation of speech, vision, hearing and special dietary needs. Records of these assessments shall be maintained in the resident health record.

(d) **Personal Hygiene.** Supervised Living Facilities shall develop and implement a plan for attainment of personal hygiene practices of all residents, with special assistance for those residents who are unable to care for themselves. Personal hygiene shall include provision for, where appropriate, and instruction in: handwashing, brushing teeth after meals, regular bathing, hair combing, brushing and shampooing, shaving, caring for toenails and fingernails, and immediate cleaning of incontinent residents, unless specifically contraindicated by a plan for toilet training. Persons shall wash their hands after handling an incontinent resident. Each resident shall be assisted in learning normal grooming practices with individual toilet articles.

(e) **Dental Assessment.** Dental assessment shall be performed at least annually. Dental examinations for children shall begin by three years of age.

(f) **Bed Rest.** Orders prescribing bed rest for residents shall be self-terminating in three days unless renewed by a physician.

(g) **Reporting Illness.** Any occurrence of sickness or communicable disease, listed in Appendix A, incurred by staff or residents shall be promptly reported to the local health officer and the Department.

MHD 397 RESIDENT'S HEALTH RECORD

Supervised Living Facilities shall maintain a resident's health record for each resident. It may be contained in a general resident record.

(a) **Required Data.** Basic health information to be maintained in each resident's health record shall include:

(1) identifying information: name, previous address, date of admission and discharge, person to contact in an emergency;

(2) the physician responsible for his/her medical care as designated by the resident or guardian;

(3) the name of the resident's dentist as designated by the resident, parent, or guardian; dates of dental examinations and treatments; special instructions for care and oral hygiene as recommended;

(4) adverse reactions to drugs recorded and prominently posted as a precaution;

(5) where professional therapy services are provided to the resident, regular notations regarding the resident's progress in such therapies;

(6) dates and descriptions of all illnesses, accidents, treatments thereof, and immunizations, including examinations required in MHD 396;

(7) summary of hospitalizations, to include recommendations for follow-up and treatment; and

(8) where the resident is being treated through a special diet, a copy of the diet, length of time to be used, prescription signed by the supervising physician, and the dates of review of the diet;

(b) **Nature of Health Record.**

(1) Upon request, a resident or parent or guardian shall be provided with a summary of the resident's health record within a reasonable period of time following discharge.

(2) All information contained in the resident's health records shall be considered privileged and confidential, and written consent of the resident or his parent shall be required for the release of information to persons not otherwise authorized to receive it. The resident shall have access to the health record upon request.

(3) All entries in the resident's health record shall be legible, dated and authenticated by the signature and other identifying designation of the individual making the entry.

(c) **Retention of Health Record.** All Resident Health Records shall be kept by the facility for at least three years following discharge or death. Employees of the department may review such records for accuracy and completeness.

MHD 398 MEDICATION HANDLING PROCEDURES

(a) **Control of Medications.** Facilities shall develop and adhere to a written medication control plan acceptable to the Board. The plan shall be on file and available for inspection. The plan shall contain at least the following provisions:

(1) a statement of: whether the staff will administer medications, how the staff will supervise self administration of medications, whether medications will be self-administered, or a combination of the above systems;

(2) how the distribution and storage of medications will be handled, including a description of suitable storage facilities;

(3) if the facility has both staff-administered and self-administered medications, the plan shall specify who will determine which system each resident will use;

(4) procedures for recording medications that residents are taking;

(5) procedures for periodic examination and review of medication regimens;

(6) procedures for storage of prescription and non-prescription medications;

(7) method of refrigeration of biologicals.

(b) **Handling of Medications.** Stock supplies of prescription medications shall not be maintained in a Supervised Living Facility. Staff may administer

prescription medications which can be safely self-administered only to residents for whom the medication is ordered by a physician. In no case shall such medications be maintained, distributed, or administered from containers other than individual prescription containers bearing appropriate labels.

(c) **Medication Containers.** All prescription medications shall be kept in their original container bearing the original label with legible information stating the prescription number, name of drug, strength and quantity of drug, expiration dates of all time-dated drugs, directions for use, resident's name, physician's name, date of original issue or in case of a refill, the most recent date thereof and name and address of the licensed pharmacy which issued the medications. It shall be the responsibility of the facility to secure the prescription number and name of the medication if these are not on the label.

(1) Any drug container having detached, excessively soiled or damaged labels shall be returned to the issuing pharmacy for relabeling.

(2) The contents of any drug container having no label or with an illegible label shall be destroyed immediately.

(3) Medications having a specific expiration date shall not be used after the date of expiration.

(d) **Record of Medications.** All prescribed medications and comfort drugs used by each resident shall be recorded on the resident's health record. This information shall include the name and quantity of the drug prescribed. Special notations shall be made whenever medications are started or discontinued. Adverse reaction to a medication, and the report to the physician of the same, shall be recorded.

(e) **Disposition of Medications.** If authorized by the attending physician or the resident's physician, medications belonging to residents shall be given to them when discharged or transferred. This shall be recorded in the resident's health record. Unused portions of controlled substances shall be handled by contacting the Minnesota State Board of Pharmacy, which will furnish the necessary instructions and appropriate forms, a copy of which shall be kept on file in the facility for two years. Any other unused portions of prescription drugs remaining in the facility after the death or discharge of the resident for whom they were prescribed, or any prescriptions discontinued permanently, shall be destroyed by the licensee or designee by flushing them into the sewer system and removing and destroying the labels from the containers. A notation of such destruction giving date, quantity, name of medication and prescription number shall be recorded on the resident's chart. Such destruction shall be witnessed and the notation signed by both persons.

MHD 399 SAFETY

(a) **First Aid.** Every facility shall have on the premises a suitable first aid kit approved in writing by a physician for use for residents and staff. Tourniquets shall not be stored in the kit. The kit shall be maintained in a place known to and readily available to all personnel responsible for the health or well-being of residents, and such personnel shall be instructed in acceptable emergency first aid procedures.

(b) **Emergency Plan.** There shall be a written plan on file which specifies action and procedures for meeting emergency situations such as fire,

serious illness, severe weather and missing persons. The procedures shall be clearly communicated to and reviewed with staff and residents. The plan shall be developed with the assistance and advice of at least the local fire and/or rescue authority and any other appropriate resource persons. The plan shall specify responsibilities assumed by the licensee for assisting residents who require emergency care or special assistance to residents in emergencies. An accident or incident report form shall be provided by and used by the staff of the facility.

(c) **Emergency Procedures Meeting.** There shall be a meeting of all employees on each shift at least once every three months to discuss emergency procedures used in the facility. Business of the meetings shall cover:

(1) Assignment of persons to specific tasks and responsibilities in case of emergency situation;

(2) Instructions relating to the use of alarm systems and signals;

(3) Systems for notification of appropriate persons outside the facility;

(4) Information on the location of emergency equipment in the facility; and

(5) Specification of evacuation routes and procedures.

(d) **Telephones.** There shall be at least one non-coin operated telephone which is accessible to staff, residents and visitors at all times for use in emergency. A list of the following telephone numbers shall be posted at this telephone: police, fire, ambulance, hospital and emergency physician.

(e) **Keys.** The person in charge of the facility on each work shift shall have keys to all locks on exits and egresses in the facility in his possession.

(f) **Smoking.** If smoking is permitted, it shall be permitted only in designated areas. Bedfast residents may be allowed to smoke only while under the direct supervision of a staff member.

(g) **Staff Training Program.** There shall be a staff training program that is appropriate to the size and nature of the facility. The program shall include, but not be limited to, plans for assignment of staff and residents to specific tasks and responsibilities.

(h) **Emergency and Unusual Occurrence.**

(1) In the event of an emergency or unusual occurrence, such as hospitalization, serious illness, accident, imminent death or death, the resident's parent or others who maintain a close relationship with him shall be notified. The wishes of the resident and his parent about religious matters shall be determined and followed as closely as possible.

(2) In case of accident:

Appropriate measures for the care and safety of the resident shall be undertaken;

An accident report shall be made for use by the facility, and in case of injury, all relevant legal requirements shall be complied with. This includes Minnesota Statute Section 626.554 relating to reporting of possible child abuse or neglect, as well as Minnesota Statute Section 626.555, relating to abuse or neglect of residents of facilities licensed pursuant to Sections 144.50 to 144.58.

MHD 400 CLOTHING AND LAUNDRY SERVICES

(a) **Clothing.**

(1) Each resident shall have neat, clean clothing appropriate for the season.

(2) Each resident should have his own clothing, which is, when necessary, properly and inconspicuously marked with his name.

(3) Washable, specially designed clothing should be utilized as needed for multiple handicapped and incontinent residents.

(b) **Laundry Services.** Laundry services are to be managed so that daily clothing and linen needs are met without delay and there is a minimum loss and damage to clothing.

MHD 401 HOUSEKEEPING SERVICES

The licensee shall be responsible for or shall supervise the cleaning and maintenance of all areas in the Supervised Living Facility.

Such responsibility shall assure cleanliness and orderliness of the residents' rooms, furnishings, and equipment through regularly scheduled cleaning, which shall be provided at least weekly. Such responsibility shall provide for security of the residents' rooms and their personal belongings.

APPENDIX A

MHD 252 (10795) – REPORTABLE DISEASES

(a) When called to a case, suspected case, or death from any of the following diseases, the attending physician, within 24 hours, shall notify the local health officer by means of the regular reporting post card or special blank provided for such reports. Diseases marked by asterisk shall also be reported directly to the Division of Personal Health Services, Minnesota State Board of Health.

When no physician is in attendance, it shall be the duty of the head of the household, or other person in charge of any institution, school, hotel, boarding house, camp, dairy farm, or pasteurization plant, or any other person having knowledge of any individual believed to have or suspected of having any disease, presumably communicable, to report immediately the name and address of any such person to the local health officer. Until official action on such has been taken, strict isolation shall be maintained.

Within 24 hours of the receipt of such notification or other knowledge of a case, the local health officer shall forward same to the Minnesota Department of Health, Division of Personal Health Services, 717 Delaware Street S.E., Minneapolis, Minnesota, 55440 (612-296-5201) after transcribing essential information for permanent local record.

*Actinomycosis
*Anthrax
*Botulism
Brucellosis (Undulant Fever)
Chickenpox (Over 16 yrs. of age)
*Cholera, Asiatic
Conjunctivitis, Epidemic
Diarrhea, Epidemic
Diphtheria
Dystentery
(a) Amebic
(b) Bacillary
Encephalitis (all types)
German Measles (rubella)
Food infection and poisoning
*Glanders
Hepatitis, Infectious
Hepatitis, Serum
Influenza
*Leprosy
Leptospirosis
Malaria
Measles
Meningitis (all types)
Mononucleosis, Infectious
*Ophthalmia, Neonatorum
Paratyphoid Fever
*Plague
Pneumonia
Poliomyelitis
*Psittacosis
*Rabies (cases and exposed persons)
Rheumatic Fever
Ringworm of the Scalp
*Rocky Mountain Spotted Fever
Scarlet Fever and Epidemic
Sore Throat
*Smallpox
*Tetanus
Trachoma
*Trichinosis
Tuberculosis
Tularemia
Typhoid Fever
*Typhus Fever
Whooping Cough (Pertussis)
Yellow Fever

Effective January 1, 1968

APPENDIX B

MINNESOTA DEPARTMENT OF HEALTH

Division of Health Facilities

717 Delaware Street South East

Minneapolis, Minnesota 55440

Law for Licensing Hospitals and Related Institutions
Minnesota Statutes

HOSPITALIZATION

144.49 VIOLATIONS; PENALTIES.

Subd. 6. Any person, partnership, association, or corporation establishing, conducting, managing, or operating any hospital, sanatorium, rest home, nursing home, or institution in accordance with the provisions of sections 144.50 to 144.56, without first obtaining a license therefore is guilty of a misdemeanor.

Subd. 7. Any person, partnership, association, or corporation establishing, conducting, managing, or operating any hospital, sanatorium, rest home, nursing home, or institution in accordance with the provisions of sections 144.50 to 144.56 violating any provision of sections 144.50 to 144.56 or any regulation thereunder, is guilty of a misdemeanor.

144.50 HOSPITALS, LICENSES; DEFINITIONS. No person, partnership, association, or corporation, nor any state, county, or local governmental units, nor any division, department, board, or agency thereof, shall establish, conduct, or maintain in the state any hospital, sanatorium, rest home, nursing home, boarding home, or other institution for the hospitalization or care of human beings without first obtaining a license therefor in the manner hereinafter provided.

Hospital, sanatorium, rest home, nursing home, boarding home, and other related institutions, within the meaning of sections 144.50 to 144.56 shall mean any institution, place, building, or agency in which any accommodation is maintained, furnished, or offered for the hospitalization of the sick or injured or for maternity care of more than one woman within a period of six months or for care of five or more aged or infirm persons requiring or receiving chronic or convalescent care. Nothing in sections 144.50 to 144.56 shall apply to hotels or other similar places that furnish only board and room, or either, to their guests.

"Hospitalization" means the reception and care of persons for a continuous period longer than 24 hours, for the purpose of diagnosis or treatment bearing on the physical or mental health of such persons.

"Maternity care" means the care and treatment of a woman during pregnancy or during delivery or within ten days after delivery, and for the purposes of sections 144.50 to 144.56 shall include care during such period of time of the infant born to such mother.

"Chronic or convalescent care" means (1) care required by a person because of prolonged mental or physical illness or defect or during recovery from injury or disease and shall include any or all of the procedures commonly employed in caring for the sick; and (2) care incident to old age required by a person who, because of advancing age, is not capable of properly caring for himself and shall include necessary personal or custodial care. The furnishing of board, room, and laundry shall not in itself be deemed care incident to old age.

Nothing in sections 144.50 to 144.56 shall authorize any person, partnership, association, or corporation, nor any state, county, or local governmental units, nor any division, department, board or agency thereof, to engage, in any manner, in the practice of healing, or the practice of medicine, as defined by law.

[*1941 c 549 s 1; 1943 c 649 s 1; 1951 c 804 s 1; 1969 c 858 s 1*]

144.51 EXISTING HOSPITALS, LICENSES. No person, partnership, association, or corporation, nor any state, county, or local governmental units, nor any division, department, board, or agency thereof, may operate a hospital, sanatorium, rest home, nursing home, or boarding home for the infirm aged, without a license therefor.

Before a license shall be issued under sections 144.50 to 144.56, the person applying shall submit evidence satisfactory to the state board of health that he is not less than 18 years of age and of reputable and responsible character; in the event the applicant is an association or corporation or governmental unit like evidence shall be submitted as to the members thereof and the persons in charge. All applicants shall, in addition, submit satisfactory evidence of their ability to comply with the provisions of sections 144.50 to 144.56 and all rules, regulations, and minimum standards adopted thereunder.

[*1973 c 725 s 7*]

144.52 APPLICATION. Any person, partnership, association, or corporation, including state, county, or local governmental units, or any division, department, board, or agency thereof, desiring a license under sections 144.50 to 144.56 shall file with the state board of health a verified application containing the name of the applicant desiring said license; whether such persons so applying are 18 years of age; the type of institution to be operated; the location thereof; the name of the person in charge thereof, and such other information pertinent thereto as the state board of health by regulation may require. Application on behalf of a corporation or association or other governmental unit shall be made by any two officers thereof or by its managing agents.

[*1973 c 725 s 8*]

144.53 FEES. Each application for a license, or renewal thereof, to operate a hospital, sanatorium, rest home, or boarding home, or related institution, within the meaning of sections 144.50 to 144.56, except applications by the commissioner of public welfare for the licensing of state institutions or by the administrator for the licensing of the university of Minnesota hospitals, shall be accompanied by a fee to be determined by the number of beds available for persons accommodated, the fee to be prescribed by the

state board of health pursuant to section 144.122. No such fee shall be refunded. Licenses shall expire and shall be renewed on the dates specified on the licenses. All such fees received by the state board of health shall be paid into the state treasury.

No license granted hereunder shall be assignable or transferable.

[1941 c 549 s 4; 1945 c 192 s 1; 1951 c 304 s 4; 1959 c 466 s 1; 1974 c 471 s 3]

144.54 INSPECTIONS. Every building, institution, or establishment for which a license has been issued shall be periodically inspected by a duly appointed representative of the state board of health under the rules and regulations to be established by the state board of health. No institution of any kind licensed pursuant to the provisions of sections 144.50 to 144.56 shall be required to be licensed or inspected under the laws of this state relating to hotels, restaurants, lodging houses, boarding houses, and places of refreshment.

[1941 c 549 s 5; 1951 c 304 s 5]

144.55 LICENSES; ISSUANCE, SUSPENSION AND REVOCATION BY STATE BOARD OF HEALTH. The state board of health is hereby authorized to issue licenses to operate hospitals, sanatoriums, rest homes, nursing homes, or other related institutions, which after inspection are found to comply with the provisions of sections 144.50 to 144.56 and any reasonable regulations adopted by the state board of health. All decisions of the state board of health thereunder may be reviewed in the district court in the county in which the institution is located or contemplated.

The state board of health may refuse to grant, refuse to renew, or may suspend or revoke a license on any of the following grounds:

(1) Violation of any of the provisions of sections 144.50 to 144.56 or the rules, regulations, or standards issued pursuant thereto;

(2) Permitting, aiding, or abetting the commission of any illegal act in such institution;

(3) Conduct or practices detrimental to the welfare of the patient; or

(4) Obtaining, or attempting to obtain a license by fraudulent means or misrepresentation.

Before any such license issued thereunder is suspended, or revoked, or its renewal refused, 30 days written notice shall be given the holder thereof of the date set for hearing of the complaint. The holder of such license shall be furnished with a copy of the complaint and be entitled to be represented by legal counsel at such hearing. Such notice may be given by the state board of health by registered mail. The board may appoint, in writing, any competent person to preside at such hearing who shall take testimony, administer oaths, issue subpoenas, and compel the attendance of witnesses and transmit the record of such hearing to the board. The decision of the board shall be based on the testimony and records.

If a license is revoked as herein provided a new application for license may be considered by the state board of health if, when, and after the conditions upon which revocation was based have been corrected and evidence of

this fact has been satisfactorily furnished. A new license may then be granted after proper inspection has been made and all provisions of sections 144.50 to 144.56 and rules and regulations thereunder as heretofore or hereinafter provided have been complied with and recommendation has been made therefor by the hospital inspector as an agent of the state board of health.

[*1941 c 549 s 6; 1951 c 304 s 6*]

144.56 STANDARDS. Subdivision 1. The state board of health shall, in the manner prescribed by law, adopt and enforce reasonable rules, regulations, and standards under sections 144.50 to 144.56 which it finds to be necessary and in the public interests and may rescind or modify them from time to time as may be in the public interest, insofar as such action is not in conflict with any provision thereof.

Subd. 2. In the public interest the board, by such rules, regulations, and standards, may regulate and establish minimum standards as to the construction, equipment, maintenance, and operation of the institutions insofar as they relate to sanitation and safety of the buildings and to the health, treatment, comfort, safety, and well-being of the persons accommodated for care. Construction as used in this subdivision means the erection of new buildings or the alterations of or additions to existing buildings commenced after the passage of this act.

Subd. 3. The board shall, with the advice of the commissioner of public welfare, prescribe such general regulations and rules for the conduct of all institutions receiving maternity patients as shall be necessary to effect the purposes of all laws of the state relating to maternity patients and newborn infants so far as the same are applicable.

Subd. 4. The board of health may classify the institutions licensed under sections 144.50 to 144.56 on the basis of the type of care provided and may prescribe separate rules, regulations, and minimum standards for each class.

[*1941 c 549 s 7; 1943 c 649 s 7; 1951 c 304 s 7*]

144.57 [Repealed, 1951 c 304 s 8]

144.571 ADVISORY BOARD. An advisory board of nine members shall be appointed in the following manner to make recommendations to the state board of health and to assist in the establishment of such rules, regulations, and standards and any amendments thereto. This board shall consist of four members to be appointed annually from the membership of the Minnesota hospital association by the board of trustees thereof, one of said four members shall be the superintendent of a hospital operated by a county or other local governmental unit; one member representing homes for chronic or convalescent patients shall be appointed annually by the state board of health; and two members shall be doctors of medicine to be appointed annually from the Minnesota state medical association by the council of the Minnesota state medical association. The commissioner of public welfare, or a person from the department of public welfare designated by him, shall be the eighth member of said advisory board, and the commissioner of public welfare shall designate the ninth member who will represent the Minnesota county welfare boards.

[*1951 c 304 s 9*]

144.572 INSTITUTIONS EXCEPTED. No regulation nor requirement shall be made, nor standard established under sections 144.50 to 144.56 for any sanatorium, nursing home, nor rest home conducted in accordance with the practice and principles of the body known as the Church of Christ, Scientist, except as to the sanitary and safe condition of the premises, cleanliness of operation, and its physical equipment.

[*1951 c 504 s 10*]

144.58 INFORMATION, CONFIDENTIAL. Information of a confidential nature received by the state board of health through inspections and authorized under sections 144.50 to 144.56 shall not be disclosed except in a proceeding involving the question of licensure.

[*1941 c 549 s 9; 1951 c 504 s 11*]

144.653 REGULATIONS; INSPECTIONS. Subdivision 1. **Rules and Regulations.** The state board of health is the exclusive state agency charged with the responsibility and duty of inspecting all facilities required to be licensed under the provisions of Minnesota Statutes 1971, Sections 144.50 to 144.58. The state board of health shall enforce such rules, regulations and standards subject only to the authority of the department of public safety respecting the enforcement of fire and safety standards in nursing homes and other licensed health care facilities and the responsibility of the commissioner of public welfare pursuant to Minnesota Statutes 1971, Sections 245.78; 252.28; and 257.081 to 257.123.

Subd. 2. **Periodic Inspection.** All facilities required to be licensed under the provisions of sections 144.50 to 144.58 shall be periodically inspected by the state board of health to insure compliance with its rules, regulations and standards. The state board of health may enter into agreements with political subdivisions providing for the inspection of such facilities by locally employed inspectors.

Subd. 3. **Enforcement.** With the exception of the department of public safety which has the exclusive jurisdiction to enforce state fire and safety standards, the state board of health is the exclusive state agency charged with the responsibility and duty of inspecting facilities required to be licensed under the provisions of sections 144.50 to 144.58 and enforcing the rules, regulations and standards prescribed by it.

Subd. 4. **Without Notice.** One or more unannounced inspections of each facility required to be licensed under the provisions of sections 144.50 to 144.58 shall be made annually.

Subd. 5. **Correction Orders.** Whenever a duly authorized representative of the state board of health finds, upon inspection of a facility required to be licensed under the provisions of sections 144.50 to 144.58, that the licensee of such facility is not in compliance with an applicable regulation promulgated under the administrative procedures act by the state board of health pursuant to section 144.56, a correction order shall be issued to the licensee. The correction order shall state the deficiency, cite the specific regulation violated, and specify the time allowed for correction.

Subd. 6. **Reinspection; Fines.** If upon reinspection it is found that the licensee of a facility required to be licensed under the provisions of sections 144.50 to 144.58 has not corrected the deficiency or deficiencies specified in

the correction order, the licensee shall forfeit to the state within 15 days a sum of up to $250 for each such deficiency not corrected. For each subsequent reinspection, the licensee may be fined an additional amount for each deficiency which has not been corrected. All forfeitures shall be paid into the state treasury and credited to the general fund.

Subd. 7. **Recovery.** Any unpaid forfeitures may be recovered by the attorney general.

Subd. 8. **Hearings.** A licensee of a facility required to be licensed under the provisions of sections 144.50 to 144.58 is entitled to a hearing on any correction order issued to him, provided that he makes a written request therefor within 15 days of receipt by him of the correction order. Such request shall operate as a stay during the hearing and review process of the payment of any forfeiture provided for in this section. Upon receipt of the request for a hearing, a hearing officer, who shall not be an employee of the state board of health shall be appointed by the state board of health, and the hearing officer shall promptly schedule a hearing on the matter, giving at least ten days notice of the date, time, and place of such hearing to the licensee. The hearing and review thereof shall be in accordance with the relevant provisions of the administrative procedures act.

Subd. 9. **Nonlimiting.** Nothing in this section shall be construed to limit the powers granted to the state board of health in section 144.55.

[1973 c 688 s 3]

MINNESOTA STATE REGULATIONS

for

FREESTANDING

OUTPATIENT SURGICAL CENTERS

MHD 411 Legal Authority

(1) The Minnesota State Board of Health pursuant to the authority granted in Minnesota Statutes, Section 144.12 and Section 144.55 to 144.56 hereby adopts the following regulations for the construction, equipment, maintenance, operation and licensure of outpatient surgical centers.

MHD 412 Definitions

(1) "Outpatient surgical center" or "center", means a freestanding facility organized for the specific purpose of providing elective outpatient surgery for preexamined, prediagnosed, low risk patients. Admissions shall be limited to procedures which utilize local or general anesthesia and which do not require overnight inpatient care. It is not organized to provide regular emergency medical services and does not include the physician's and dentist's office or clinic for the practice of medicine or the delivery of primary care.

(2) "Surgery", for the purpose of these regulations, means treatment of conditions by operative means, involving incision or repair of human tissues.

(3) "Physician" means a person licensed by the Board of Medical Examiners under the provision of Minnesota Statutes, Chapter 147.

(4) "Dentist" means a person licensed by the Board of Dental Examiners under the provision of Minnesota Statutes, Chapter 150A.

(5) "Board" means the Minnesota State Board of Health.

(6) "Department" means the Minnesota Department of Health.

(7) "Licensee" means the responsible person or governing body to whom the license is issued.

(8) "Facility" means the building or buildings, equipment and supplies related to the operation of the center.

(9) "Modification" means alteration, remodeling, addition or other change in a licensed facility or its services.

413 7 MCAR S 1.413 Licensure.

A. Application for a license to establish and operate an outpatient surgery center shall be made in writing and submitted on forms provided by the department.

B. The application shall be made by the person or persons who will be the licensee, operate the facility and be responsible for its operation. Documentation shall be submitted which provides full disclosure of ownership.

C. If the applicant is a corporation, the applicant shall furnish the department names and addresses of the governing body and names of current officers of the corporation.

D. In addition to the documentation required in MHD 413(3) out-of-state corporations shall furnish the department with a copy of the certificate of authority to do business in the state of Minnesota.

E. A license shall be issued by the board when compliance has been made with the requirements of these regulations. It is issued for one (1) year. Renewal of a license is subject to demonstrated compliance with these regulations.

F. A license is not transferable. A change in ownership requires a new application.

G. Separate licenses are required for facilities maintained on separate sites, even though operated by the same ownership.

H. The license shall be conspicuously posted in a public area in the center.

I. The licensee shall notify the department in writing of any change of name or address of the licensee and of the administrator.

J. A center which has been determined by the state fire marshal to be out of compliance with the fire safety requirements of the state fire marshal is not eligible for licensing.

K. Architectural and engineering drawings and specifications for new centers or modifications of facilities in existing centers shall be submitted to and approved by the department. New centers and their staffing require approval prior to licensure.

L. Physical plant deficiencies relating to required area sizes or distance limits may be waived by the board for a recognized existing center which was functioning prior to the effective date of these regulations when such deficiencies do not constitute an unacceptable compromise in patient treatment and safety and correction would involve major remodeling and

cause unusual hardship.

M. Fees shall be paid in accordance with 7 MCAR S 1.701, Exhibit I.

MHD 414 Administration

(1) The person or governing body recorded as the licensee shall be responsible for its management, control and operation.

The licensee shall:

(a) Appoint an administrator, and submit name, address and qualifications to the Board. This person shall be responsible for management, control, operation, records and reports, as well as compliance with these regulations.

(b) Appoint a medical director or chief of staff who shall be a physician. This person shall be responsible for establishment, implementation and supervision of all medical policies, patients' records, procedures and services of the facility.

(c) Maintain a record of each physician and dentist on the staff. This record shall contain his or her name, qualifications, experience and present hospital affiliation, accompanied by a list of procedures and services he or she is authorized to perform.

(d) Designate a registered nurse who shall be responsible for all nursing services and assure that a registered nurse is in attendance at all times when patients are present in the facility.

(e) Provide sufficient additional professional and allied health personnel to administer diagnostic and treatment services as necessary in accordance with the services provided in the facility.

(f) Establish and maintain a program for periodic review of administrative and professional functions and services by means of utilization review and medical audit.

(g) Maintain a written agreement with at least one of the general hospitals in the immediate vicinity for the transfer of patients requiring hospital care in case that emergency or inpatient care is required.

(h) Maintain a written agreement with an emergency ambulance service to assure that such services will be available.

(i) Provide a facility which is constructed, equipped, operated and maintained to satisfy the needs of the services rendered and to maintain safe and sanitary conditions as required by accepted current practice and by these regulations.

(j) Adopt a written disaster plan with procedures for the protection and/or evacuation of all persons in the case of fire or explosion or in the event of floods, tornados or other emergencies.

(2) The medical director and the medical staff shall be responsible to the governing body for patient and staff policies and for medical procedures and services relative to admission, treatment and related emergency treatment.

The medical staff shall:

(a) Establish written policies for the admission and treatment of patients for surgery, including but not limited to:

1. Requirements for preoperative history, physical examinations and diagnostic procedures.

2. Preparation for and administration of anesthesia. Only an anesthesiologist or qualified physician and/or anesthetist shall administer anesthetics other than local infiltration anesthetics.

3. Post-operative patient observation and care.

4. Discharge examinations by physician.

5. Safe transfer to home and follow-up services.

(b) Establish written policies for surgical procedures to be performed.

(c) Establish written policies for the creation and maintenance of a program for infection control.

(d) Provide for orientation and inservice programs for all center personnel as related to their activities, including medical emergency procedures.

(e) Provide for emergency care procedures in the event of surgical complications.

(f) Establish policies for transfer of patients needing hospital care.

(g) Maintain medical records on each patient accepted for treatment. Each patient record shall include: the patient's name, address and telephone number; the operating physician, admission and discharge notes and dates; a signed consent form; pertinent medical history; tests and examinations; admitting diagnosis; surgical procedure and anesthesia report; pathology report where indicated; patient after-care instructions; prescribed medications; and other progress notes. Surgery-related or anesthesia-related complications which result in morbidity or mortality of a patient shall be recorded in detail. Patients' records shall be made available for inspection by the Department and be preserved in accordance with Minnesota Statutes, Sections 145.30-145.33.

(h) Develop and maintain a system for professional peer review.

(i) Assure that all employees, prior to employment and at least annually thereafter show freedom from tuberculosis by means of a standard Mantoux tuberculin test and/or a chest x-ray test as medically indicated. The results shall be reported in writing and made a part of each employee's personnel record.

MHD 415 Administrative Areas

Administrative areas shall include the following elements:

(1) A reserved access to the site for arrival and departure of patients.

(2) A supervised waiting area with reception and seating for arriving and departing patients and persons accompanying patients.

(3) A toilet room for each sex available for the waiting area.

(4) At least one public telephone for use by patients.

(5) Patient consultation room and administrative offices.

MHD 416 Patient Treatment Areas

Treatment areas for patient preparation, surgery and recovery shall be separate. Each area shall be equipped to accommodate its functional needs.

(1) The **patient preparation area** shall include the following elements:

(a) An arrangement which permits patient access to the area for initial entry and final departure from the dressing area without passing through the postoperative recovery area; and provides gowned patients access to the surgical suite without entering the recovery area or a public space or corridor.

(b) Dressing rooms which assure privacy, and space for storage and security of patients' clothing and belongings.

(c) Examination rooms, each provided with a lavatory with an open grid strainer, a wrist, knee or foot controlled mixing faucet with gooseneck spout, and a single service towel dispenser. It shall include examination table and light.

(d) A nurses office or nurse station for patient management, for directing of nursing care, and for keeping patient records, unless the nurses station for the postoperative recovery area is accessible for use.

(e) Space for clinical laboratory services, unless arrangements have been made for obtaining such services outside the center.

(f) A radiology area with equipment, required protection, and toilet room(s) as appropriate, unless such services are provided for outside the center.

(2) The **surgical suite** shall include the following elements:

(a) Location and arrangement shall prevent unrelated traffic through the suite.

(b) One or more operating rooms. Each operating room shall have a floor area of not less than 225 sq. ft. with a minimum dimension of 15 feet. Walls, ceilings, and floors shall have smooth cleanable surfaces. Equipment shall include an operating table, surgical light, and provision for oxygen and vacuum. Operating rooms using flammable anesthetic shall be designed in accordance with the NATIONAL ELECTRICAL CODE, 1975 Edition, for such use.

(c) A scrub sink with foot, knee or automatic controls adjacent to the entrance to each operating room, or in a central location convenient to such rooms.

(d) A clean work room for assembly and storage of clean and sterile surgical supplies and instruments. It shall contain a work counter, sink with institutional fittings for handwashing, and storage cabinets or shelving. A high speed sterilizer is required in this area if a sterilizer is not provided in the general clean and sterile supply room.

(e) A soiled work room for disposal or collection of soiled materials generated in surgery. It shall contain a flushing rim sink, work counter and sink with institutional fittings, and space for collection of waste and soiled linen. Institutional fittings shall include: mixing faucet with gooseneck spout, wrist-action controls, and open grid strainer.

(f) Space for cleaning, testing and storage of anesthetic equipment. It shall contain a work counter and sink with institutional fittings.

(g) A janitors closet with a service sink and shelving for cleaning supplies for exclusive use by the surgical suite.

(h) Gowning areas for the surgical staff, both male and female. Each area shall contain lockers; toilet; and a lavatory with open grid strainer, wrist, foot or knee control mixing faucet for handwashing; and separate storage provisions for clean and soiled gowns and boots. The areas shall be arranged to provide initial entry without entering the operating suite and shall permit direct access to the surgical suite by staff prepared for surgery.

(3) The **postoperative recovery area** shall include the following elements:

(a) An arrangement which permits transfer of patients direct from the surgical suite or by route of a nonpublic corridor.

(b) A recovery area that provides access and space for wheeled stretcher traffic and parking, and provides patient holding areas with privacy curtains and at least 3 feet of space on each side and foot end of stretchers or recovery beds.

(c) A nurses office or nurse station for patient management, for directing of nursing care, and for keeping patient records. It shall be arranged to offer visual control of the recovery area.

(d) Space for charting, drugs, nourishment, supplies and equipment for patient care and emergency treatment. This includes facilities for handwashing, a flushing rim sink, space for soiled linen collection, and portable or built-in provisions for oxygen and suction in the recovery area.

(e) Medications and narcotics stored in accordance with the requirements of the Minnesota State Board of Pharmacy.

MHD 417 General Service Areas

The general service areas shall include the following elements:

(1) Employee locker areas for street clothes and other belongings, with access to toilet facilities.

(2) A clean supply room for receiving, storage and assembly of clean and sterile supplies. It shall contain a sterilizer unless sterile supplies are received from a central supply service or a commercial supplier.

(3) A room for the processing of soiled instruments and other reusable surgical items, unless such processing is provided by an outside central supply service.

(4) A soiled linen collection room for collection and storage of linen which is to be processed either in an on-premise laundry or by an outside laundry service, unless an all-disposable linen service is utilized.

(5) The laundry, if provided, shall be designed and operated as required by the Department for the processing of institutional linen.

(6) A separate storage area for solid waste. Collection, storage and disposal of regular and infectious waste shall be in accordance with these regulations.

(7) An elevator of a size which can accommodate a standard stretcher and two attendants, if the facility is located at a level without direct access from street or ground level.

(8) A janitors closet with a service sink and with storage space for housekeeping items.

MHD 418 Medical Gases and Flammable Liquids

(1) Storage and distribution systems for anesthetic gases and oxygen shall be in compliance with NFPA Standard No. 56A, 1973 Edition, and NFPA Standard No. 56F, 1973 Edition.

(2) Storage or installations for flammable liquids shall comply with NFPA Standard No. 30, 1973 Edition.

MHD 419 General Maintenance

(1) Provisions shall be made for the periodic inspection, testing and calibration of systems and equipment, as appropriate, and records kept.

(2) The facility shall be clean, sanitary and in good repair at all times. Maintenance shall include procedures and program to assure the safety and comfort of patients, visitors and personnel.

MHD 420 Mechanical and Electrical Systems — General

(1) The construction of all mechanical systems shall be in accordance with the State Building Code, 1973 Edition, and with these regulations.

(2) New mechanical systems shall be tested, balanced and operated by the contractors to satisfactorily demonstrate and document to the owner and the Department that the installation and performance of these systems conform to the specified requirements.

(3) Plumbing and other piping systems shall be designed, installed and tested in accordance with the Minnesota Plumbing Code, 1973 Edition.

(4) Lavatories and sinks required in patient care or treatment areas shall be provided with a gooseneck spout or similar elevated spout and shall be trimmed with valve controls which can be operated without the use of hands. All lavatories and sinks shall be provided with a single-service towel dispenser.

(5) Electrical installations and systems shall be installed and tested in accordance with the National Electrical Code, 1975 Edition. A certificate of satisfactory testing for macro and micro shock hazards of sensitive electrical systems shall be submitted to the Department for all new installations.

MHD 421 Emergency Electrical Service

(1) An automatic emergency power source shall be provided for essential lighting, equipment and alarm systems which will restore the power within 10 seconds in case of failure of normal power.

(a) Essential **lighting** includes the following:

1. Exitways and exit signs.

2. Surgical lights in operating rooms and general illumination in surgical corridors.

3. Laboratory, recovery room, nurses station and in elevator.

4. Boiler room and near source of emergency electrical service within surgical center building.

(b) Essential **Equipment** and **Alarm** Systems:

1. Nurses call and/or paging system.

2. Fire alarm system according to State Building Code's and State Fire Marshal's requirements.

3. Receptacles in operating and recovery rooms.

4. Receptacles for equipment that require continuous source of power.

5. Elevator — automatic or manual transfer to emergency electrical service where elevator is used for vertical transport of patients to operating rooms.

MHD 422 Air Conditioning, Heating and Ventilation

(1) The systems shall be designed to provide temperatures and humidities as follows:

Area Designation	Temp. °F	R.H.%
Operating Rooms	70-76 (variable range)	50-60
Recovery Rooms	75 (variable range)	50-60
Other Areas	75 (winter design condition)	

(2) All air-supply and air-exhaust systems shall be mechanically operated. All fans serving exhaust systems shall be located at the discharge end of the system. The ventilation rates shown in Table A shall be considered as minimum acceptable rates and shall not be construed as precluding the use of higher ventilation rates.

(3) Outdoor air intakes shall be located as far as practical but not less than 25 feet from the exhaust from any ventilating system, combustion equipment stack, medical-surgical vacuum system, or sewer vent stack 4" diameter or greater, or from areas which may collect vehicular exhaust and other noxious fumes. The bottom of outdoor air intakes shall be located as high as practical but not less than 4 feet above ground level, or if installed through the roof, 2 feet above the roof level.

(4) The ventilation systems shall be designed and balanced to provide the pressure relationships as shown in Table A.

(5) All air supplied to operating rooms shall be delivered at or near the ceiling of the area served and all exhaust air from the area shall be removed near floor level. At least 2 exhaust outlets shall be used in all operating rooms.

(6) The bottom of any room supply air inlets, recirculation and exhaust air outlets shall be located not less than 3 inches above the floor.

(7) Corridors shall not be used to supply air to or exhaust air from any room, except that air from corridors may be used to ventilate toilet rooms, janitors' closets, and small electrical or telephone closets opening directly on corridors.

(8) Induction units with reheat shall not be used in the operating suite.

(9) Filters. All ventilation or air conditioning systems serving the operating suite and all central systems serving other facility areas shall have a minimum of 2 filter beds. Filter bed #1 shall be located upstream of the air conditioning equipment and shall have a minimum efficiency of 25 percent. Filter bed #2 shall be downstream of the supply fan and any recirculating spray water systems and/or water reservoir type humidifier(s). Filter bed #2 shall have a minimum efficiency of 90 percent. The efficiency of filter bed #2 may be reduced to 80 percent for central systems using 100 percent outdoor air and serving areas other than the operating suite.

Exceptions to above:

(a) Independent air handlers serving only a laundry shall have at least one filter bed and this filter bed shall have an efficiency of at least 80 percent.

(b) Independent air handlers serving only administrative spaces and/or bulk storage areas shall have at least one filter bed and this filter bed shall have an efficiency of at least 25 percent.

(10) All filter efficiencies shall be certified by an independent testing agency and shall be based on ASHRAE Standard No. 52-68, except as noted in 7-30D-2-1(2).

Filter frames shall be durable and carefully dimensioned and shall provide an airtight fit with the enclosing duct work. All joints between filter segments and the enclosing duct work shall be gasketed or sealed to provide a positive seal against air leakage.

Each filter bed serving operating room areas or central air systems shall have a manometer installed across each filter bed.

(11) Ducts which penetrate construction intended for X-ray or other ray protection shall not impair the effectiveness of the protection.

(12) Linings in air ducts and equipment shall meet the Erosion Test Method described in Underwriters' Laboratories Publication No. 181. Duct linings shall not be used in air supply systems for operating rooms unless terminal filters of at least 90% efficiency per ASHRAE Standard No. 52-68 are installed downstream of linings.

MHD 423 Special Exhaust Systems

A. Operating Rooms

(1) Each operating room shall be provided with a separate evacuation system for the venting of waste anesthesia gas.

(2) The system shall provide a gas venting intake of the head end of the operating table, and provide exhaust of collected gas directly to the outdoors.

B. Laboratory

(1) If the air changes required in Table A do not provide sufficient air for use by fume hoods and safety cabinets, additional air shall be provided.

(2) Each laboratory hood shall have an independent exhaust with the fan installed at the discharge point of the system. Laboratory hoods for general use shall have a minimum average face velocity of 75 feet per minute. Hoods in which infectious or radioactive materials are processed shall have the following:

(a) A minimum face velocity of 100 feet per minute,

(b) Filters in the exhaust having a 99.97 percent efficiency based on the DOP (dioctyl-phthalate) test method, and

(c) Equipment and/or procedure for the safe removal and replacement of contaminated filters.

(3) Duct systems serving hoods shall be constructed of corrosion-resistant material to meet the planned usage of the hood. Duct systems serving hoods in which radioactive materials and strong oxidizing agents (e.g. perchloric acid) are used shall be constructed of stainless steel for a minimum distance of 10′ 0″ from the hood and shall be equipped with washdown facilities.

(4) The ventilation system for anesthesia storage rooms and for flammable liquids storage areas shall conform to the requirements of NFPA Standard No. 56A, 1973 Edition and NFPA Standard No. 30, 1973 Edition.

MHD 424 Handling and Disposal of Solid Waste

(1) **Infectious Waste Definitions.** Infectious waste is defined as waste which originates from the diagnosis, care or treatment of a person that has been or may have been exposed to a contagious or infectious disease. Such waste includes but may not be limited to the following:

(a) **Hazardous Infectious Waste:**

1. All wastes originating from persons placed in isolation for control and treatment of an infectious disease.

2. Bandages, dressings, casts, catheters, tubing, and the like, which have been in contact with wounds, burns, or surgical incisions of a suspected, known or medically identified hazardous infectious nature.

3. Laboratory and pathology waste of an infectious nature which has not been autoclaved.

4. All anatomical waste, including human parts or tissues removed surgically or at autopsy.

5. Any other waste as defined by the State Board of Health which because of its potential infectious characteristics or hazardous nature requires handling and disposal in a manner prescribed for (a) through (d).

(b) **General Infectious Waste** (Contaminated Waste)

1. Bandages, dressings, casts, catheters, tubing, and the like, which have been in contact with wounds, burns, or surgical incisions, but are not suspected or have not been medically identified as being of a hazardous infectious nature.

2. Discarded hypodermic needles and syringes, scalpel blades, and similar materials, except when suspected or identified to be of a hazardous infectious nature.

3. Incinerator ashes from infectious waste.

(2) **Ordinary Waste Definitions.** All household-type trash is defined as ordinary waste. It includes uncontaminated dietary garbage, autoclaved laboratory specimens and cultures, and incinerator ashes from ordinary waste. Autoclaved laboratory waste shall be labeled "autoclaved".

(3) Collection and Handling of Waste

(a) **Hazardous** infectious waste as defined shall be collected **separately** in containers provided with moisture-proof heavy-duty or double plastic or paper bag liners for safe storage and disposal. Bags or containers shall be kept positively closed or sealed at all times, and shall be color coded or otherwise marked for easy identification.

(b) **General** infectious waste as defined shall be collected in containers provided with moisture-proof plastic or paper bag liners. Bags or containers shall be kept closed or sealed at all times and shall be color coded or otherwise be identifiable. Disposal of needles with the waste shall provide safety from puncture wounds to personnel. General infectious waste may be collected separately or it may be collected with the ordinary waste. Where separation of general infectious waste is not accomplished, all such **mixed** waste shall be considered and handled as general infectious waste.

(4) Removal, Storage and Disposal of Waste

(a) **Removal** of hazardous or general infectious waste from the originating points of collection shall be accomplished as needed, but at least daily in accordance with an established housekeeping program. Waste shall be removed in the original bag liners which must be positively sealed. Waste shall not be transported through dietary or medically sensitive areas.

(b) **Storage** of infectious waste in a central waste collection area shall be done in a sanitary manner. Space assignment shall clearly indicate separation of hazardous waste as well as general infectious or mixed waste from ordinary waste.

1. Waste accumulated in an **inside storage area** shall be stored in closed metal containers or in a pest-proof enclosed room. The room shall be provided with exhaust ventilation. If container storage is not provided for bagged waste or if a room serves a compactor unit, a floor drain must be provided for cleaning and flushing.

2. **Hazardous** infectious waste accumulated in an **outside refuse area** shall be stored in separate metal containers with tight fitting covers. **General** infectious waste or **mixed** waste shall be stored in metal containers with tight fittings covers; or it may be stored in a closed metal dumpster or in a compactor unit if such a method of waste handling is compatible with an approved system of waste disposal.

3. All containers shall be of non-corrodible water-tight construction. Containers in patient areas must be of metal or other fire-proof material. Appropriate facilities shall be provided to facilitate washing of waste containers and for cleaning of rooms used for refuse storage, compaction or incineration.

(c) Disposal of infectious waste shall be in accordance with the regulations of the State Board of Health and the Minnesota Pollution Control Agency.

1. Hazardous infectious waste shall be destroyed either by on-site incineration or by contracted incinerator service.

2. **General** infectious waste or mixed waste may be deposited in a sanitary landfill which has been approved by the Minnesota Pollution Control Agency without conditions. If the landfill operation does not comply with the requirements, general infectious and mixed waste must also be incinerated.

3. **Ordinary** waste shall be disposed of in accordance with State regulations and local ordinances for such waste.

(5) Incineration of Infectious Waste. The incinerator shall conform with

the standards of the Minnesota Pollution Control Agency for operating temperatures, retention time and smoke emission levels and shall be capable of burning institutional type waste as classified by the Incinerator Institute of America. The incinerator, if provided on the site, may be an inside or an outside installation.

Incinerators burning pathological waste require the specific approval of the Director of the Minnesota Pollution Control Agency.

MHD 425 General Laundry Requirements

The following regulations apply to all laundry services for the processing of institutional type linen. Such services may be provided by an on-premise laundry operated by the facility or by an outside laundry through contractual agreement.

(1) A soiled linen collection and sorting room shall be located at the soiled side of the laundry processing room. It shall be provided with exhaust (negative) ventilation. The door to the corridor must be kept closed. Locate chute within this room, if a chute is provided.

(2) The laundry processing room shall be arranged to allow for an orderly, progressive flow of work from the soiled to the clean area. Equipment shall be arranged to minimize linen transportation, provide the necessary floor area between operations, and avoid cross traffic contamination between clean and soiled operations. The room shall provide space for storage of laundry supplies, cleaning equipment, and for parking of laundry trucks used in the operation. Handwashing facilities shall be available for the area. A two-compartment laundry tub shall be provided, and it shall be of a material with a non-absorbent, smooth, permanent finish. The laundry tub may be equipped with fittings to provide for the required handwashing facilities.

(3) The equipment shall be of a commercial type and shall consist of one or more washers, extractors, tumblers, or combinations of these, as well as ironers and presses. The washer installation shall be capable of meeting the necessary operating requirements.

(4) A separate enclosed clean linen room for storage and delivery. This area shall be provided with fresh air supply (positive ventilation).

(5) The air in the laundry shall be vented away from the clean storage and finishing or ironing area and toward the extracting and washing area. The general air movement shall be from the clean area to the soiled area, and shall be of sufficient volume to remove steam, odors and excessive heat. Spot ventilation for large heat-producing equipment such as dryers and ironers should be provided. Dryers shall be provided with a lint collector. Horizontal exhaust ducts shall be provided with access panels for cleaning.

(6) The wash water temperature inside the washers shall be at least 160°F. during the main washing and rinsing cycles for a total time of at least 30 minutes, excluding time for filling and draining.

(7) Contaminated linen shall be thoroughly preflushed separately before being introduced to the main washing and rinsing process.

(8) Contaminated linen, such as linen from patients with infectious drainage, dressings or pads shall be stored and sent to the laundry in separate bags which are plainly marked to indicate that their contents are contaminated. The bags shall be tightly closed until the contents are removed from the bag and placed in the washer along with the bag, if non-disposable. Laundry personnel shall be instructed in the safe handling of such laundry.

MHD 426 through 430 reserved for future use.

Filed June 30, 1975

Table A GENERAL PRESSURE RELATIONSHIPS AND MINIMUM VENTILATION REQUIREMENTS

Area Designation	Pressure Relationship to Adjacent Areas	Minimum Air Changes of Outdoor Air Per Hour	Minimum Total Air Changes Per Hour	All Air Exhausted Directly to Outdoors	Recirculated Within Room Units
Waiting Areas	E	Optional	2	Optional	Optional
Corridor	E	2	4	Optional	Optional
Operating Room	P	5	12	Optional**	No*
Recovery Room	P	2	6	Optional	No*
Examination Room	E	2	6	Optional	Optional
Medication Room	P	2	4	Optional	Optional
X-ray, Fluoroscopy Room	N	2	6	Yes	No
Soiled Workroom, Soiled Utility Room	N	2	10	Yes	No
Clean Workroom, Clean Utility Room	P	2	4	Optional	Optional
Toilet Room	N	Optional	10	Yes	No
Janitors Closet	N	Optional	10	Yes	No
Sterilizer Equipment Room	N	Optional	10	Yes	No
Linen & Trash Chute Room	N	Optional	10	Yes	No
Laboratory	N	2	6	Optional**	Optional
Laundry	E	2	10	Yes	No
Soiled Linen Sorting and Storage	N	Optional	10	Yes	No
Clean Linen Storage	P	2	2	Optional	Optional
Anesthesia Storage	E	Optional	8	Yes	No
Central Medical and Surgical Supply:					
Soiled or Decontamination Room	N	2	4	Yes	No
Clean Workroom	P	2	4	Optional	Optional
Unsterile Supply Storage	E	2	2	Optional	Optional

P — Positive
N — Negative
E — Equal
* — Recirculating room units meeting the filtering requirement for sensitive areas may be used.
** — See MHD 423 for special provisions.

Rules Relating to Clean Indoor Air: 7 MCAR §§ 1.441-1.445
Effective Date, April 14, 1980.

7 MCAR § 1.441 Authority, scope and purpose.

A. These rules are promulgated pursuant to authority granted to the Commissioner of Health in Minn. Stat. § 144.417, subd. 1, relating to prohibition of smoking in public places and at public meetings.

B. These rules apply to "public places" and "public meetings," as defined in Minn. Stat. § 144.413, subds. 2 and 3. "Public place" includes all enclosed, indoor areas used by the general public or serving as a place of work, regardless of type of ownership of the area. Restrictions and prohibitions on smoking in "factories, warehouses and similar places of work" shall be regulated under rules of the Department of Labor and Industry.

C. Nothing in these rules shall be construed to in any way affect smoking prohibitions imposed by the fire marshal or other laws, ordinances or regulations.

D. It is the purpose of these rules to provide clarification of certain provisions of the Minnesota Clean Indoor Air Act and to maintain the same public policy position as the act.

7 MCAR § 1.442 Definitions. All terms which are defined in Minn. Stat. §§ 144.411-144.417 shall have the meanings attributed to them therein. For the purpose of these rules the terms defined herein shall have the meanings given to them.

A. "Acceptable Smoke-free Area" means:

1. A contiguous portion of the public place or public meeting including seating arrangements, measuring a minimum of 200 square feet, where smoking is prohibited and,

2. At least one of the following conditions exists:

a. There is a continuous, physical barrier such as a wall, partition or furnishing, of at least 56 inches (1.42 meters) in height to separate the smoking-permitted and no-smoking areas. The barrier may contain doors or portals for exit and entry.

b. There is a space of at least four feet (1.22 meters) in width to separate the smoking-permitted and no-smoking areas. This space may be either an unoccupied area or a section of seating area acting as a buffer zone in which smoking is not permitted, but which itself is not part of the "acceptable smoke-free area."

c. The ventilation system in the room containing both a smoking-

permitted and no-smoking area has total air circulation (recirculated plus outside air) of not less than six air changes per hour including supply of tempered outside air determined according to rules of the Department of Administration, Minnesota Building Code, Minn. Reg. SBC 6007 (c) (3).

B. "Act" means the Minnesota Clean Indoor Air Act of 1975, Minnesota Laws 1975, Chapter 211, Minn. Stat. §§ 144.411-144.417.

C. "Bar" shall mean any establishment or portion of an establishment where one can purchase and consume alcoholic beverages, but excluding any such establishment or portion of the establishment having table and seating facilities for serving of meals to more than fifty people at one time, and where, in consideration of payment, meals are served at tables to the public.

D. "Facotry, warehouse or similar place of work" means the indoor area of any facility of an enterprise used principally to manufacture or assemble goods, products or merchandise not for the purpose of direct retail sale, and shall include those areas incidental but related to the primary operation.

E. "Health care facilities" means any institution, place, building or agency which is required to be licensed under Minn. Stat. §§ 144.50 to 144.58, including but not limited to, hospitals, nursing homes, boarding care homes, supervised living facilities and surgical centers.

F. "Meals" shall mean any foods made available to be consumed on the premises except foods which are prepackaged when served to the patron and foods which are served as snacks or appetizers.

G. "Office" means any building, structure or area which is used by the general public or serves as a place of work at which the principal activities consist of professional, clerical or administrative services. This classification shall include professional offices, financial institutions, business offices and government offices.

H. "One side of the room" shall mean a contiguous portion of the room, including any seating arrangements.

I. "Other person in charge" shall mean the agent of the proprietor authorized to perform administrative direction to and general supervision of the activities within the public place at any given time.

J. "Place of work" shall mean any location at which two or more individuals perform any type of a service for consideration of payment under any type of employment relationship, including but not limited to such employment relationship with or for a private corporation, partnership, individual, or government agency. This term shall also include any locations wherein two or more individuals gratuitously perform services for which individuals are ordinarily paid.

K. "Private social function" shall mean any function for which all the following conditions are met:

1. The function is a specific social or recreational event for which an entire room or hall has been reserved for the purpose of entertainment or pleasure and not for the principal purpose of education, sales or business.

2. The function is limited in attendance to people who have been specifically designated and their guests.

3. Seating arrangements for the function, if any, are under control of the sponsor of the function and not of the person otherwise responsible for the public place.

L. "Proprietor" means the party, regardless of whether he is owner or lessee of the public place, who ultimately controls, governs or directs the activities within the public place. The term does not mean the owner of the property unless he ultimately controls, governs or directs the activities within the public place. The term proprietor may apply to a corporation as well as an individual.

M. "Public Conveyance" means any air, land or water vehicle used for the transportation of persons whether or not for compensation, including but not limited to airplanes, trains, buses, boats, and taxis. The term includes vans and trucks which may be used to transport persons to, from and during work or jury duty. The term does not include privately owned vehicles when used for private purposes.

N. "Responsible person" means the proprietor or other person in charge as herein defined.

O. "Restaurant" means any building, structure, or area used as, maintained as, or advertised as, or held out to the public to be an enclosure where meals, for consideration of payment, are made available to be consumed on the premises. For the purpose of these rules, the term "restaurant" shall not depend upon licensure as such under Minn. Stat., ch. 157.

P. "Room" means any indoor area which is bordered on all sides by a wall or partition of at least 56 inches (1.42 meters). Such sides shall be continuous and solid except for door portals for entry and exit.

7 MCAR § 1.443 General provisions.

A. Smoking shall be prohibited in all sections of public places or public meetings except in areas designated as smoking-permitted areas. The responsible person shall make arrangements for an acceptable smoke-free area as defined in 7 MCAR § 1.442 A. The size and location of any smoking-permitted area shall be determined such that toxic effects of smoking are minimized in the adjacent no-smoking area.

B. Smoking permitted area.

1. If smoking is to be permitted in an area of a public place or public

meeting, the responsible person shall designate such area as "smoking-permitted." One and only one smoking-permitted area shall be designated per room. However, rooms containing at least 20,000 square feet (1,858 square meters) in total floor space may designate more than one smoking-permitted area and shall otherwise comply with these rules.

2. In a public place which contains two or more rooms which are used for the same activity, the responsible person may designate one entire room as smoking permitted as long as at least a portion of one other comparable room has been designated as a no-smoking area.

3. In the case of a public place consisting of a single room in which a smoking-permitted area is designated, the responsible person shall be responsible for reserving and clearly designating a no-smoking area on one side of the room.

4. The size of the designated smoking-permitted area shall not be more than proportionate to the preference of users of that location for a smoking-permitted area, as can be demonstrated by a responsible person. The proportional preference of users of a smoking-permitted area in that location may be demonstrated by the responsible person by evidence of any of the following:

a. the percentage of users of the location who express a preference for a smoking-permitted area when the responsible person asks all users for their preference, or

b. the percentage of users of the location who request or select a smoking-permitted area when the responsible person does not ask all users for their preference, or

c. the percentage of users who are determined by the proprietor to prefer a smoking-permitted area by an alternate method which reasonably indicates the user's preference.

C. Signs.

1. To advise persons of the existence of "no-smoking" and "smoking-permitted" areas, "No Smoking" and "Smoking Permitted" signs shall be posted in the appropriate areas. In addition, the statement "Smoking is prohibited except in designated areas," shall be conspicuously posted at all major entrances to any public place.

2. All signs which are used to identify a location where the responsible person prohibits smoking in an entire public place or public meeting shall use the statement, "No smoking is permitted in this entire establishment," or a similar statement. The sign shall be conspicuously posted either on all outside entrances or in a position within the establishment.

3. All signs which are used to identify a smoking-permitted area shall use the words "smoking permitted" and/or use the international smoking

symbol. Signs which are used to identify a no-smoking area shall use the words "no smoking" and/or the international no-smoking symbol.

4. All signs which are used to identify smoking-permitted and no-smoking areas shall be placed at a height and location easily seen by a person in the establishment and not obscured in any way. "Smoking permitted" and "no-smoking" signs, except signs on tables or seats, shall be in printed letters of not less than 1.5 inches (3.8 centimeters) in height. Whenever either of the international symbols is used, the diameter of the outer circle shall not be less than 4 inches. In large areas where signs may have to be read from a distance, the following are minimum sizes which must be used:

Furthest distance from which sign is to be read:	Height of lettering	Diameter of outer circle on symbol
150 feet	4 inches	6 inches
200 feet	6 inches	10 inches
350 feet	8 inches	15 inches
500 feet	12 inches	18 inches

The boundary between a no-smoking area and smoking-permitted area shall be clearly designated so that persons may differentiate between the two areas.

5. All signs which are used on tables or seats to designate no-smoking and smoking-permitted areas shall use printed letters of not less than 0.5 inches (1.3 centimeters) in height. Whenever either of the international symbols is used, the diameter of the outer circle shall not be less than 3 inches. When such signs are used, the responsible person shall conspicuously post at least one "no smoking" sign and one "smoking permitted" sign either at the boundary between the two areas or on the walls adjacent to the no-smoking and smoking-permitted areas.

6. The size of lettering on signs reading "smoking permitted" shall not exceed the size of lettering on signs reading "no smoking" in the same public place.

7. All signs which are used to identify a bar that has been designated as a smoking area in its entirety shall use the statement, "This establishment is a smoking area in its entirety," or a similar statement. The sign shall be conspicuously posted either on all outside entrances or in a position clearly visible on entry into the establishment.

8. A restaurant or other public place which has controlled seating (an employee directs patrons to seating or waiting areas) must ask each person whether he prefers a smoking-permitted or a no-smoking area before directing that person to a seat in the appropriate area. At least one sign advising the public of this mechanism shall be conspicuously posted at all entrances normally used by the public. Similarly a restaurant or other public place which takes advance reservations shall ask the person's preference for a smoking-

permitted or no-smoking area at the time the reservation is made. A restaurant or other public place which uses controlled seating as defined above shall be exempt from the sign requirements contained in 7 MCAR § 1.443 C. 3., 4., 5., and 6.

D. Permissible ash trays. Portable ash trays are banned in all no-smoking areas. Only ash stands and permanent ash trays may be used at or near the entrance to a no-smoking area. Such ash stands and permanent ash trays shall be conspicuously labelled with the following message placed on or near the ash stand:

SMOKING IS PROHIBITED
PLEASE EXTINGUISH ALL SMOKING MATERIALS
IMMEDIATELY

7 MCAR § 1.444 Categories of affected places.

A. Absent irreconcilable conflict, the responsible person shall be expected to comply with 7 MCAR § 1.443 and the specific provisions governing that public place in 7 MCAR § 1.444. If the provisions of the rules governing specific affected places conflict with or are inconsistent with a general provision of 7 MCAR § 1.443, the specific portion of 7 MCAR § 1.444 shall prevail over the general. The public places specified in this rule shall be expected to comply with applicable provisions according to functional activities taking place in a public area and not according to the nature of a controlling establishment.*

B. Places of work.

1. As an alternative to 7 MCAR § 1.443 B. 1. requiring one and only one smoking-permitted area per room, a place of work which is not customarily frequented by the general public may contain several, separate no-smoking and smoking-permitted areas within the same room provided each no-smoking area is at least 200 square feet (18.2 square meters) in area. Such no-smoking areas must comply with the requirements for an acceptable smoke-free area as defined in 7 MCAR § 1.442 A. 2. Under this alternative for places of work which are not customarily frequented by the general public, the responsible person shall not be required to comply with sign provisions of 7 MCAR § 1.443 C., but the responsible person must conspicuously post at least one sign on each floor which states "smoking is prohibited except in designated smoking areas."

2. These rules shall not apply to a private residence when the residence is not customarily used as a "place of work."

* For example, different rules may apply to component areas of a medical center according to the actual functional activities of each area, such as a restaurant, office or health care facility.

3. Any "factory, warehouse or similar place of work," as defined in 7 MCAR § 1.442 D., shall be regulated by rules of the Department of Labor and Industry.

C. Offices.

1. Smoking is permitted in a private office. "Private office" means an enclosed room in an office which is occupied exclusively by smokers, even though such room may occasionally be visited by non-smokers.

2. When a public place which is a factory, warehouse or similar place of work contains an office which is incidental but related to the primary operation, such office shall for the purposes of this act, be regulated under rules of the Department of Labor and Industry.

D. Restaurants.

1. During hours of operation when a facility which may otherwise be considered a restaurant does not serve food but does serve alcoholic beverages, the facility shall be considered a "bar."

2. When a public place which is a factory, warehouse or similar place of work contains a restaurant which is intended as an employee eating area and which is incidental to the primary operation, such restaurant shall, for the purposes of this act, be regulated under rules of the Department of Labor and Industry.

3. A restaurant shall be deemed to be in compliance with these rules if 30% of the seats in the eating area are designated as "Smoking Prohibited."

E. Public conveyances.

1. No person is permitted to smoke in a public conveyance except in designated smoking areas. Smoking-permitted sections may be designated in any public conveyance with a capacity of ten or more persons including the driver.

2. A public conveyance with a capacity of less than ten persons may be considered to be a smoking area in its entirety if the driver and all passengers expressly consent.

F. Health care facilities.

1. The requirement for posting of appropriate signs in 7 MCAR § 1.443 shall be satisfied in patient or resident rooms if there is at least one sign at the entrance to each floor and wing which states: "Smoking is prohibited except in designated smoking areas."

2. One of the following procedures shall be used in patient or resident rooms:

a. The responsible person shall ask all prospective patients or resident or a person authorized to represent the patient or resident whether a smoking-permitted or no-smoking area is preferred. The responsible person then shall assign rooms according to this preference when space is available. When space is not available in a no-smoking room and a person is admitted to a room originally designated for smoking, smoking shall be prohibited in that room unless expressly permitted by the non-smoker.

b. If the responsible person does not assign patient or resident rooms according to the smoking preference of the patient or resident, smoking shall be prohibited in all such rooms except rooms occupied exclusively by persons who smoke or persons who have expressed permission for smoking.

3. Visitors and staff shall be prohibited from smoking in patient or resident rooms unless the occupants expressly permit.

4. In hospitals, smoking shall be prohibited in corridors, emergency rooms, treatment rooms, admitting areas and intensive care units.

G. Hotels, motels and resorts. No person may smoke in hotels, motels and resorts except in designated smoking areas. This prohibition does not apply to sleeping rooms which are rented to a guest.

H. Common areas. Entry or exit areas, ticket areas, registration areas, common traffic areas or similar sections of public places shall not be designated in their entirety as a smoking-permitted area if non-smokers would be required to use the area to participate in activities for which the public place is intended. These rules shall not be construed to prevent designation of a smoking-permitted area in a portion of the establishment which non-smokers must briefly cross to reach the intended activity.

7 MCAR § 1.445 Application for waiver of the law.

A. To apply for a waiver of the act, the responsible person for a public place or public meeting shall submit a written application to the Commissioner of Health stating the grounds for the waiver. The commissioner has the right to request any other information reasonably necessary to determine the merits of the waiver application. Failure to submit such requested information may result in denial of the waiver application.

B. An applicant for waiver shall have the burden to provide clear and convincing evidence to demonstrate that compelling reasons exist to necessitate a waiver. Such compelling reasons may consist of evidence that implementation of the act and these rules would endanger the ability of the public place to produce sufficient income to meet its operating expenses. Acceptable evidence of such compelling reasons shall consist of financial records and/or projections, based upon demonstrable proof, reasonably showing changes of income and/or expenses which are directly attributable to the act or these rules.

C. In making determination of the eligibility of an applicant for a waiver, the Commissioner of Health shall:

1. Consider information supplied by the responsible person in the application for waiver.

2. Consider prevailing smoking restrictions and other practices relating to similar public places in the community.

3. Consider other relevant information consistent with the public policy expressed in the act.

D. After the commissioner has reviewed the information required in 7 MCAR § 1.445 C., the commissioner shall make the final decision on the waiver application and shall respond in writing to the applicant indicating that the waiver request has been denied or approved and reasons therefor.

448

7 MCAR S 1.448 Formaldehyde in housing units.

A. Applicability. This rule applies to newly constructed housing units containing urea formaldehyde and to installations of urea formaldehyde foam insulation. The rule establishes a maximum permissible indoor air level for formaldehyde and prescribes the methods for measuring levels of formaldehyde and the conditions under which the measurements are to be made.

B. Definitions. For the purpose of this rule, the following terms have the meanings given them.

1. "Commissioner" means the Commissioner of Health.

2. "Housing unit" means one or more rooms which are intended for long-term human habitation. It includes any mobile home, single family residence, or living unit in a multi-unit structure, regardless of type of ownership, and any health care facility such as a nursing home, boarding care home, intermediate care facility, or hospital.

3. "Newly constructed" means that the housing unit has not been previously occupied and that construction of the unit was completed more than 30 days after the effective date of this rule.

C. Maximum permissible formaldehyde level in housing units.

1. At the time of sale of a newly constructed housing unit, the ambient indoor air of any habitable room in the unit shall not contain more than 0.5 parts of formaldehyde per million parts of air as measured according to the procedures specified in D. and E. The seller is responsible for assuring that the unit complies with this level.

2. The installation of urea formaldehyde foam insulation in a housing unit which is not newly constructed shall not cause the indoor level of formaldehyde in any habitable room in the unit to exceed the higher of 0.5 parts per million or the preinstallation level as measured according to the procedures specified in D., E. and F. The installer of urea formaldehyde foam insulation is responsible for assuring that the installation complies with this level.

D. Test method.

1. Formaldehyde shall be measured according to the National Institutes of Occupational Safety and Health (NIOSH) Manual of Analytical Methods, Volume 1, 2nd Edition, NIOSH 77-157-A, 1977, Method Number P&CAM 125. Air samples shall be collected in a solution of one percent sodium bisulfite in distilled water.

2. For the purpose of determining compliance with C., measurements made using an alternate analytical method are valid

only if the alternate method has been approved by the commissioner. The approval shall be granted if the proponent of the alternate method can demonstrate to the satisfaction of the commissioner that the alternate method results in numerical values which have at least the same precision, reliability and accuracy as those obtained with the use of the method described in 1.

E. Testing conditions. Whenever the level of formaldehyde is to be measured, all of the conditions prescribed in 1.-4. must be met before a measurement is considered valid for the purpose of determining compliance with this rule.

1. Testing shall be carried out at an indoor temperature within the range of 70 degrees Fahrenheit to 85 degrees Fahrenheit and at ambient relative humidity. The resulting formaldehyde test levels shall be corrected to a 78 degree Fahrenheit condition using the following formula:

$$C = C_o \times e^{-R(1/t - 1/t_0)}$$

Where,

C = test formaldehyde concentration level

C = corrected formaldehyde concentration level

e = natural log base

R = coefficient of temperature = 9799

t = actual test condition temperature in degrees Kelvin

t. = corrected temperature in degrees Kelvin

2. The housing unit shall be prepared for measurement as follows:

a. For two hours prior to the close-up period, the housing unit shall be aired out at a ventilation rate of at least one outdoor air change per hour, with all interior doors, cabinets, closets and drawers open for maximum air exchange;

b. For the next two hours, the windows and exterior doors of the housing unit shall be closed. All nonvented gas appliances shall be turned off. No smoking shall be allowed;

c. Immediately after the two hour close-up period, the collection of air samples shall begin. The conditions prescribed for the close-up period shall be maintained until all samples have been collected; and

d. A housing unit equipped with a device to provide tempered outside air may be tested with the ventilation system operating at a maximum rate of one air change per hour.

3. At a minimum, a sample of air shall be taken from the kitchen and another sample shall be taken from one bedroom. Each air sample shall be taken in the center of the room, at a point which is approximately equidistant from opposing walls and at a height of 3-1/2 to 4 feet above the floor.

4. Each sample of air shall be analyzed separately.

F. Special testing conditions for use with urea formaldehyde foam insulation. In order to assure compliance with C.2., procedures in addition to those prescribed in E. must be followed with urea formaldehyde insulation. Those procedures are:

1. The level of formaldehyde in a housing unit shall be measured no more than two weeks prior to installation and shall be measured again within 30 days after the installation of the urea formaldehyde foam insulation.

2. If the entire roof or all exterior walls are to be insulated, the preinstallation air samples shall be taken as prescribed in E.1.-2. If only a portion of the unit is to be urea formaldehyde foam insulated the preinstallation measurement for formaldehyde shall be made in those two rooms closest to the walls where the installation is to be made. Postinstallation air samples shall be collected from the same rooms as those which were sampled prior to installation.

G. Effective date. The levels prescribed in C. shall apply 30 days after the effective date of this rule.

DEPARTMENT OF HEALTH

RULES RELATING TO THE AWARDING OF GRANTS AND SUBSIDIES FOR COMMUNITY HEALTH SERVICES AND ESTABLISHING STANDARDS UNDER THE COMMUNITY HEALTH SERVICES ACT.

Chapter 27, Part I: 7 MCAR §§ 1.451 - 1.455

§ 1.451 Purpose, scope, and definitions.

A. Purpose of rules. The purpose of these rules is to establish a process for allocating federal and state funds in the form of grants and subsidies to assist in establishing and maintaining community health services.

B. Scope of rules.

1. These rules apply generally to all grants and subsidies awarded by the Commissioner* which are not governed by other specific procedural rules.

2. The monies available for the grant and subsidy awards governed by these rules come from both state and federal sources. These rules, therefore, do not prescribe the exclusive procedures and requirements applicable to grants and subsidies governed by them, but are in addition to any procedures and requirements specified in the enabling and authorizing laws establishing subsidies and grants programs, as well as any other applicable rules.

C. Type of funds. Funds shall be available for the following purposes:

1. Planning Grants for the development of a community health service agency or system.

2. Demonstration Grants of the appropriateness, effectiveness, or feasibility of a community health service, or for the integration of existing community health services.

3. Special Projects Grants for the delivery of community health services to specified target populations.

4. Community Health Services Subsidies for the delivery of community health services.

D. Definition of terms. The following terms used in these rules shall have the meanings given them:

1. "Act" means the Minnesota Community Health Services Act of 1976, Laws of 1976, ch. 9, coded Minn. Stat. § 145.911 *et. seq.*

2. "Activity" means public health/community health services described in the grant or subsidy application and approved by the Commissioner for fiscal support.

*Pursuant to Laws of 1977, ch. 305, §§ 39 and 45, references to the State Board of Health have been deleted and Commissioner of Health has been substituted therefor.

3. "Application" means a written request for funds submitted by the applicant on forms provided by the Commissioner pursuant to these rules and applicable statutes.

4. "Award" means the authorization by the Commissioner for an applicant to receive and expend grant or subsidy funds for an activity.

5. "Commissioner" means the State Commissioner of Health.

6. "Community Health Services" means those services designed to protect and improve the people's health within a geographically defined community by emphasizing services to prevent illness, disease, and disability, by promoting effective coordination and use of community resources, and by extending health services into the community. These services include community nursing services, home health services, disease prevention and control services, family planning services, nutritional services, dental public health services, emergency medical services, health education, and environmental health services.

7. "Consumer" means a person who is not a licensed or credentialed health professional or the spouse of such person, a person who does not have a material financial interest in the provision of professional health services, and a person who is not directly related to health services planning and development, except as a consumer member of health-related boards.

8. "Fiscal Management Officer" means the chief fiscal officer for the recipient of funds who has primary responsibility and accountability for expenditure of and reporting on grant and subsidy funds.

9. "Fiscal Year" for subsidies to a local board of health means January 1 through December 31. The fiscal year for grants may differ dependent upon funding source requirements.

10. "Key Administrative Personnel" means those persons functioning under an approved community health services plan, including:

a. the community health services administrator,

b. the nursing director,

c. the home health services director,

d. the disease prevention and control director,

e. the emergency medical services director,

f. the health education director, and

g. the environmental health services director.

11. "Local Agency" means a nonprofit institution or organization or a general purpose subdivision of state government or combinations thereof authorized under joint powers agreement.

12. "Local Government Officials" means members of a board of county commissioners, or a city council, or a township board, or a school board, or other such officials who have responsibility for decision making concerning health and related human services.

13. "Local Match" means the local agency's share of the cost of activities funded by grants and which share complies with the eligibility requirements of the funding source.

14. "Local Participation" means those funds expended by a general purpose subdivision of state government or combinations thereof authorized under a joint powers agreement to support community health services, which are identified in the community health services plan and which qualify for subsidy, including funds derived from tax levies, gifts, fees for services, revenues from contracts, and federal general revenue sharing funds.

15. "Notice of Availability" means a written announcement by the Commissioner noting the availability of funds.

16. "Project Director" means the person responsible for administration of a funded activity.

17. "Provider" means any individual who is a licensed or credentialed health professional; an employee or representative of a licensed or certified health care institution or agency, health care insurer, or health professional school; or a person with a material financial interest in the provision of health services.

§ 1.452 Availability of funds and application process.

A. Notice of availability. The Commissioner shall mail a notice of availability of grant and subsidy funds to interested parties and local agencies who have requested the Commissioner in writing to be so notified. The notice of availability shall include at least the following information:

1. Specific purposes for which funds are available.

2. The format of the notice of intent to apply for funds.

3. The final dates for submission of notice of intent and for submission of applications.

4. The expected timetable for review of applications by the Commissioner.

5. Regional review requirements.

B. Notice of intent. Interested parties shall notify the Commissioner in writing of intent to apply for funds in accordance with the timetables and format specified in the Commissioner's notice of availability.

C. Provision of application forms. Upon receipt of the notice of intent, the Board shall transmit application forms and instructions to the agency, institution, or organization submitting the notice of intent.

D. Submission of application. Applications shall be submitted to the Commissioner no later than the date specified in the notice of availability. Information addressed in the application shall include, but not be limited to the following items:

1. Name and address of the applicant.

2. Names of the project director and the fiscal management officer who will be responsible for the activity for which funding is sought.

3. Identification of the significant community health services needs of the community and a description of the way the proposed activity will affect these needs, including:

a. Statement of the community health problem to which the activity is addressed.

b. Statement of goal(s) of the activity.

c. Objective(s) to be accomplished by the activity.

d. Methods by which each objective will be achieved.

e. Evaluation criteria to be used for periodic assessment of the activity.

f. Completed budget and budget justification.

g. Identification of local match and/or local participation.

h. Original signature on face sheet and budget form.

4. Assurances of compliance with applicable state and federal laws pertaining to the administration of funds, and where applicable, documentation of approval by the county board(s) or city council(s) of the proposed community health services plan.

5. The community health services plan submitted to the Commissioner for fiscal year 1977 may be for funding for any remaining portion of fiscal year 1977. Thereafter, the annual community health services plan shall be submitted to the Commissioner no later than August 15 of each year for funding for the following fiscal year.

E. Additional information. To enable the Commissioner to make an adequate evaluation, the Commissioner may request the submission of additional information consistent with these rules and any applicable statutes. The Commissioner may refuse to award a grant or subsidy for failure of the applicant to submit requested additional information.

§ 1.453 Review and disposition of applications.

A. Regional review. The applicant shall submit one copy of the completed application form to the Commissioner by the date specified in the notice of availability and concurrently to the regional development commission(s) for the area in which the funded activity will take place. Such regional development commissions shall review and comment on the proposed community health service plans within 40 days after receipt, and shall review and comment on grant applications within 20 days after receipt. In addition, one copy of the completed application form shall be submitted to the appropriate health systems agencies for review and comment, or approval as appropriate. Any comments of the health systems agencies shall be submitted to the Commissioner in accordance with the time schedule specified immediately above for regional development commissions.

B. Commissioner review.

1. The Commissioner shall review all applications in accordance with the time schedule specified in the notice of availability.

2. The Commissioner shall give consideration to the following criteria in determining which activities shall receive funds:

a. Eligibility. A determination that all legal conditions of eligibility are established. In the case of special grants authorized under Minn. Stat. § 145.922, the following conditions shall apply:

(1) Migrant agricultural workers shall include only those persons and their families whose principal occupation is or has been in agriculture on a seasonal basis during the preceding twelve month period, and who are required to establish a temporary place of abode for the purpose of such employment.

(2) Native Americans without an established county of residence shall include only persons not residing on Indian land who are members of an organized tribe, band or other group of aboriginal people of the United States, having a treaty relationship with the federal government and who are regarded as Native Americans by the group in which they claim membership.

b. Limitation of funds. The amount of funding available for a specific type of grant or subsidy.

c. Probable effectiveness. Evidence that the proposed activity will positively affect identified community health problems in a cost effective manner.

d. Community support. Evidence of coordinated planning and of community support, including the availability of local match and/or local participation for the proposed activity.

e. Equity. Equitable distribution of funds throughout the state.

f. Regional review. The findings submitted by the regional review agencies.

g. Quality of the application. Clarity, specificity, and completeness of the application.

C. Disposition.

1. The Commissioner shall inform each applicant in writing that one of the following actions has been taken with respect to its application.

a. Approval of application as submitted.

b. Approval of application with modifications.

c. Conditional disapproval due to inadequate funds. Such applications shall be held by the Commissioner pending availability of additional funds.

d. Disapproval of application with justification.

2. The Commissioner's notice of award shall specify the amount of the award, source of funds, duration of the funding period, and such conditions as are necessary for assuring the appropriate use of public funds.

§ 1.454 Administration.

A. Monitoring. A member of the Department of Health staff will be designated to act as monitor for each grant or subsidy awarded. The person designated shall provide or arrange for technical assistance and shall monitor progress toward the goals and objectives of the activity.

B. Local agency responsibilities. The local agency, in addition to fulfilling the goals and objectives of the activity, shall:

1. Comply with the terms and conditions of the Commissioner's award notice and with the requirements of these rules and other applicable laws and rules and regulations.

2. Maintain such records, including program and accounting records, as are necessary to make the required reports and to permit assessment of the activity by the Commissioner.

3. Provide access to records relating to the funded activity.

4. Provide progress reports in accordance with a schedule specified in the award notification.

5. Assure that:

a. The treasurer or an official exercising similar functions shall receive and provide for the custody of all funds paid by the Commissioner.

b. All local funds that are expended by the agency used to match a directly-awarded federal grant are reported on the budget/expenditure form.

c. The local funds identified as local match and/or local participation are used solely to match the specific grant or subsidy awarded by the Board.

d. Funds are used solely for the purpose authorized in the award.

e. Accounting records are supported by source documents.

f. Audits are conducted to determine at a minimum the fiscal integrity of financial transactions and reports.

C. Disqualification. The Commissioner may withhold or terminate funding for failure to comply with the terms of the award, with the requirements of the applicable rules or statutes, or for other just cause. The Commissioner may require reimbursement of unauthorized expenditures identified by fiscal audit.

§ 1.455 Special rules authorized by the act.

A. Personnel. 7 MCAR § 1.455 A. establishes minimum standards for the training, credentialing and experience requirements for key administrative personnel under Minn. Stat. § 145.918, except that this rule shall not apply to employees of agencies having a personnel system approved by the United States Civil Service Commission.

1. Except for the community health services administrator, this rule applies only when the local agency has the specific services program as a distinct organizational component. A person may perform more than one key administrative role.

2. Key administrative personnel shall have documented experience that includes skills necessary to:

a. Prepare and manage budgets.

b. Manage a planning process for the delivery of services.

c. Prepare necessary reports.

d. Evaluate programs for efficiency and effectiveness.

e. Coordinate the delivery of community health services with other public and private services.

f. Advise and assist the local board of health in the selection, direction, and motivation of personnel.

3. Incumbent key administrative personnel shall have until January 1, 1980, to meet the minimum training, credentialing, and experience standards.

4. Minimum standards for key administrative personnel positions are as follows:

a. Community Health Services Administrator. Academic preparation in administration, public health, or a related field and two years of documented experience in an administrative or supervisory capacity.

b. Community Nursing Director. Minnesota certification as a public health nurse and two years of documented experience in nursing, preferably in public health and in an administrative or supervisory capacity.

c. Home Health Services Director. Licensure to practice as a registered nurse in Minnesota, preferably meeting certification standards for public health nursing, and two years of experience in nursing involving supervisory or administrative responsibilities.

d. Disease Prevention and Control Director. Bacculaureate degree in physical or biological sciences and one year of experience in disease prevention and control methods; or two years of documented experience in an administrative or supervisory position in a disease prevention and control program.

e. Emergency Medical Services Director. Two years of documented experience in an administrative or supervisory position in a health-related program and training and/or experience in emergency medical services.

f. Health Education Director. Baccalaureate degree and one year of experience in relevant fields; or two years of documented experience in an administrative or supervisory capacity in a health education program.

g. Environmental Health Director. Baccalaureate degree in physical or biological sciences and two years of experience relevant to the environmental health program operated by the local board of health; or six years of experience in a technical or professional capacity relevant to the environmental health program operated by the local board of health. A masters degree in the environmental health sciences or as much as two academic years of post-secondary environmental health course work may be substituted for up to two years of experience provided that, in any case, the environmental health director shall have at least one year of experience.

B. Uniform reports. The recipient of a subsidy award shall furnish uniform reports to the Commissioner as follows:

1. Reports of expenditures shall be filed on forms provided by the Commissioner no later than 45 days following the close of each quarter of the fiscal year.

2. Annual reports of evaluations of activities shall be submitted no later than 90 days following the close of the fiscal year. This will constitute compliance with the requirements of Minn. Stat. § 145.92, subd. 1 (e). Reports of evaluation of the activities conducted under the annual community health services plan shall be submitted in accordance with the instructions and on forms provided by the Commissioner and shall include at least the following:

a. An analysis of the results including statistical data for each of the activities included in the annual community health services plan using the evaluation criteria specified in the plan.

b. A narrative identification and description of efforts made toward improved coordination and integration of activities conducted by the local board of health with other organizations, agencies, and groups providing similar or related services in the area.

c. A summary expenditure report including the amount of local match or local participation.

d. Statistical data to comply with the federal requirements.

C. Community participation process.

1. The community health services plan shall be developed with full community participation. Such participation shall include the following:

a. Written notice shall be made to interested persons, including affected providers, consumers, and local government officials, of the initiation of a local community health services plan development process. Such notice shall include the procedures by which persons may participate in that process, and notification of dates, times and location of meetings or hearings at which persons shall be given the opportunity to express their views.

b. A general roster shall be developed and maintained for mailings of materials relating to community health services plan development, implementation, or major revision.

c. A public meeting at which interested persons shall have the opportunity to comment on the proposed plan shall be held annually at least 15 days prior to approval by the county board(s) of a proposed community health services plan. A summary of the plan shall be made available to interested persons at least two weeks prior to this meeting. A complete copy of the proposed plan shall be available for public review at a designated place.

d. A summary of the approved community health services plan shall be distributed to interested persons and a copy of the approved community health services plan and periodic progress reports shall be made available for public review at a designated place.

2. Advisory committee.

a. Interim planning committee. When a county board(s) or city council(s) initiates a planning process for the development of a community health services plan, and until a local board of health is formally established, an interim planning committee shall be appointed by the county board(s) or city council(s) to assist in the development of the community health services plan. The committee shall function in a manner identical to that specified for the community health services advisory committee in Minn. Stat. § 145.913, subd. 3. Nominations for appointments to the interim planning committee shall be solicited from affected and interested community provider and consumer organizations and/or constituencies. Appointments to the interim planning committee shall be broadly representative of the community. The interim planning committee shall elect officers and may establish special study groups and task forces which may include persons other than members of the interim planning committee. All meetings of the interim planning committee shall be public and minutes of meetings and records of attendance shall be maintained and transmitted to the county board(s), or city council(s) as appropriate. Staff to assist the committee and task forces shall be furnished by the county board(s) or city council(s).

b. Advisory committee. The advisory committee required by Minn. Stat. § 145.913, subd. 3 to be established upon the formation of the local board of health shall be selected by the participating county board(s) or city council(s) from nominations solicited from interested and affected organizations, community groups and/or constituencies. The advisory committee may at its discretion organize special study groups and task forces which may include persons other than members of the advisory committee. All meetings and records of the advisory committee and of study groups and task forces established by it shall be public and minutes of meetings and records of attendance shall be maintained and transmitted to the local board of health. Staff support to the advisory committee shall be provided by the local board of health.

7 MCAR § 1.457 Family planning special project grants.

A. Purpose, scope and applicability.[1] The purpose and scope of these rules is to prescribe requirements applicable to family planning special project grants, to establish minimum standards for family planning services supported in whole or in part by family planning special project grant funds, and to provide a criteria for the review of family planning special project grant applications. An applicant is not required to provide all family planning service components to be eligible for funding. The following parts of 7 MCAR §§ 1.451-1.455 and no others also apply to family planning special project grants: 7 MCAR §§ 1.451 A., B., C.3., D.; 7 MCAR §§ 1.452 A., B., C., D.1. & 2., E.; 7 MCAR §§ 1.453 A., B.2.c. & e.; 7 MCAR §§ 1.454 A., B.1.-5.a., d., e., f., C.; 7 MCAR §§ 1.455 B.

B. Definitions. "Family Planning Methods" means agents and devices for the purpose of fertility regulation prescribed by a licensed physician, and other agents and devices for the purpose of fertility regulation including, spermicidal agents, diaphragms, condoms, natural family planning methods, sterilizations, and the diagnosis and treatment of infertility by a licensed physician, which can be paid for in whole or in part by family planning special project grant funds.

"Family planning" means voluntary planning and action by individuals to attain or prevent pregnancy.

"Family planning services components" means each of the public information, outreach, counseling, method, referral and follow-up services.

"Provide" means to directly supply or render or to pay for in whole or in part.

C. Content of application. In lieu of the items 7 MCAR § 1.452 D.3.a.-h., the application shall identify the geographic area to be served by the applicant and shall address the following information and requirements:

1. An inventory of existing family planning services provider agencies in the geographic area served by the applicant. The inventory shall include for each provider agency at least:

a. names and addresses;

b. the target population served, including total number served if available; if unavailable, estimates will be acceptable;

[1] Minn. Stat. § 145.925 contains provision prohibiting use of these funds for abortions, family planning services to unemancipated minors in school buildings, requiring notice to parents or guardians of unemancipated minors to whom abortion or sterilization is advised, except as provided in Minn. Stat. §§ 144.341 and .342, and prohibiting coercing anyone to undergo an abortion or sterilization.

c. family planning service components provided.

2. An assessment of unmet needs of the geographic area to be served by the applicant including, but not limited to, an identification of unavailable family planning service components and/or unserved or underserved population. A description of the method used in making the assessment shall be provided by the applicant.

3. A description of the family planning service components to be provided by the applicant. Procedures for referral and follow-up shall be incorporated into all family planning services available on an individual basis. Each component to be provided with family planning special project funds must meet the standards for that component described in 7 MCAR § 1.457 D. For each component to be provided, the application must describe:

a. the goals;

b. the population to be served (target population);

c. the specific objectives to be achieved during the funding period;

d. the methods by which each objective will be achieved;

e. the criteria to be used to evaluate the progress towards each objective;

f. a budget and budget justification;

g. a summary of the training and/or experience relevant to the component(s) to be provided of the person(s) providing the service.

4. A description of the linkages between the applicant and other family planning services in the geographic area including, but not limited to, plans for contracts and/or cooperative agreements with other organizations, agencies or individual providers. All funded projects must establish linkages to facilitate access to outreach, counseling, and other component services for service recipients.

5. A description of fees, if any, to be charged individuals for any family planning services. Proposed fees must be charged in accordance with a sliding fee for services and supplies based on the cost of such services or supplies and on the individual's ability to pay as determined by income, family size and other relevant factors. When applicable, the maximum fee charged shall not exceed the maximum reimbursement available from Title XIX, Medical Assistance. Services shall not be denied based on ability to pay as specified in "C.8." herein.

6. Assurance that services will be provided in accordance with state and federal laws and rules.

7. A description of the policies and procedures that will be employed to maximize the use of third-party sources of funding.

8. Assurance that services will be provided without regard to age, sex, race, religion, marital status, income level, residence, parity, or presence or degree of disability except as otherwise required by law.

9. Assurance that arrangements shall be made for communication to take place in a language understood by the family planning service recipient.

10. When the applicant proposes to use family planning special project grant funds to supplant Community Health Services subsidy funds planned and budgeted for family planning services, the amount to be supplanted must be described in the application.

11. Assurance that the privacy of the service recipient will be maintained in accordance with law.

D. Family planning service components, definitions and minimum standards. All service components shall include information on family planning services available from the applicant. Service components to be provided by the applicant shall be defined as indicated and shall meet or exceed the following standards:

1. "Public information" means specific activities designed to inform the general population about family planning and all family planning services available in the geographic area.

2. "Outreach" means specific activities designed to inform members of the target population about family planning and all the family planning services available in the geographic area. Outreach activities shall include, but not be limited to, one-to-one or small group contacts with the target population.

Outreach shall be conducted at times and places convenient to the target population. Persons conducting outreach shall have training and/or experience in family planning services.

3. "Counseling" means utilization of non-directive interview techniques which enable individuals to voluntarily determine their participation in family planning services and their family planning method of choice, if any. When individuals are seeking to prevent pregnancy, counseling shall include the provision and explanation of factual information on all family planning pregnancy prevention methods. When individuals are seeking to attain pregnancy, counseling shall include the provision and explanation of factual information on infertility diagnosis and treatment and services for pregnant women available in the geographic area.

Counseling shall be available to any individual in the target population and shall be conducted at times and places convenient to the target population.

Counseling shall include documentation that information required in Minn. Stat. § 145.925 has been provided. Counseling shall be conducted by persons with training and/or experience in counseling and family planning services.

4. "Method" means the provision to a service recipient of her/his family planning method of choice. Provision of any family planning method shall include, but not be limited to:

a. Procedures which document that the service recipient participated in counseling prior to selecting a family planning method to prevent pregnancy;

b. Voluntary selection of the family planning method by the service recipient;

c. Information on the advisability of females obtaining a gynecological examination with Pap smear prior to initiating any family planning method;

d. Education on the use of the selected family planning method, including the risks and benefits of the method;

e. Medical/laboratory services prior to the provision of a family planning method when the selected method requires medical intervention for prescription, fitting, insertion or for surgical or diagnostic procedures. When the selected method does not require medical intervention, as described herein, the applicant shall encourage service recipients to obtain medical/laboratory services, but provision by the applicant is not required. Medical/laboratory services shall include:

(1) Social and medical/surgical history with emphasis on the reproductive system;

(2) Height, weight, and blood pressure measures;

(3) Bimanual pelvic examination for females;

(4) Breast examination and instruction on self-examination for females;

(5) Hemoglobin or hematocrit;

(6) Urinalysis for sugar and protein;

(7) Pap smear.

In addition, when indicated by history or symptoms, the medical services shall include for both male and female as appropriate:

(8) Diagnosis and treatment of venereal disease;

(9) Diagnosis and treatment of vaginitis;

(10) Diagnosis of pregnancy.

Medical services shall be rendered by licensed physicians, or professional nurses with documentable training in gynecological care conducted under the supervision of a licensed physician, or nurse midwives certified by the American College of Nurse Midwifery, under the supervision of a physician. Laboratory tests shall be conducted by personnel trained to conduct such tests.

5. "Referral" means to provide, in writing, information to service recipients which enables them to participate in family planning.

6. "Follow-up" means specific procedures of continuing care designed to encourage safe and consistent family planning and utilization of other needed services.

E. Criteria for award of family planning special project grants. Applications which meet the requirements of law and these rules shall be awarded in accordance with the notice of availability as specified in 7 MCAR § 1.452 A., procedures specified in 7 MCAR § 1.452 E., and the following criteria:

1. Applications proposing to provide all family planning service components in counties with no in-county subsidized family planning service as of December 31, 1978, will be given priority above all other applications.

2. Quality and content: Applications will be evaluated on the basis of:

a. 7 MCAR § 1.453 B.2.c. and e.;

b. The extent the funds will be used to meet unmet needs in the geographic area as identified in the application;

c. The extent the application proposes an identifiable expansion in the capacity of the family planning service system in the geographic area to be served by the applicant;

d. The extent the application proposes to coordinate family planning services with organizations, agencies and individual providers in the geographic area to be served.

3. Agency. When equivalent and competing applications are submitted for a geographic area, award priorities will be in accordance with the following:

a. First priority will be given to local boards of health;

b. Second priority will be given to eligible non-profit corporations.

Prior to submission to the Commissioner, the applicant shall submit the proposal to the local board of health for review and comment. Any comments of a local board of health shall be submitted to the Commissioner within 20 days of the date the proposal was mailed to the local board.

F. Contingency funding proration. If after processing applications in accordance with 7 MCAR § 1.457 E. above, the total amount of funds budgeted in these applications exceeds the amount of family planning special project grant funds available, applications will be funded in accordance with the following:

1. Applications proposing to provide service in counties with no in-county family planning service as of December 31, 1978, will receive first priority. Up to the first $20,000 of the recommended budget in these applications will be awarded with no modification. Any portion in excess of $20,000 will be awarded in accordance with number 2 as follows:

2. All other applications and those unawarded portions of applications in number 1 above, will be prorated in an amount equal to their recommended budget multiplied by the ratio of total available funds minus funds awarded under number 1 above to total amount of the recommended budgets minus funds awarded under number 1 above.

G. Use of state funds available for family planning special project grants.

1. Family planning special project grant funds awarded to applicant may be used to supplant Community Health Services subsidy funds planned and budgeted for family planning services in the 1978 or 1979 Community Health Services Plan.

2. Family planning special project grant funds may not be used to supplant any existing federal or local funds for family planning information or services.

3. Applicants are not required to match funds available under family planning special project grants.

Rules of the State Board of Health Relating the Maternal and Child Nutrition Act of 1975

MHD 461 to 470

MHD 461 General Purpose and Definitions

(a) These rules are promulgated to establish procedures and criteria for those local organizations which seek funds from the Minnesota Board of Health in order to distribute nutritional supplements to mothers and children under these rules.

(b) Definitions

For the purposes of the Maternal and Child Nutrition Program, the terms in this section are defined as follows:

(1) "Act" means the Maternal and Child Nutrition Act of 1975 (Minnesota Laws 1975, Chapter 346).

(2) "Administrative costs" means all costs directly attributable to program operations, except expenditures for food.

(3) "Affirmative Action Program" is a program that meets state and federal laws which prohibit discrimination in employment, public service and public assistance.

(4) "Agency" means any local health agency as defined in the Act (Minnesota Laws 1975, Chapter 346, sec. 1, subd. 2).

(5) "Applicant" means those local health agencies who have submitted program applications to the Board in accordance to these rules.

(6) "Birth weight" means weight of an infant determined within two hours of birth, or as soon thereafter as is practicable.

(7) "Board" means the Minnesota Board of Health and/or its agent, the Minnesota Department of Health.

(8) "Children" means persons at least one year of age but less than four years of age.

(9) "Competent professionals" means physician and/or registered nurses duly licensed by the State of Minnesota, or public health nutritionists, registered dietitians, or persons designated and supervised by one of the above as being competent to evaluate nutritional risk.

(10) "Certification process" means the method by which the grantee designates certified individuals in accordance with the criteria specified in MHD 463 (d) dealing with certification.

(11) "Certified individuals" means those persons who have been certified by the grantee as eligible to receive supplemental food and services pursuant to the program.

(12) "Grantee" means those agencies who have contracted with the Board to participate in the program.

(13) "Infants" means persons under one year of age.

(14) "Lactating woman" means any breast feeding individual who presents competent evidence of having been delivered of a surviving child within the 12 months immediately preceding the filing of an application for nutritional supplements.

(15) "Low birth weight" means a birth weight less than 2,500 grams.

(16) "Low income" means a gross annual income at or below the following:

$ 4,652 for a single person
$ 6,083 for a family of two (2)
$ 7,515 for a family of three (3)
$ 8,947 for a family of four (4)
$10,378 for a family of five (5)
$11,810 for a family of six (6)
$12,078 for a family of seven (7)
$12,346 for a family of eight (8)
$12,615 for a family of nine (9)
$12,883 for a family of ten (10)

(17) "Nutritional risk" means in addition to those items specified in the Act (Minnesota Laws 1975, Chapter 346, sec. 1, subd. 7), a condition in which an individual's health has, or may become, compromised due to an inadequate consumption of necessary nutrients as can be demonstrated under the criteria specified under MHD 463 (d)(4)(aa) herein.

(18) "Pregnant women" means persons determined by licensed physician, midwife or appropriately trained registered nurse, to have one or more fetuses in utero.

(19) "Program" means the program specified in the Act.

(20) "Program area" means the geographic boundaries determined by the agency and approved by the Board, within which the distribution of benefits under this program and under these rules shall be administered.

(21) "Public assistance" means any form of federal, state or local aid wherein qualification is based upon financial need of the recipient.

(22) "Responsible official" means the person designated by the local health agency as being accountable to the department for carrying out the provisions of the act and of these rules.

(23) "Supplemental food" means any food authorized to be made available under MHD 463 (e)(3)(aa) of these rules.

(24) "Vendor" means any retailer who has entered into a written contract with a grantee to provide food to certified individuals pursuant to these rules.

(25) "Voucher" means the coupon issued by the grantee to the certified individuals and/or their parents or guardians for purchase of specified supplemental foods from a vendor.

MHD 462 Procedures and Conditions for Obtaining a Grant

(a) Contracts between the Board and grantees.

(1) The Board will make funds available only to those grantee agencies with which it has entered into a written contract.

(2) The Board will provide funds, technical assistance and consultation to grantees to enable them to establish and implement a certification process to determine individuals eligible for supplemental food vouchers in accordance with the Act and these rules.

(3) The Board and the grantee shall enter into a contract that shall specify at least the following:

(aa) The local grantee will operate pursuant to the Act and these rules.

(bb) The grantee shall have an affirmative action program as defined in MHD 461 (b)(3).

(b) Conditions for entering a funding contract with the Board:

(1) The Board will accept applications from agencies seeking to become grantees.

(2) The Board may execute a contract only with those agencies which submit an acceptable application as specified in MHD 462 (b)(3) and upon consideration of the criteria as specified in MHD 462 (b)(4).

(3) The applications for contract shall be submitted in triplicate. The Board may request the submission of additional information consistent with the provisions of the Act and these rules, as well as information necessary to clarify matters already contained in the application. Such information shall be for the sole purpose of enabling the Board to fairly, adequately and completely evaluate the application to determine whether a grant should be awarded. The Board may refuse to award a grant for failure of the applicant to submit the requested information. The application shall contain at least the following information:

(aa) The name, address and telephone number of the applying agency.

(bb) The name of the person who will be designated the responsible official for supervising local program operations.

(cc) The title and number of all persons, including clerical or non-professionals, who are employed by the agency and will be working with the program.

(dd) The title and number of all members of the staff who will examine and /or interview persons in order to designate certified individuals for the program.

(ee) The geographic boundaries of the proposed program area.

(ff) An estimate of the total population living within the proposed program area and the basis upon which that estimate is made.

(gg) An estimate of the low income population living within the proposed program area and the basis upon which that estimate is made.

(hh) An estimate of the number of pregnant or lactating women, infants or children which the grantee expects to serve monthly under the program and the basis upon which that estimate is made.

(ii) An estimate of the monthly cost of purchasing supplemental foods for potential participants as based on current retail prices and a description of the basis on which that estimate was determined.

(jj) An estimate of the monthly administrative costs for the program by the general type of expenditure with a brief justification for each such budgeted expenditure.

(kk) A proposed plan for establishing and implementing a certification process.

(ll) A statement that the information furnished in the application is true and accurate to the best knowledge of the responsible official who signs it.

(4) In addition to information provided in the application, the Board will consider the following criteria in determining whether it will contract with an applicant:

(aa) The absence of any similar supplementary feeding program serving the clientele within the proposed program area of the applying agency.

(bb) The ability of the applicant to meet program requirements for individual certification, recordkeeping, reporting, nutrition education and all the other requirements of the Act and these rules.

(cc) The severity of nutritional risk and other health problems which affect residents of the proposed program area as demonstrated by Board data ranking counties based on percent of women receiving prenatal care, percent of premature births, perinatal death rate, percent of mothers less than 20 years old, percent of illegitimacy, percent of family income below $6,000 and fertility rate.

(5) Each applicant will be notified in writing by the Board as to the action taken on its application for contract and the reason for such action. Such notification shall specify the amount of funds which the Board will make available to the grantee and any contingencies upon the application.

MHD 463 Duties of Grantees

(a) Each grantee is responsible for identifying persons who may be designated as certified individuals. Each grantee shall inform these persons of program benefits and procedures to be followed in order to be designated as certified individuals.

(b) The grantee shall designate only competent professionals to certify individuals.

(c) Each grantee shall be responsible for establishing and implementing a certification process and for documenting the fulfillment of criteria by which

each certified individual was determined as certified by a competent individual. No person shall be certified for more than six months. Any person desirous of continuing in the program shall be re-certified in accordance with these rules relating to any certification.

(d) Each grantee may designate pregnant or lactating women, infants and children as certified individuals provided such individuals meet all of the following requirements:

(1) They are not receiving a similar supplement under any federal, state or local program, and;

(2) They reside in an area served by the grantee and;

(3) (aa) They are eligible for, or a recipient of, any form of public assistance authorized by law or

(bb) They are determined by the grantee to be at low income, as can be verified by a statement provided by the Board which each individual applying for certification must sign, to purchase necessary supplemental foods, and;

(4) They are determined by the grantee to be at nutritional risk as defined by any one or more of the following criteria:

(aa) Nutritional anemia as found by blood analysis, either hemoglobin or hematocrit, showing results which are lower than those indicated on the following list:

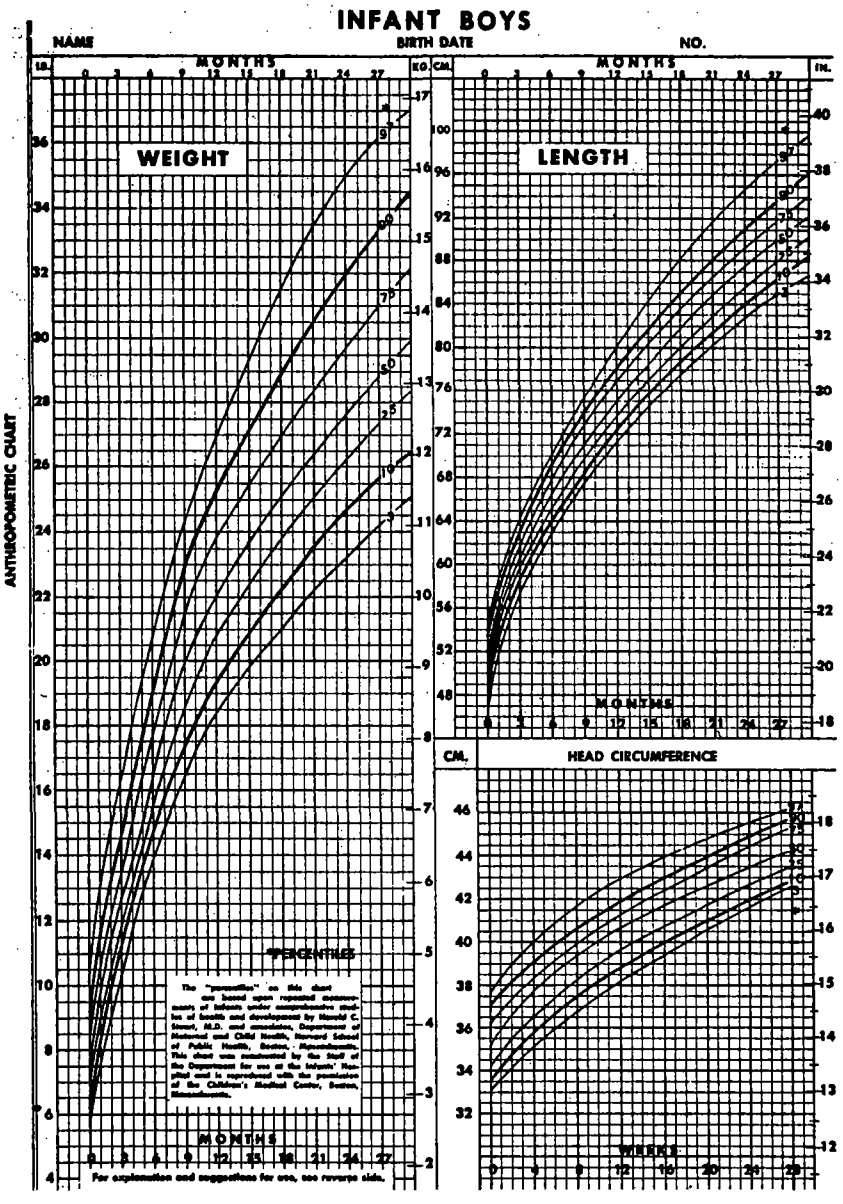
	Age	gm/100ml
Hemoglobin	6-23 months	10.0
	2-4 years	11.0
	non-pregnant	12.0
	pregnant	11.0

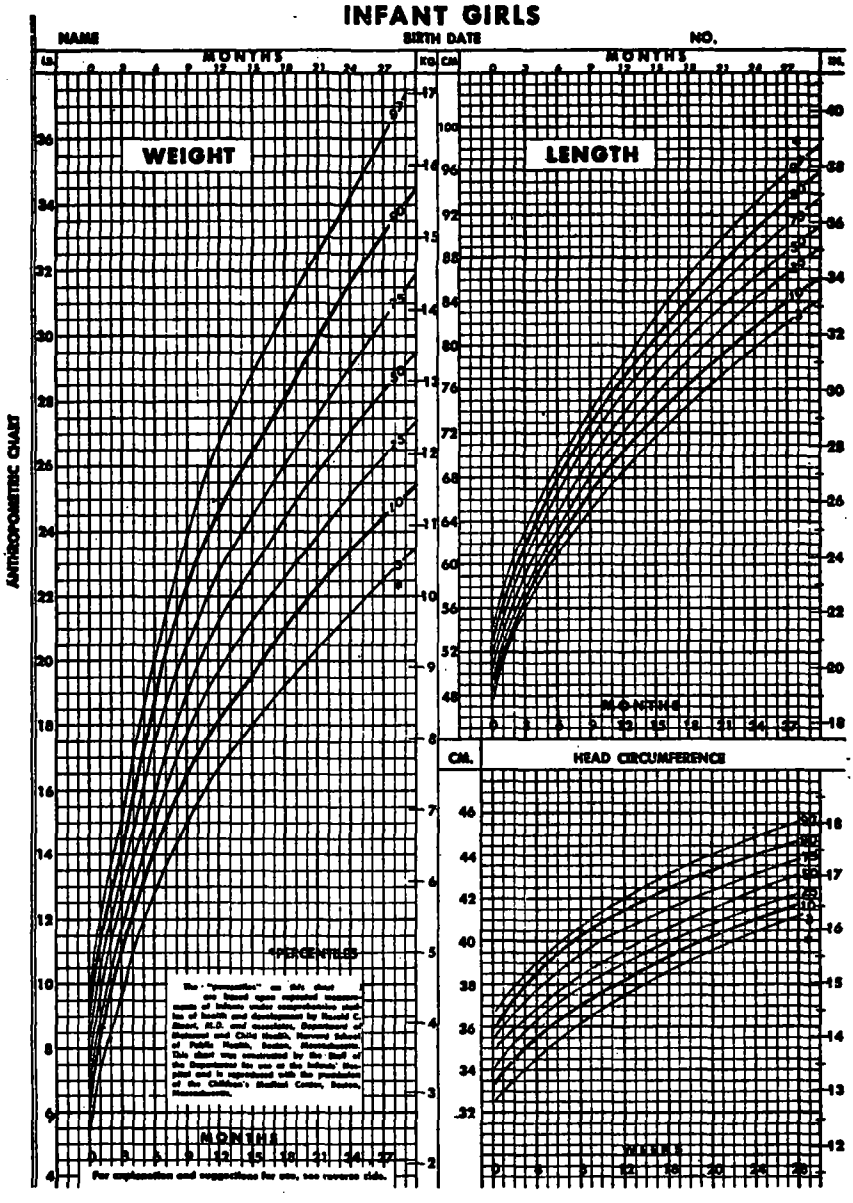
	Age	Packed Cell Volume in Percent
Hematocrit	up to 2 years	33
	2-4 years	34
	non-pregnant	36
	pregnant	33

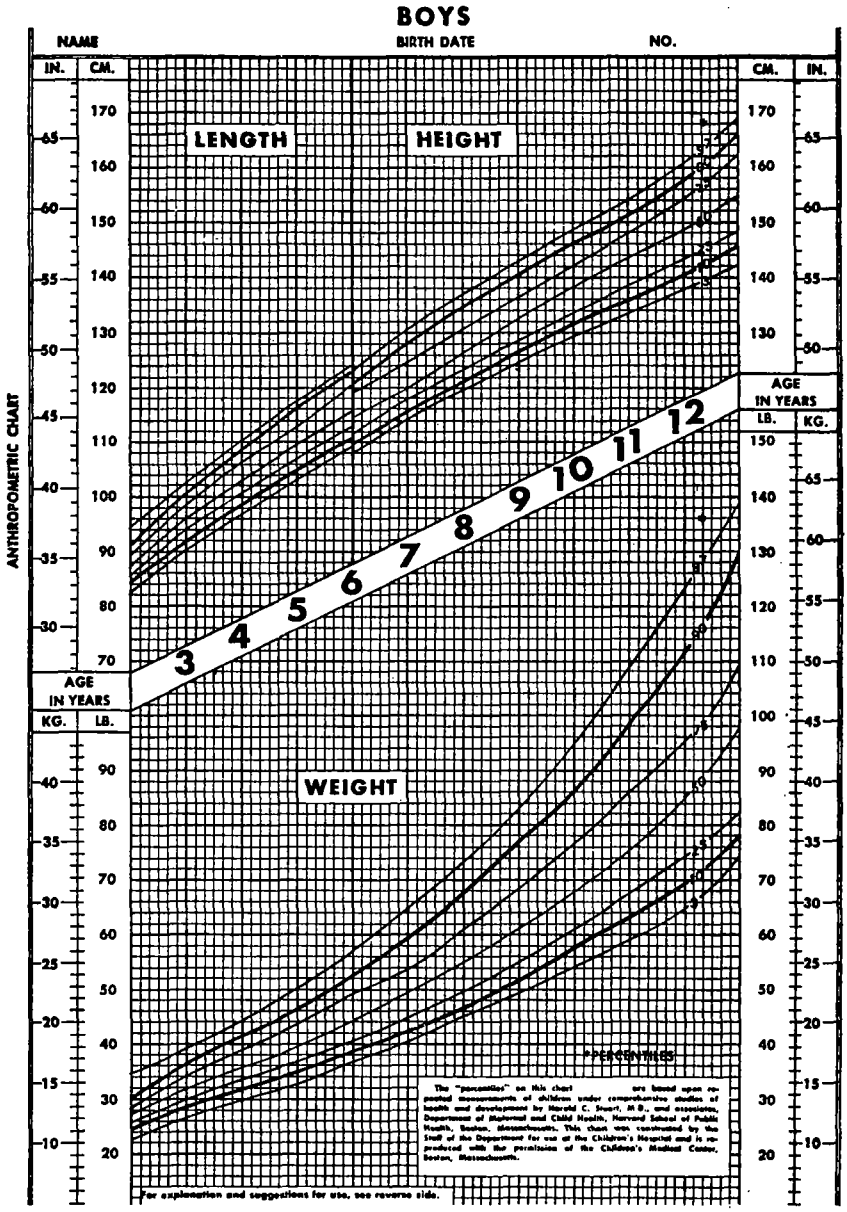
(bb) Inadequate diet as demonstrated on a food intake record form provided by the Board, and which indicates the diet, contains less than the specified amounts of the following nutrients and calories.

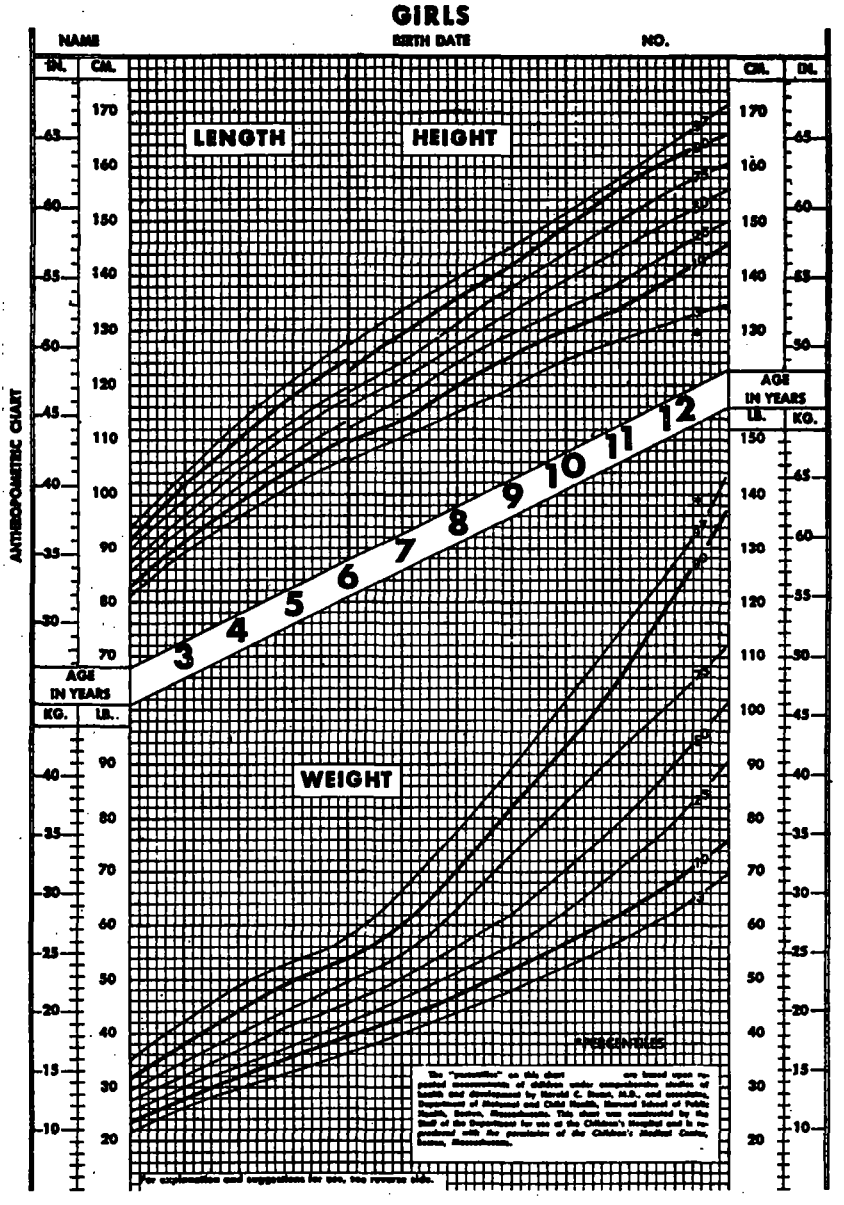
	0-6 Months	6 Months to 1 Year	1-3 Years	3-4 Years	Pregnant Woman	Lactating Woman
Protein	2.2 gm/kg	2.0 gm/kg	23g	30g	76g	66g
Iron	10mg	15mg	10mg	10mg	18mg	18mg
Calcium	360mg	540mg	800mg	800mg	1,200mg	1,200mg
Vitamin A	1,400 IU	2,000 IU	2,000 IU	2,500 IU	5,000 IU	6,000 IU
Vitamin C	35mg	35mg	40mg	40mg	60mg	80mg
Calories	117/kg	108/kg	1,300	1,800	2,400	2,600

(cc) Inadequate pattern of growth in infants and children as demonstrated when heights and weights plotted on the following growth grids show height and/or weight to be two or more standard deviations below the mean:









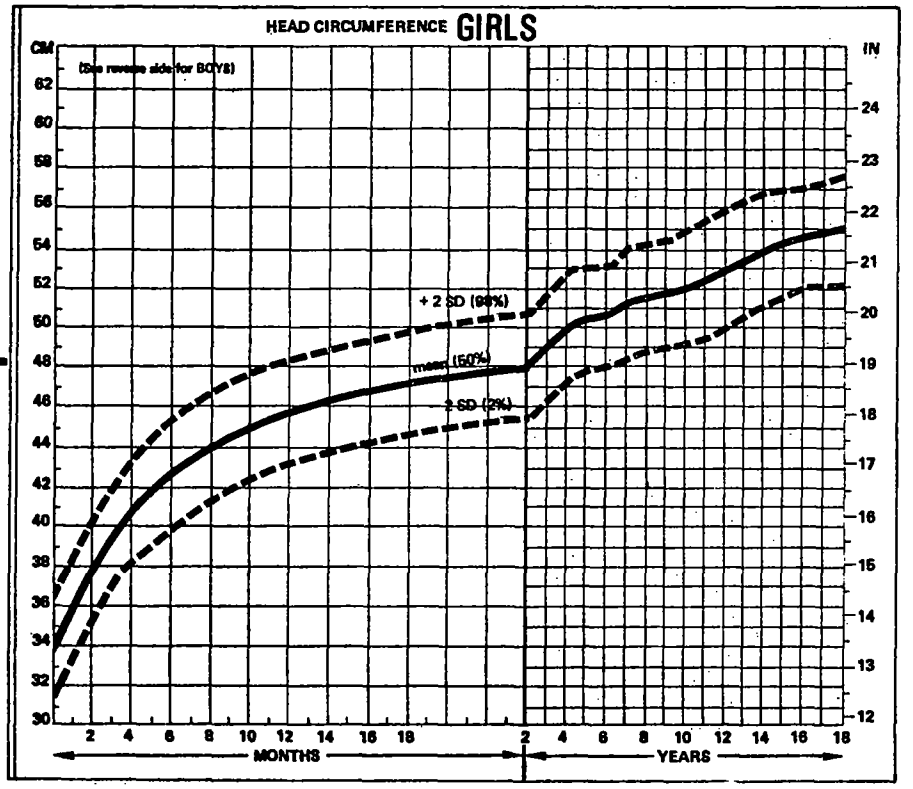
MHD 463

PATIENT INFORMATION:

Name

Birth Date

Notes



GIRLS

SOURCE: Nellhaus, G., Composite International & Interracial Graphs, PEDIATRICS 41:106, 1968
(Minnesota Department of Health)

733

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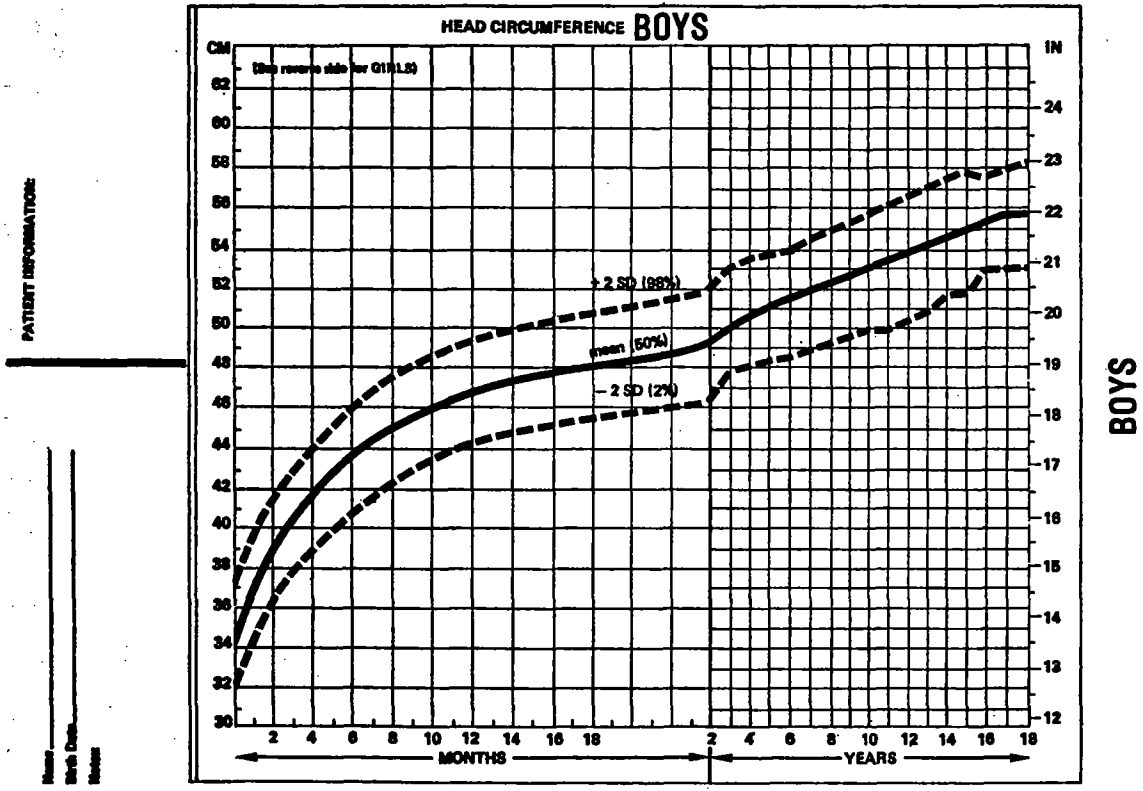
MHD 463



SOURCE: Nellhaus, G., Composite International & Interracial Graphs, PEDIATRICS 41:106, 1968
(Minnesota Department of Health)

(ee) Inappropriate preconception weight as demonstrated by a preconception weight 10 percent or more below weight for height as shown on the following chart:

Height Barefoot	Weight
4' 9"	92
4' 10"	94
4' 11"	96
5' 0"	99
5' 1"	102
5' 2"	105
5' 3"	108
5' 4"	111
5' 5"	114
5' 6"	118
5' 7"	122
5' 8"	126
5' 9"	130
5' 10"	134
5' 11"	138
6' 0"	142

(ff) Inappropriate preconception weight as demonstrated by a preconception weight twenty percent or more above the weight for height as shown on the following chart:

Height Barefoot	Weight
4' 9"	119
4' 10"	122
4' 11"	125
5' 0"	128
5' 1"	131
5' 2"	134
5' 3"	138
5' 4"	142
5' 5"	146
5' 6"	150
5' 7"	154
5' 8"	158
5' 9"	163
5' 10"	168
5' 11"	173
6' 0"	178

(gg) Inappropriate weight gain during pregnancy as demonstrated by a weight gain of seven pounds or more per month or a weight gain of less than two pounds per months after the first trimester.

(hh) Medical history or finding suggesting nutritional need as shown by a competent professional by one of the following conditions:

(i) Intrauterine growth retardation or difficulty with previous pregnancy that could be nutritionally related such as, but not limited to, five or more pregnancies, two or more spontaneous abortions, less than one year since last delivery, or a neonatal death that may have nutritional cause;

(ii) Pregnant or lactating patient seventeen years of age or under and/or her infant;

(iii) Premature or low birth weight infant or an infant having a sibling with a history showing failure to thrive.

(e) Procedure by which grantee is to provide supplemental foods to certified individuals:

(1) The Board shall provide vouchers to the grantee and the grantee shall provide secure storage of the vouchers until they are issued. The grantee shall issue vouchers to certified individuals on the basis of individual need, but in no case shall exceed the maximum quantity stated in MHD (e)(3).

(2) Upon presentation of vouchers provided by the program grantee, certified individuals may obtain supplemental foods from a vendor. Each voucher shall state the specified food and the maximum quantity of that food that can be provided by the vendor.

(3) Maximum quantities that will be provided for certified individuals through the vouchers are indicated for each food as follows. Substitutions are not allowed.

(aa) For infants:

Foods	Unit	Maximum Number of Units per Month
Iron fortified infant formula	13 fluid oz. can of concentrated liquid, or dry or ready-to-use form in an amount to provide 26 ounces of single strength formula	31
Infant Cereal	8 oz. package	3
Juice, single strength or frozen, concentrated fruit juices in 12 ounce cans, at the same rate or in an equivalent volume in other can sizes	46 fluid oz can	2 or 15 four ounce cans of infant juice

(bb) For children and pregnant and lactating women:

Foods	Unit	Maximum Number of Units per Month
Whole, skim, or low fat fluid milk	fluid quart or evaporated or nonfat dry milk in equivalent amount	31 or 28 units plus one pound cheese or 25 units plus two pounds of cheese
Eggs	dozen	2½
Cereals	8 ounce package	4
Juice, single strength or frozen, concentrated fruit juices in 12 ounce cans at the same rate or in an equivalent volume in other can sizes	46 fluid ounce can	6

(4) The kinds and specifications of supplemental foods to be made available through voucher are as follows:

(aa) For infants:

(i) Iron fortified infant formula with at least 10 milligrams of iron per liter of formula at standard dilution (which supplies 67 kilocalories per 100 milliliters; i.e., 20 kilocalories per fluid ounce).

(ii) Infant cereal which contains a minimum of 28 milligrams of iron per 100 grams of dry cereal.

(iii) Fruit juice which contains at least 30 milligrams of vitamin C per 100 milliliters.

(bb) For children and pregnant or lactating women:

(i) Whole fluid milk fortified with 400 International Units of vitamin D per quart, or evaporated milk fortified with 400 International Units of vitamin D per reconstituted quart; or skim or low-fat milk fortified with 400 International Units of vitamin A per reconstituted quart, or cheese (Swiss, cheddar or pasteurized process American). Children with milk allergies may continue to receive special formulas provided there is a written request from a physician.

(ii) Cereal (hot or cold) which contains a minimum of 15 milligrams of iron per 100 grams of dry cereal which is not pre-sweetened.

(iii) Fruit or vegetable juice, or both, which contains a minimum of 30 milligrams of vitamin C per 100 milliliters.

(iv) Eggs.

(5) Each grantee shall enter into a written contract with local vendors serving the project area. The contract shall require the vendor to agree that:

(aa) The vouchers will be redeemed only for those foods and quantities specified on the voucher;

(bb) The price charged for each item on the voucher will be the same price charged to all purchasers of those items on the days vouchers are redeemed;

(cc) The vendor shall send a monthly statement showing cost of redemption to the grantee;

(dd) The grantee shall pay the vendor monthly upon submission of statement.

(f) Nutrition Information and Counseling

Each grantee shall provide nutrition information and counseling to certified individuals and/or parents or guardians. The grantee shall develop a written plan showing how nutrition information and counseling will be provided. This plan will include an implementation schedule showing the dates by which objectives will be prepared and when the methods are to be put into operation.

(g) Records and Reports

(1) General — Grantees shall maintain full and complete records concerning operation. All such records shall be retained indefinitely unless State Archives approves their destruction. The Board has the right to review and inspect all records at its discretion.

(2) Contract Records — Each grantee shall keep a record of all contracts entered into with local vendors.

(3) Financial Records — Each grantee shall keep complete and accurate records of all funds received and disbursed for the program. All financial disbursement records shall be summarized and submitted in report form monthly to the Board on forms supplied by the Board.

(4) Food Records and Reports — Each grantee shall keep a record of the food issued each month to each certified individual. A monthly summary shall be submitted to the Board on forms supplied by the Board.

(5) Medical Records — The grantee shall record height, weight, and infant head circumference at each certification visit. If hematocrit and/or hemoglobin tests are a routine of the agency, these should also be recorded.

(6) Nutrition Information and Counseling Records — Each grantee shall report quarterly on progress made toward accomplishment of objectives stated in their Nutrition Information and Counseling Plan.

(7) Voucher Records — Vouchers must be accounted for from point of receipt from the Board. A record shall be kept of vouchers issued to certified individuals. Any voucher not intended to be redeemed shall immediately be marked VOID.

(h) Fair Hearing Procedure

Each grantee shall have an established hearing procedure in accordance with the Minnesota Administrative Procedures Act under which a person or his or her parent or guardian can appeal a decision made by the grantee respecting the refusal of the grantee to designate the person as a certified individual.

MHD 464 Miscellaneous

(a) Payments to Grantees

The Board shall advance funds to grantees based on the number of certified individuals. This advance of funds shall be made quarterly and is to cover food and allowed administration costs. The dollar amount allowed per participant shall be based on current prices of the supplemental foods. The grantee shall be responsible for costs incurred in excess of the program budget.

(b) Grantee Disqualification

(1) Any grantee may be disqualified from participation if it fails to comply with the provisions of this Act and these rules and/or its contract with the Board.

(2) If, in accordance with the Minnesota Administrative Procedures Act, it is determined that any part of the money received by the grantee was through grantee negligence or fraud misused, the grantee shall, on demand of the Board, pay the Board a sum equal to the amount of the money misused or diverted.

(3) If, in accordance with the Minnesota Administrative Procedures Act, the Board determines that any part of the money received by the grantee, or vouchers redeemed with program funds, were lost as a result of thefts, embezzlements, or unexplained causes, the grantee shall, on demand of the Board, pay to the Board a sum equal to the amount of money or the value of the vouchers so lost.

MHD 465 to 470 are reserved for future use.

Filed May 28, 1976

4590-4594

7 MCAR S 1.471 Scope.

A. All acute care hospitals licensed pursuant to Minnesota Statutes, sections 144.50 to 144.58 are subject to the requirements of the Minnesota hospital rate review system established by these rules.

B. Beds located in these hospitals, which are not licensed as acute care beds pursuant to Minnesota Statutes, sections 144.50 to 144.58, are not subject to the requirements of the Minnesota hospital rate review system. Where costs incurred through the operation of these beds are commingled with the costs of operation of acute care beds in a hospital subject to the system, associated revenue and expenses and other related data shall be separated in a manner consistent with the normal requirements for allocation of costs as stated by 20 CFR 405.453 (Medicare).

C. Citations of federal law or federal regulations incorporated in these rules are for those laws and regulations then in effect on April 1, 1976.

7 MCAR S 1.472 Definitions. For the purposes of these rules, the following terms have the meanings given them:

A. "Accounting period" means the fiscal year of a hospital which is a period of twelve consecutive months established by the governing authority of a hospital for purposes of accounting.

B. "Admissions" means the number of patients accepted for inpatient services in beds licensed for inpatient hospital care exclusive of newborn admissions.

C. "Applicant" means a voluntary nonprofit rate review organization which has applied to the commissioner of health[1] for approval or renewed approval of its reporting and review procedures.

D. "Auxiliary enterprises" means significant continuing revenue-producing activities which, while not related directly to the care of patients, are businesslike activities commonly found in health care institutions for the convenience of employees, physicians, patients and/or visitors:

[1]Pursuant to Laws of 1977, chapter 305, sections 39 and 45, references to the State Board of Health have been deleted and commissioner of health has been substituted therefor.

1. An activity is significant if either its revenues or direct costs exceed $.20 per inpatient day.

2. An activity is businesslike if it has related direct costs equal to at least 25 percent of its revenues.

3. Irrespective of the above criteria, all parking lots, private physicians' offices, and retail operations are considered to be auxiliary enterprises.

E. "Beds" means the number of acute care beds licensed by the Minnesota Department of Health, pursuant to Minnesota Statutes, sections 144.50 to 144.58.

F. "Burden of proof" means the burden of persuasion by the preponderance of the evidence.

G. "Charges" means the regular amounts charged less expected bad debts, contracted allowances and discounts to patients and/or insurers, prepayment plans and self-insured groups on the patient's behalf. The terms "charges" and "rates" are synonymous for the purposes of these rules. "Gross charges" means "charges" irrespective of any discounts, deductions, or other reductions which by contract or other agreement, may be applicable. The terms "gross charges," "gross acute care charges," and "gross rate" are synonymous for the purpose of these rules.

H. "Cost" means the amount, measured in money, of cash expended or other property transferred, services performed or liability incurred, in consideration of goods or services received or to be received.

I. "Emergency services" are those inpatient or outpatient hospital services that are necessary to prevent immediate loss of life or function due to the sudden onset of a severe medical condition.

J. "Emergency visit" means an acceptance of a patient by a hospital for the purpose of providing emergency services in a distinct emergency service center.

K. "Expanded facility" means any expansion or alteration in the scope of service of an institution subject to the provisions of the Minnesota Certificate of Need Law, Minnesota Statutes, sections 145.71 to 145.84, or Section 1122 of the Social Security Amendments of 1972, Public Law 92-603, according to the definitions contained in these laws and the current regulations sanctioned by them.

L. "Expense(s)" means costs that have been incurred in carrying on some activity and from which no benefit will extend beyond the period for which the expense is recorded.

M. "Fiscal year" means that period of 12 consecutive months established by the state for the conduct of its business.

N. "Inpatient hospital services" means the following items and services furnished by a hospital to an inpatient of such a hospital:

1. Bed and board;

2. Nursing services and other related services;

3. Use of hospital facilities;

4. Medical social services;

5. Drugs, biologicals, supplies, appliances and equipment;

6. Certain other diagnostic or therapeutic items or services; and

7. Medical or surgical services provided by certain residents-in-training.

O. "Loss" means the excess of all expenses over revenues for an accounting period or the excess of all or the appropriate portion of the net book value of assets over related proceeds, if any, when items are sold, abandoned, or either wholly or partially destroyed by casualty or otherwise written off.

P. "Non-revenue center" means a service center which incurs direct operating expenses but which does not generate revenue directly from charges to patients for services. These centers, which rely on revenue from revenue centers to meet their expenses, may include such service centers of a hospital as:

1. General services, including:

a. Dietary services;

b. Plant operation and maintenance services;

c. Housekeeping services;

d. Laundry services; and

e. Other services.

2. Fiscal services;

3. Administrative services; and

4. Medical care evaluation services.

Q. "Outpatient services" mean those services offered by a hospital which are furnished to ambulatory patients not requiring emergency care and which are not inpatient services.

R. "Outpatient visit" means an acceptance of a patient by a hospital for the purpose of providing outpatient services.

S. "Program" means the reporting and review procedures proposed by an applicant.

T. "Quarter" means that period of the fiscal year corresponding to a three-month period of time for which the state regularly gathers information for the conduct of its business. For purposes of these rules, a fiscal year is composed of four quarters corresponding to the following groupings of months: a quarter is defined by the time period represented by the months of July, August and September; a quarter is defined by the time period represented by the months of October, November and December; a quarter is defined by the time period represented by the months of January, February and March; and, a quarter is defined by the time period represented by the months of April, May and June.

U. "Rate" means "gross charges" as defined in 7 MCAR S 1.472 G. "Aggregate rate" means the average gross revenue per adjusted admission for a full accounting period determined by dividing total gross revenue by the number of adjusted admissions:

$$\frac{\text{Total Gross Revenue}}{\text{Number of Adjusted Inpatient Admissions}}$$

Adjusted admissions are determined by:

$$\text{Number of outpatient \& emergency visits} \times \frac{\text{Total outpatient \& emergency gross revenue}}{\text{Number of outpatients \& emergency visits}}$$

$$\times \frac{1}{\text{Inpatient gross revenue} \div \text{the number of inpatient admissions per admission}}$$

The aggregate rate for the budget year shall always be based upon annually projected admissions as stated in the rate revenue and expense report.

V. "Restricted funds" mean funds donated to the hospital which are restricted for a specific purpose by the donor.

W. "Revenue(s)" or "income(s)" means the value of a hospital's established charges for all hospital services rendered to patients less expected and/or incurred bad debts, contracted allowances and discounts granted to patients and/or insurers, prepayment plans and self insured groups. "Gross revenue(s)" or "gross income(s)" means "revenue(s)" or "income(s)" regardless of the amounts actually paid to or received by the hospital.

X. "Revenue center" means a service center which incurs direct operating expenses and which generates revenue from patients on the basis of charges customarily made for services that the center offers directly to patients. Revenue centers may include such service centers of a hospital as:

1. Daily patient services (routine services) including:

a. Medical services;

b. Surgical services;

c. Pediatric services;

d. Intensive care services;

e. Psychiatric services;

f. Obstetric-gynecological services;

g. New born nursery services;

h. Premature nursery services;

i. Other routine services.

2. Other nursing services (ancillary services), including:

a. Operating room services;

b. Recovery room services;

c. Delivery and labor room services;

d. Central services and supply services;

e. Intravenous therapy services;

f. Emergency services;

g. Other ancillary services.

3. Other professional services (ancillary services), including:

a. Laboratories;

b. Blood bank;

c. Electrocardiology;

d. Radiology;

e. Pharmacy;

f. Anesthesia;

g. Physical therapy;

h. Other special services.

Y. "Service center" means an organizational unit of a hospital for which historical and projected statistical and financial information relating to revenues and expenses are accounted. A service center may be a routine, special, or ancillary service center. A service center may also be a revenue center or a non-revenue center.

Z. "System" means the Minnesota hospital rate review system and any applicant approved to operate it or the commissioner of health.

AA. "Third party payors" mean insurers, health maintenance organizations licensed pursuant to Minnesota Statutes, chapter 62D, nonprofit service plan corporations, self-insured or self-funded plans, and governmental insurance programs, including the health insurance programs authorized by Title V, Title XVIII and Title XIX of the United States Social Security Act (Medicare and Medicaid).

BB. "Unrestricted funds" mean funds not restricted by the donor and funds designated by the governing authority of the hospital, not including revenues in excess of expenses.

4590-4594

7 MCAR S 1.473 The Minnesota hospital rate review system. The Minnesota hospital rate review system is established. This system shall be operated by the commissioner of health and any voluntary nonprofit rate review organization whose reporting and review procedures have been approved by the commissioner pursuant to 7 MCAR S 1.496. The system shall consist of reports, administrative procedures, and standards.

7 MCAR S 1.474 Report requirements. The system shall require annual financial information and rate revenue and expense, and interim increase reports.

A. Annual financial information report. Each hospital shall submit an annual financial information report to the system. This report shall include:

1. A balance sheet detailing the assets, liabilities, and net worth of the hospital. This balance sheet should include information on:

a. Current assets, including:

(1) Cash;

(2) Marketable securities;

(3) Accounts and notes receivable;

(4) Allowances for uncollectable receivables and third party contractuals;

(5) Receivables from third party payors;

(6) Pledges and other receivables;

(7) Due from other funds;

(8) Inventory; and

(9) Prepaid expenses.

b. Plant capital allowances, including historical cost of, price level increments related to and accumulated depreciation related to:

(1) Land;

(2) Land improvements;

(3) Buildings;

(4) Leasehold improvements;

(5) Building equipment;

(6) Movable equipment; and

(7) Construction in progress.

c. Deferred charges and other assets, including:

(1) Other assets;

(2) Investments in non-operating property, plant and equipment;

(3) Accumulated depreciation on investments in non-operating plant and equipment; and

(4) Other intangible assets (e.g., good will, unamortized borrowing costs).

d. Current liabilities, including:

(1) Notes and loans payable;

(2) Accounts payable;

(3) Accrued compensation and related liabilities;

(4) Other accrued expenses;

(5) Advances from third party payors;

(6) Payable to third party payors;

(7) Due to other funds;

(8) Income taxes payable; and

(9) Other current liabilities.

e. Deferred credits and other liabilities, including:

(1) Deferred income taxes;

(2) Deferred third party revenue;

(3) Long-term debt; and

(4) Fund balances (identifying donor restricted and unrestricted funds).

f. In the case of hospitals owned by, operated by, affiliated with, or associated with an organization, corporation, or other hospital(s), a statement of the flow of funds between the hospitals and that organization, corporation or other hospital(s). This statement shall detail all transactions between the hospital and the organization, corporation or other hospital(s).

g. In the event that a hospital maintains a balance sheet which includes information which differs from the information required by the balance sheet recommended by section 1.474 A.1., above, the hospital may substitute its balance sheet. This balance sheet shall include a narrative description of the scope and type of differences between its balance sheet and that balance sheet recommended by section 1.474 A.1., above.

2. A detailed statement of income and expenses, including:

a. Gross revenues from and expenses directly attributable to revenue centers;

b. All operating revenues and expenses other than those directly associated with patient care;

c. Reductions in gross revenues that result from charity care, contractual adjustments, administrative and policy adjustments, provision for bad debts, and other factors;

d. Direct expenses incurred by the research and educational, general, fiscal, and administrative service centers;

e. Direct gross revenue and gross expense received or incurred from nonhospital operations; and

f. A statement of expenses by a natural classification of expenses for the hospital as a whole. The natural classification of expenses may include such factors as:

(1) Salaries and wages, including:

(a) Management and supervision;

(b) Technicians and specialists;

(c) Registered nurses;

(d) Licensed practical nurses;

(e) Aides and orderlies;

(f) Clerical and other administrative employees;

(g) Environment and food service employees;

(h) Physicians;

(i) Non-physician medical practitioners;

(j) Vacation, holiday, sick pay, and other non-worked compensation.

(2) Employee benefits, including:

(a) F.I.C.A.;

(b) State unemployment insurance and federal unemployment insurance;

(c) Group health insurance;

(d) Pension and retirement;

(e) Workmen's compensation insurance; and

(f) Group life insurance.

(3) Professional fees - medical, including:

(a) Physician's remuneration; and

(b) Therapists and other non-physician.

(4) Other professional fees, including:

(a) Consulting and management services;

(b) Legal services;

(c) Auditing services; and

(d) Collection services.

(5) Special departmental supplies and materials.

(6) General supplies, including:

(a) Office and administrative supplies;

(b) Employee wearing apparel;

(c) Instruments and minor medical equipment which are non-depreciable;

(d) Minor equipment which is non-depreciable; and

(e) Other supplies and materials.

(7) Purchased services, including:

(a) Medical-purchased services;

(b) Repairs and maintenance - purchased services;

(c) Medical school contracts - purchased services; and

(d) Other purchased services.

(8) Other direct expenses, including:

(a) Depreciation, amortization, and rental or lease expenses necessary to maintain an adequate plant capital fund, pursuant to 7 MCAR S 1.487 A.1.;

(b) Utilities - electricity;

(c) Utilities - gas;

(d) Utilities - water;

(e) Utilities, oil;

(f) Other utilities;

(g) Insurance - professional liability;

(h) Insurance - other;

(i) Licenses and taxes other than income taxes;

(j) Telephone and telegraph;

(k) Dues and subscriptions;

(l) Outside training sessions;

(m) Travel; and

(n) Other direct expenses.

g. In the event that a hospital maintains accounts which include information resulting in detailed statements of income and expense which differ from the information required by the statement of income and expense recommended by 7 MCAR S 1.474 A.2., the hospital may substitute its statement of income and expenses. This statement shall include a narrative description of the scope and type of differences between its statement of income and expenses and that statement recommended by 7 MCAR S 1.474 A.2.

3. An unaudited copy of the hospital's cost report filed pursuant to requirements of Title XVIII of the United States Social Security Act stated in 20 CFR 405.406(b) and the uniform cost report required under Public Law 95-142, Section 19. These cost reports shall correspond to the same accounting period as that used in the compilation of data for other requirements for the report of annual financial information.

4. Attestation by the governing authority of the hospital or its designee that the contents of the report are true.

5. Attestation by a qualified, independent public accountant that the contents of the balance sheet and statement of income and expense have been audited.

6. A statement of changes in financial position showing the source and application of all funds.

7. A statement(s) of all fund balance(s).

8. All notes and footnotes to the balance sheet, statement of income and expense, statement of changes in financial position, and statement(s) of fund balance(s).

9. Each hospital claiming exempt status pursuant to Minnesota Statutes, section 144.7021 and 7 MCAR S 1.505 shall include or append a clearly identifiable statement(s) of annual gross acute care charges.

B. Rate revenue and expense report.

1. Each hospital shall submit a report of rate revenue and expense to the system on an annual basis. This report shall include statistical and financial information for:

a. The hospital's last full and audited accounting period prior to the accounting period during which a hospital files this report with the system. This period shall be known as the prior year. Information for the prior year shall be actual.

b. The hospital's full accounting period during which a hospital files this report with the system. This period shall be known as the current year. Information for the current year shall be actual and estimated according to the following:

(1) Information for at least the first six months shall be actual;

(2) Information for the remaining months may be estimated.

c. The hospital's next subsequent full accounting period following the accounting period during which the report is filed with the system. This period shall be known as the budget year. Information for the budget year shall be projected.

2. Statistical information for the rate revenue and expense report shall include:

a. The number of inpatient days excluding nursery days for the hospital, and each appropriate service center.

b. The number of admissions for the hospital and for each appropriate service center.

c. The average number of full-time-equivalent employees during each accounting period for the hospital and for each of its service centers. An employee or any combination of employees which are reimbursed by the hospital for 2080 hours of employment per year is a full-time-equivalent employee.

d. The number of beds (licensed), the number (the statistical mean) of beds physically present, and the number (the statistical mean) of beds actually staffed and set up for the hospital and each appropriate service center, excluding nursery bassinets.

e. The number of outpatient clinic visits for the hospital.

f. The number of emergency visits for the hospital.

g. The number of units of service provided by each of the hospital's other service centers. The hospital shall select the statistic that best measures the level of activity for a particular function or service center and that, in addition, is compiled on a routine basis by the hospital to serve as the appropriate unit of service for each of its service centers.*

*For example, although patient days might be used as the unit of service for daily patient services, treatments, procedures, visits, hours, or other statistics would be the applicable measure of activity in other service centers.

3. Financial information for the rate revenue and expense report shall include:

a. An interim financial statement of the hospital which shall include an interim balance sheet and an interim income and expense statement for the current year only. The balance sheet and income and expense statement shall conform to the requirements of 7 MCAR S 1.474 A.1. and A.2. This financial statement shall contain a minimum of six months of actual information for the current year.

b. A statement of expenses for the hospital and for each of its service centers and a statement according to natural classifications of expenses as provided by 7 MCAR S 1.474 A.2.f.

c. A statement detailing the accounting method used to allocate expenses from among the non-revenue centers to revenue centers, which shall detail compliance with the offsets to costs and allocation of costs specified by the bases for judging stated by 7 MCAR S 1.487 A.

d. A statement of total direct and indirect costs for the hospital and for each of its service centers before and after the allocation of expenses.

e. A statement of the accounts receivable by type of purchaser of services and a statement of the average aggregate number of day's charges outstanding at the end of each period.

f. A statement of the capital budget of the hospital.

4. The report of rate revenue and expense shall also contain the following information:

a. The pricing policy of the hospital which incorporates the overall pricing policy and financial objectives of the institution. This will be supplemented by a statement of budgeted increases in charges, revenue and aggregate rates for the budget year including these items:

(1) Date(s) on which gross charges and gross revenue will be adjusted.

(2) For each such date, the resulting aggregate dollar amount and weighted average percent of increase in budget year aggregate rates and gross charges for each revenue center.

(3) For each such date, the resulting aggregate dollar and weighted average percent of increase in budget year total hospital gross revenues.

(4) For each date, the resulting aggregate dollar amount and percent of increase in the budget year aggregate rate.

b. Attestation by the hospital's governing authority or its designee that the rates are set equitably and without

discrimination among insurers.

c. In the case of a hospital with expanded facilities, a copy of the hospital's report used to obtain a certificate of copy of the hospital's report used to obtain a certificate of need for the expanded facility which projects the patient and service activity levels of the expanded facility for its first five years of operation.

5. If a hospital maintains its accounts in a way which necessarily results in detailed statements of income, expense and statistics differing in form and content from those recommended by this rule and 7 MCAR S 1.481 A.1., the hospital may substitute the information it has available. However, in all such cases the hospital shall submit a detailed reconciliation of the differences between the two sets of information and presentations in conjunction with the rate revenue and expense report.

C. Interim increase reports.

1. Each hospital desiring to amend or modify the aggregate rates for the budget year stated in the rate revenue and expense report then on file with the system to an extent exceeding the allowable increase limit prescribed according to 7 MCAR S 1.504, shall submit an interim increase report.

2. In instances where changes in rates during the budget year are the result of legislative policy and appropriations to hospitals subject to these rules which are operated by the commissioner of public welfare, this report is not required.

3. The interim increase report shall include statistical and financial information for:

a. The period of the budget year immediately preceding the effective date of amendments or modifications to the rates for the budget year which are stated in the rate revenue and expense report then on file with the system. Data for this period shall be actual for all expired months of the budget year, excepting the 60 day period immediately preceding the filing of this report for which data may be projected.

b. The period immediately subsequent to and including the effective date of these amendments or modifications which terminates at the end of the last day of the budget year. Information for this period shall be projected on the basis of these rate amendments or modifications.

4. Statistical information for each period established by 7 MCAR S 1.474 C.3. for the interim increase report shall include that required of a hospital for the rate revenue and expense report, pursuant to 7 MCAR S 1.474 B.2. and B.5., which shall be recorded for each period stated by 7 MCAR S 1.474 C.3., above. This information shall indicate any change in the budget year from the projected information then on file with the system.

5. Financial information for each period established by 7 MCAR S 1.474 C.3. for the interim increase report shall include that required of a hospital for the rate revenue and expense report, pursuant to 7 MCAR S 1.474 B.3. and B.5., which shall be recorded for each period stated by 7 MCAR S 1.474 C.3., above. This information shall indicate any change in the budget year from the projected information then on file with the system.

6. This report shall also include a narrative statement describing the reason for admendments or modifications to the hospital's aggregate rates.

7 MCAR S 1.475 Experimental alternative reporting requirements. Each hospital meeting the criteria specified in paragraph A. of this section may file annual rate revenue and expense reports and interim increase reports according to paragraph B. of this section, in lieu of information required under sections 1.474 B.2. and B.3.

A. Selection criteria. Nonstate, nonfederal acute care hospitals licensed in the state of Minnesota are eligible if they belong to the set of hospitals comprising 15 percent of the total gross acute (inpatient plus outpatient) charges for all nonstate, nonfederal acute care hospitals in the state. Determination of the hospitals to be included in the set of hospitals comprising 15 percent of total state gross acute charges shall be made as follows:

1. The total gross acute charges used shall be for the hospital's 1977 fiscal year, pursuant to 7 MCAR S 1.474 B.1.a.

2. The hospital with the lowest total gross acute charges shall be selected first. The hospital with the second lowest total gross acute charges shall be selected second and its gross acute charges shall be added to the first selected hospital. The hospital with the third lowest gross acute charges shall be selected third and its total gross acute charges shall be added to the sum of the gross acute charges of the hospitals selected first and second. The procedure shall continue in direct ascending order so as to maximize the number of hospitals included, but the sum of gross patient charges included shall not exceed 15 percent of the total gross acute charges for all nonstate and nonfederal acute care hospitals.

B. Rate revenue and expense report.

1. Each hospital shall submit a report of rate, revenue and expense pursuant to 7 MCAR S 1.481 C. This report shall include statistical and financial information for:

a. The prior year as provided by 7 MCAR S 1.474 B.1.a.;

b. The current year as provided by 7 MCAR S 1.474 B.1.b.; and

c. The budget year as provided by 7 MCAR S 1.474 B.1.c.

2. Statistical information submitted in the rate revenue and expense report shall include:

a. The number of inpatient days for the hospital;

b. The number of admissions for the hospital;

c. The average number of full-time-equivalent employees during each accounting period for the hospital and each service center. An employee or any combination of employees which is reimbursed by the hospital for 2080 hours of employment per year is a full-time-equivalent employee;

d. The number of beds licensed, the number (the statistical mean) of beds physically present, and the number (the statistical mean) of beds actually staffed and set up for the hospital; and

e. The number of outpatient and emergency visits for the hospital.

3. Financial information submitted in the rate revenue and expense report shall include:

a. An interim financial statement as provided by 7 MCAR S 1.474 B.3.a.;

b. A statement of expenses for the hospital according to natural classifications of expenses as provided by 7 MCAR S 1.474 A.2.f.;

c. A statement indicating the accounting method used to allocate expenses from among the "non-revenue producing centers" to "revenue producing centers" as provided by 7 MCAR S 1.474 B.3.c.;

d. A statement of total "direct" and "indirect" costs and revenues where applicable for the hospital and for each of the following, both before and after allocation of indirect expenses:

(1) Daily services,

(2) Ancillary services (enumerating inpatient, outpatient and emergency), and

(3) Non-revenue producing services;

e. A statement of the accounts receivable in total and of gross revenue by type of payer;

f. A statement of the capital budget of the hospital; and

g. All information as provided by 7 MCAR S 1.474 B.4. and B.5.

C. Interim increase reports.

1. Interim increase reports shall be filed as required under 7 MCAR S 1.474 C.1. and C.2.

2. Statistical and financial information shall be filed as required under 7 MCAR S 1.474 C.3., C.4., C.5., and C.6., except when in conflict with information required in the rate revenue and expense report as provided by 7 MCAR S 1.475 B. In such circumstances, the information required by 7 MCAR S 1.475 B. shall be the required information.

D. Review and comment. The review and comment upon all experimental reports reviewed pursuant to 7 MCAR S 1.475 B. and C. shall be conducted and made as stated in 7 MCAR S 1.487 C.2., with the exceptions of 7 MCAR S 1.487 C.2.b.(1)(c) and (2)(f). The following shall substitute for 7 MCAR S 1.487 C.2.b.(1)(c) and (2)(f):

1. Aggregate rates and costs and components of aggregate rates and costs have been demonstrated by the hospital to be consistent or inconsistent with the reasonable operating expenses found in 7 MCAR S 1.487 A.1.a.(1), (2), (3), (4), (5), (6); b.(1)(a), (2), (3), (4), (5), (6), (7); A.2.; A.3; and A.4. In addition, a maximum of five percent of 7 MCAR S 1.487 A.1.a.(1), (2), (3), (4); and b.(1)(a) shall serve in lieu of 7 MCAR S 1.487 A.1.b.(1), (b), (2), (3), (4); and C.

2. Sixty-six percent of the five percent plus factor provided in 7 MCAR S 1.475 D.1. shall be placed in an identifiable depreciation fund and may be used in the manner prescribed in 7 MCAR S 1.487 A.1.b. and A.1.b.(i).

E. Aspects of the experiment.

1. The alternative experimental reporting requirements shall remain in force for a period of four years (four complete reporting cycles) commencing with the effective date of these rules.

2. At the close of the third year of the experiment an evaluation of the alternative reporting requirements shall be made by the department of health in conjunction with all approved voluntary, nonprofit rate review organizations. The evaluation shall address the following, at a minimum:

a. The adequacy of the data,
b. Impact of the reduced data set on the quality of rate reviews,
c. The appropriateness of the set of hospitals chosen to participate in the experiment, and
d. The appropriateness of adopting the requirements permanently.

§ 1.481 Administrative procedures.

A. General provisions for filing of reports.

1. Forms to be specified. The system shall design and issue forms as necessary for meeting the requirements of reports established by these rules. These forms shall contain clear instructions for their completion.

2. All documents may be filed personally or by the United States Postal Service with the system at the system's official offices during normal business hours.

3. The system shall establish a method of record-keeping which shall insure that reports and other documents are ordered, stored, designated and dated in such a manner that facilitates easy public access to the contents of those reports, documents, and other information as required by these rules. These records shall be open to the public inspection during normal business hours.

4. No report required by these rules shall be deemed to be filed until the system has ascertained the completeness of the report in accordance with the provisions of 7 MCAR § 1.487 C.1.

B. Filing of report of annual financial information.

1. Each year, each hospital shall file a report of annual financial information as required by 7 MCAR § 1.474 A. with the system within 120 days after the close of that hospital's full accounting period. The cost report of the hospital filed pursuant to the requirements of Title XVIII of the United States Social Security Act (20 CFR 405.406(b)) may be filed separately from the other requirements for the report of annual financial information, provided:

a. It is filed no later than the time it is required to be filed with the Medicare Fiscal Intermediary as identified according to 20 CFR 405.651, et. seq. (Medicare). The hospital shall inform the system of this date when filing other information required by this report.

b. The report of annual financial information is considered incomplete until the receipt of the unaudited cost report, but the hospital is not considered in violation of rules until the date required by the Medicare Fiscal Intermediary for the submission of the unaudited Medicare cost report.

c. The audited Medicare cost report is submitted as soon as is practicable to substitute for the unaudited Medicare cost report. The submission of an audited Medicare cost report shall not affect the official filing date of a report of annual financial information.

2. Failure to file. Any hospital which fails to file the annual financial information report, and which has not requested an extension of time pursuant to 7 MCAR § 1.481 F., to file that report shall be considered to be in

violation of rules. The system shall notify the Commissioner, the appropriate health systems agency and professional standards review organization to this effect.

C. Filing of report of rate revenue and expense.

1. Each year, each hospital shall file a report of rate revenue and expense up to sixty days prior to the commencement of any accounting period of the hospital. No change in rates shall be made until sixty days have elapsed from the date of filing.

2. a. Failure to file. Any hospital which fails to file a report of rate revenue and expense, and which has not requested an extension of time, pursuant to 7 MCAR § 1.481 F., to file that report shall be considered to be in violation of rules. The system shall notify the Commissioner of Health, the appropriate health systems agency and professional standards review organization to this effect.

b. A hospital which fails to file a report of rate revenue and expense, and which has requested an extension of time, pursuant to 7 MCAR § 1.481 F., to file that report may be charged an additional late fee as authorized by 7 MCAR § 1.509 C.

c. A hospital which fails to file a report of rate revenue and expense, and which has not requested an extension of time, pursuant to 7 MCAR § 1.481 F., to file that report shall not amend or modify its rates until sixty days after that hospital files that report with the system.

D. Filing of interim increase reports.

1. A hospital shall file an interim increase report sixty days prior to the effective date of any amendments or modifications to aggregate rates then on file with the system for the budget year if:

a. The proposed aggregate rate change exceeds the allowable increase limit established according to 7 MCAR § 1.504.

b. Amendments or modifications to aggregate rates which are to become effective after the first day of the budget year and prior to the end of the last day of the budget year were not included in the report of rate revenue and expense then on file with the system.

2. Limitations. An interim increase report may not be filed within ninety (90) days of any other interim increase or rate revenue and expense report filed by that hospital or when there are any reports, fees or other documents due to the system from that hospital. This provision may be waived by the system if the hospital can show cause therefor.

3. Failure to file.

a. A hospital which fails to file an interim increase report with the

system when it is required to file such a report pursuant to 7 MCAR § 1.474 C., shall be considered in violation of these rules.

b. If this violation is discovered by the system during the budget year, the system may require a hospital so violating these rules to adjust its aggregate rate to be consistent with the allowable increase limits until sixty days after the hospital properly files an interim increase report.

c. If this violation is discovered by the system subsequent to the expiration of the budget year during which the violation occurred, the system may investigate this violation, pursuant to 7 MCAR § 1.487 B., in order to determine the effect of this violation upon the aggregate rate of the hospital. The system may recommend a reduction in the rates of the hospital and require that the hospital submit interim increase reports for every increase in aggregate rate, irrespictive of the allowable increase limits, for the next two subsequent full accounting periods following the discovery of the violation.

d. In making any retrospective assessment of a hospital's compliance with requirements to file interim increase reports, the system shall recognize that the actual aggregate rate for the budget year may exceed the projected aggregate rate for that budget year by a reasonable amount due to slight variations from projected information contained in the rate revenue and expense report then on file with the system. A reasonable amount may vary with the financial and statistical composition of each hospital but, it should never exceed one and one-tenth times the allowable increase limit for the accounting period in question.

4. Allowable increase limits: Hospital calculation. In order for a hospital to determine the extent to which it may increase its aggregate rate during the budget year before it is required to submit an interim increase report, the hospital shall:

a. Add the four quarterly allowable increase limits established by the Commissioner of Health, pursuant to 7 MCAR § 1.504, which are appropriate for the budget year of the rate revenue and expense report then on file with the system. This calculation provides the hospital with an allowable increase limit for the budget year stated in percentage terms; then

b. Subtract from the allowable increase limit for the budget year the percentage of the aggregate rate increase for the hospital, if any, from the current year to the budget year, as stated in the rate revenue and expense report then on file with the system. To the extent that the remainder from this calculation is positive, the hospital may increase its aggregate rate for the hospital by this amount at any time during the budget year. Cumulative increases in the aggregate rate of the hospital over the budget year up to this amount do not require the submission of an interim increase report. The system should be advised by the hospital at the time that rates are being so increased, stating the reason for and general scope of such an increase. The next subsequent rate revenue and expense report of the hospital should detail these increases.

c. Amendments or modifications which do not exceed the allowable increase limit or provide for aggregate rate decreases may take effect immediately upon determination by the hospital's governing authority or its designee. Notice of the amendments or modifications at the time they become effective shall be given to the Commissioner of Health. These amendments or modifications shall also be noted in the hospital's next subsequent rate revenue and expense report.

E. Filing of reports: Multi-hospital corporations and other organizations operating more than one hospital. The system requires the filing of all reports for each individually licensed acute care hospital, as provided by 7 MCAR § 1.474. A multi-hospital corporation or organization operating more than one hospital may act as the reporting organization for the hospital to the system. This reporting organization shall provide all information separately for each hospital it operates. The reporting organization shall also provide with this information, a statement detailing the financial relationship between each hospital it operates and the reporting organization, as required by 7 MCAR § 1.474 A.1.a.(6), for the annual financial information report.

F. Filing of reports: Extensions. Upon reasonable cause being shown by a hospital, the system may extend any period of time established for the submittal of any report or other information, or any period of time established for the performance of any other act permitted or prescribed by these rules, for an additional and specified period of time.

4596

7 MCAR S 1.487 Investigations, analysis and review standards. The system shall investigate, analyze and review all reports and other information it receives relating to hospital rates according to the following standards:

A. Bases for judging the reasonable use of finances in a hospital. In all investigations, analyses, and reviews conducted pursuant to Minnesota Statutes, sections 144.695 to 144.703, and these rules, the system shall recognize that rates must supply the financial resources necessary to meet the financial requirements of a hospital. In meeting the reporting requirements of these rules, hospitals shall address the contents of their reports to and indicate their compliance with these financial requirements and to the other stated bases for judging the reasonable use of finances in a hospital. The system shall then conduct investigations, analyses and reviews following these established bases.

1. Financial requirements of hospitals. The gross rates charged to patients or their insurers by a hospital must be adequate to maintain the solvency of the hospital. Rates should provide adequate money to meet expenses incurred in the following specific categories:

a. Current operating needs related to patient care. In meeting the needs of a hospital to provide health care services, rates should provide finances necessary to meet expenses incurred by:

(1) Direct patient care.

(a) Rates should provide finances to meet expenses in this category which may include salaries, wages, employee fringe benefits, services, supplies, normal maintenance, minor building modification and any applicable taxes.

(b) The monetary value of services provided by members of religious orders, other organized religious or social service groups or organizations or by a unit of government, such as a county, may be included in rates, provided:

(i) That value does not exceed the amount that would have been paid to regular salaried hospital employees for the provision of the same services;

(ii) The maximum value for non-governmental services is the cash payment to the order, group or organization from the hospital;

(iii) That value is reduced by the expense incurred by the hospital for the provision of any room and/or board without charge to members of those orders, groups, or organizations.

(2) Interest expense.

(a) Rates should provide the finances necessary to recover costs incurred by the hospital due to necessary and proper interest on funds borrowed for operating and plant capital needs.

(b) Interest on funds borrowed for operating needs if the cost incurred for funds borrowed for a relatively short term. This interest is usually attributable to funds borrowed for such purposes as working capital for normal operating expenses.

(c) Interest on funds borrowed for plant capital needs is the cost incurred for funds borrowed for plant capital purposes, such as the acquisition of facilities and equipment, and capital improvements. These borrowed funds are usually long term loans.

(d) Interest is necessary if it is:

(i) Incurred on a loan made to satisfy a financial need of the hospital. Loans which result in excess funds or investments should not be considered necessary;

(ii) Incurred on a loan made for a purpose reasonably related to patient care. Loans made for the following are not to be considered to be for a purpose reasonably related to patient care: to expand facilities that have been determined to have excess capacity, pursuant to 7 MCAR S 1.487 A.4.

(e) Interest is proper if it is incurred at a rate not in excess of what a prudent borrower would have to pay in the money market existing at the time the loan was made.

(3) Educational program expenses.

(a) Rates should provide the finances necessary to recover the net cost to the hospital of providing educational activities which:

(i) Are approved educational activities and can be demonstrated to directly contribute to the care of patients who are in hospitals during the time the cost is incurred; or;

(ii) Can be demonstrated to contribute to the preventive health education of the population of areas of patient origin which the hospital serves.

(b) "Approved educational activities" means formally organized or planned programs of study usually engaged in by hospitals in order to enhance the quality of patient care in a hospital. These activities shall be licensed where required by state law. Where licensing is not required, the

hospital shall be able to demonstrate that it has received approval for its activity from a recognized national professional organization for the particular activity. Approved educational activities include those programs defined as approved by 20 CFR 405.116(f) (Medicare) and 20 CFR 405.421(e) (Medicare).

(c) "Net cost" means the cost of approved educational activities (including stipends of trainees, compensation of teachers, and other costs), less any reimbursement from grants, tuition and specific donations. Non-inpatient revenue sources, including fees from those receiving educational benefits, should be investigated and utilized prior to the inclusion of the cost of community preventive health education in financial requirements.

(d) "Orientation" and "on-the-job training" costs are recognized as normal operating costs of hospitals for employees of the hospital.

(e) The extent of costs incurred for the provision of educational activities contributing to the preventive health education of the population of the hospital's areas of patient origin should not exceed that amount necessary to provide activities recommended appropriate for hospitals by the State Health Planning and Development Agency, and appropriate health systems agency, pursuant to Public Law 93-641, Section 1523 and Section 1513, respectively.

(4) Research program expenses. Rates should provide finances necessary to meet costs incurred by a hospital due to research programs which directly relate to daily patient care to the extent that nonpatient revenue of the hospital is unavailable to offset these research costs. Rates should not provide finances necessary to meet costs incurred by a hospital due to research purposes, over and above usual patient care.

(5) Bad debt, charity allowances, and contractual allowances.

(a) Gross rates should provide finances necessary to recover losses in gross revenue due to bad debts, charity allowances, and governmental contractual allowances.

(i) "Bad debts" mean amounts considered to be uncollectable from accounts and notes receivable which were created or acquired in providing services. Accounts receivable and notes receivable are designations for claims arising from the rendering of services, and are collectable in money in the near future. These amounts should not include any amount attributable to a reclassification of any expenses incurred due to the provision of charity care. Income reductions due to charity allowances, and contractual allowances should be recorded as such in the records of a hospital and not as bad debts.

(ii) "Charity allowances" mean the provision of care at no charge to patients determined to be qualified for care according to 42 CFR 53.111(f) and (g), in hospitals required to provide free care, pursuant to 49 U.S.C. Section 291, et. seq. (The Hill-Burton Act). The annual amount of charity care shall be no greater than the amount of the Hill-Burton grant or Hill-Burton guaranteed loan amortized in equal installments over the life of the hospital's Hill-Burton free care obligation.

(iii) "Governmental contractual allowances" are those discounts from the established gross charges required due to governmental reimbursement practices established pursuant to regulations authorized by such governmental programs as those created by Title V, Title XVIII and Title XIX of the United States Social Security Act.

(b) The losses in revenues due to bad debts, charity allowances, and governmental contractual allowances should be offset by available and applicable income from sources other than patients, as identified by 7 MCAR S 1.487 A.2., before these losses are included in rates. Such offsets should never result in a condition where charges are lower than the actual cost of providing care for purposes of reimbursement by third party payors or by governmental programs.

(6) "Discounts" and/or "price differentials" are those discounts and/or prices granted and/or charged to certain payors (patients, groups of patients, or third party payors), which result in receipts by a hospital of something less than the average expected dollar amount received for services rendered of comparable type, kind, and quality in the absence of such discounts and/or prices. These discounts and/or price differentials shall be classified as either cost justified or non-cost justified.

(a) "Cost justified discounts" and/or "cost justified price differentials" are discounts and/or price differentials, as measured in dollars, for the services and/or other benefits given to a hospital by a payer during an accounting period. Cost reducing benefits and services that shall be considered in a determination of whether a discount is cost justified include:

(i) Hospital administration;

(aa) Payer admitting requirements,

(bb) Payer accounting and audit requirements,

(cc) Payer billing costs,

(ii) Hospital working capital requirements;

(aa) Cash and prepayment,

(bb) The length of time taken to pay bills; and

(iii) Other cost reducing activities undertaken by specific payers that do not simply and inequitably shift costs from one payer to another.

(b) "Non-cost justified discounts" and/or "non-cost justified price differentials" are all other discounts and/or price differentials that are not cost justified in a manner consistent with 7 MCAR S 1.487 A.1.a.6.(a).

(c) "Cost justified discounts" and/or "price differentials" shall be granted to payers for hospital services and shall be included in a hospital's financial requirements if:

(i) The amount of the discounts or price differentials as measured in dollars is equal to or less than the value of services or other benefits given to a hospital by a payer during an accounting period; and

(ii) The dollar value, per adjusted admission, of the services or other benefits offered to a hospital by a payer is first subtracted from the average cost (which includes the cost saving associated with the service or the benefit given) per adjusted admission for all patients.

(d) "Non-cost justified discounts" and/or "non-cost justified price differentials" shall not be included in a hospital's financial requirements.

b. Plant capital needs. Rates should provide the finances necessary for various plant capital needs. In order to include plant capital needs in rates, the hospital must fund the plant capital requirement and be in receipt of a certificate of need as required by Minnesota Statutes, sections 145.71 to 145.84. Funding of depreciation shall mean the actual placement of the cash in the fund or meeting the capital obligations and depositing the net amount to the fund.

(1) Finances which relate to land, land improvement, building and building equipment and movable equipment shall be placed in an identifiable fund. The use of the fund shall be restricted to debt principle retirement, new plant and equipment (with certificate of need approval if necessary), major repairs (that are capitalized), replacement of capital equipment (with certificate of need approval if necessary), Hill-Burton free-care expenses in excess of those accounted for by 7 MCAR S 1.487 A.1.a.(5)(a)(iii) and all other free-care (not to exceed three percent of operating expenses net of medicare and medicaid expenses). The annual increment to this fund should be:

(a) The annual straight-line depreciation expense on land improvements, buildings, building equipment and movable equipment.

(b) Plus an amount annually determined (for each hospital) to be consistent with the established useful lives of land improvements, buildings, building equipment, and movable equipment. This amount shall be determined as follows:

(i) An index or cumulative index determined by the system and recognized by independent public appraisers as expressing the annual effects of inflation upon historical cost from the year of purchase of hospital land improvements, buildings, hospital building equipment and movable equipment and shall be multiplied by an asset(s) annual depreciation expense.

(ii) The index for the budget year's expected annual depreciation expense shall not exceed 1.04.

(c) The system shall derive these indices from any of the most current indices then available to the system which give specific recognition to the following factors:

(i) The effect of inflation upon the replacement cost of existing land improvements, buildings, building equipment, and movable equipment, based upon their historical cost; and

(ii) The effect of inflation upon funds necessary for the modification of or addition to hospital buildings, land improvements, building equipment, and movable equipment.

(2) 100 percent of the inflation factors should be included by the hospital as the annual inflation factor unless the hospital has been determined to have excess capacity, as provided by 7 MCAR S 1.487 A.4., or by the appropriate health systems agency, professional standards review organization and State Health Planning and Development Agency. In instances where excess capacity exists, the annual inflation factor and the level of debt principal payment in excess of the depreciation allowance permitted by 7 MCAR S 1.487 A.1.b.(1) should be reduced by the proportion of facilities determined to be in excess.

(3) The fund may not be sufficient to retire existing debt.

(4) The annual interest income earned from an investment of this fund annually should be used to reduce the inflation factor requirements for plant capital needs which are included in rates. In addition, the annual increment to the plant capital fund, when projected over the lives of the depreciable assets of the hospital using the current year's experience, should be evaluated with regard to the individual hospital's capital needs in relationship to the appropriate health systems agency's areawide health plan and the State Health Planning and Development Agency's State Health Plan.

(5) In the event that sufficient financial resources

are not available in this fund to meet plant capital needs (including the need for the replacement of existing facilities and the need for expansion of the scope of services to accommodate advances in medical technology, where either or both of these needs have received certificate of need approval when required), the additional financial resources should be acquired from:

(a) Income from appropriate sources other than patients;

(b) Borrowed funds or leases to the extent income from sources other than patients can be demonstrated to be inadequate; or

(c) Approved inclusion in rates to the extent it can demonstrate that insufficient resources exist from (a) and (b) above, and that inclusion in rates will result in a lower cost to current patients than would result from the borrowing of funds or leasing of plant capital assets. Approval of inclusion in rates shall be by the system upon demonstration by the hospital of both of the conditions herein stated. Once approved, the inclusion in rates of these additional financial requirements may be considered reasonable. Any portion of the annual equal amortized historical cost of any plant capital needs, as determined over the useful life of those plant capital needs, so included in rates should not be depreciated.

(6) If a hospital can demonstrate that an emergency exists, then the hospital may, with certificate of need approval, include the cost of the emergency plant capital needs directly in its rates in a manner consistent with the previous financial practices of that hospital.

(7) If a hospital can demonstrate that the assumption of any specific capital debt will result in a greater cost to current patients than depreciation or retirement of that debt under consistent financial practices of that hospital which differ from the determination of plant capital needs as stated by these rules, then a hospital may choose an alternative method of meeting its plant capital needs. In this instance, the hospital should provide complete information to the system regarding the precise method which will be used to meet such a plant capital need. Direct inclusion of plant capital needs in rates requires approval by the system as provided by 7 MCAR S 1.487 A.1.b., above.

c. Incremental operating cash needs. Rates should provide finances to maintain a reasonable working capital allowance.

(1) The working capital allowance which may be included in rates is determined by the annual incremental difference between (net accounts receivable and inventories and prepaid expenses) and (salaries payable and other net payables) at the end of an accounting period. Any increases in working

capital over the prior year, as stated in the first report of annual financial information submitted to the system by a hospital shall form the initial basis for the system's assessment of the reasonableness of the working capital allowance.

(2) The amount of working capital is dependent upon the number of days charges in accounts receivable for the hospital. These days charges should be stated in aggregate for an accounting period. A statement of accounts receivable by payor must also be provided.

(a) Payors may include:

(i) Third party payors, including:

(aa) Medicare;

(bb) Medicaid;

(cc) Blue Cross;

(dd) Health maintenance organizations;

(ee) Other insurers; and

(ii) Paying patients.

(b) The number of days charges in accounts receivable for the hospital is determined by:

$$\frac{\text{Total Net Accounts Receivable At The End Of An Accounting Period}}{\text{Total Patient Charges For The Same Accounting Period}} \Big/ \frac{\text{Actual Number of Calender Days In That Same Accounting Period}}{}$$

(3) "Net accounts receivable" means the dollar amount accounts receivable at the end of an accounting period less estimated discounts and differentials and reserve for uncollectables.

(a) To the extent that the number of days charges in accounts receivable for a hospital increases from one accounting period to another subsequent accounting period, the hospital may increase rates to maintain its working capital allowance.

(b) To the extent that the number of days charges in accounts receivable for a hospital which is attributable to a

particular payor or category of payors decreases, the working capital allowance should be reduced by that amount.

(4) "Inventories" means the dollar amount in inventories at the end of an accounting period. The dollar amount in inventories should not increase from one accounting period to another subsequent accounting period unless the hospital can justify such an increase as due to inflation, alterations in scope or volume of services offered.

(5) "Other net payables" means total payables at the end of an accounting period less all liabilities owed to third party payors and less the current portion of plant capital expenditure from the plant capital fund.

(6) The reasonableness of the working capital allowance depends upon factors including:

(a) The number of days charges in accounts receivable for a hospital compared with the number of days charges in accounts receivable for other hospitals determined by the system to share common characteristics. This number may be compared for hospitals in total;

(b) The amount of bad debts accrued by a hospital during an accounting period; and

(c) The amount of finances a hospital may hold in reserve funds.

2. Restricted and unrestricted funds from sources other than patients. In all investigations, analyses, and reviews conducted pursuant to these rules, the system shall recognize that hospitals have sources of funds other than patients which are intended to be or may be used for the reduction of rates. In meeting the reporting requirements of these rules, hospitals shall disclose the extent of which these funds are used to offset costs and to provide service in such a manner as to reduce gross rates charged patients. This income includes:

a. Restricted endowment funds, specific purpose funds, tax funds (tax receipts or appropriations received) and gifts.

(1) Monies from endowment funds, and/or gifts restricted by donors, or monies generated by taxes to provide for services for designated patients should be used to reduce the payment for those services.

(2) Monies from endowment funds, and/or gifts restricted by donors or monies generated by taxes to provide for buildings and movable equipment should be used to reduce the designated building and movable equipment capital needs, (this may include debt principle retirement) as appropriate.

(3) If a hospital has restricted funds which could be used for a building or equipment purchase but chooses instead

to use borrowed money, all costs associated with paying off the incurred debt should not be considered reasonable unless the hospital demonstrates that the financing method used was to the economic benefit of patients then utilizing that building or equipment.

(4) If funds are restricted to a particular type of plant capital project, which is not a replacement of a previous or existing project, these funds should not be used until the hospital has obtained a certificate of need, if required, for that type of plant capital project.

(5) Funds restricted to research should be used if needed and available to offset any research costs. Patient revenues form revenue cost centers should not be used to provide matching monies for nonpatient-care related research.

(6) Monies from endowment funds, and/or gifts restricted by donors or monies generated by taxes to provide for operating expenses should be used to reduce payments for operating expenses.

b. Unrestricted funds from nonpatient sources. Unrestricted funds from nonpatient sources should be used to reduce the total financial requirements of a hospital. Exceptions to this rule may be granted if the hospital can show that alternative uses of these funds are to the economic benefit of current patients and/or are in the best interests of the community served.

c. Auxiliary enterprises. Profits from such enterprises operated by hospitals should be used primarily to offset the financial requirements of a hospital. Such enterprises should be self-sufficient and profitable. Any losses incurred by the hospital due to such an enterprise which can be demonstrated to be a fringe benefit to hospital employees or of direct economic benefit to patients receiving care during the period of incurred loss may be included in rates.

d. Special projects income. Income received to finance special projects or salaries paid to special project employees should be deducted from financial requirements before determining the amount of payment to be made for patient services. Income to the hospital from the special projects in excess of the projects' financial requirements should be used to offset the hospital's financial requirements.

e. Income from sources other than patients used as offsets to rates should never result in a condition where charges are lower than the actual cost of providing care for purposes of reimbursement by third party payors or by governmental programs. If such a condition should result, the offsets should be adjusted to that portion which would not cause this condition.

3. Variations from budgeted revenue and expense. Changes

in aggregate rates may be necessary due to variations from budgeted volume and mix of services, and assumptions about future input prices. The financial requirements of a hospital for a budget year should reflect variations from budgeted revenue and expense as depicted by actual experience in the current and prior years.

a. If actual reasonable financial requirements pursuant to 7 MCAR S 1.487 C.2.b., as reconciled to an audit, are in excess of actual reasonable revenues, as reconciled to an audit, pursuant to 7 MCAR S 1.487 C.2.b., by a greater margin than was previously budgeted in the year in question, then the excess may be included in the forthcoming budget year's reasonable financial requirements pursuant to 7 MCAR S 1.487 C.2.b.

b. If actual reasonable revenues pursuant to 7 MCAR S 1.487 C.2.b., as reconciled to an audit, are in excess of actual reasonable financial requirements, as reconciled to an audit, pursuant to 7 MCAR S 1.487 C.2.b., for the year in question, then the excess may be used to offset the forthcoming budget year's reasonable financial requirements pursuant to 7 MCAR S 1.487 C.2.b.

c. When adjusting the forthcoming year's budgeted reasonable financial requirements pursuant to 7 MCAR S 1.487 C.2.b. for the conditions described in 7 MCAR S 1.487A.3.a. and 3.b.:

(1) Hospitals should not benefit from unanticipated gains resulting from under estimates of projected reasonable revenues, and/or volume, and/or over estimates of the costs of services delivered pursuant to 7 MCAR S 1.487 C.2.b.; however, hospitals should benefit from productivity increases that reduce the reasonable cost of delivered and/or offered services pursuant to 7 MCAR S 1.487 C.2.b.

(2) Hospitals should not be penalized for incurring unanticipated losses resulting from over estimates of reasonable volume, and/or revenue, and/or under estimates of the reasonable costs of services delivered (when compared to the allowable increase limit adjusted for actual inflation for the relevant period), however, hospitals shall not carry forward losses that result from conditions that should have been averted and/or decreases in productivity.

(3) If current year estimates of unanticipated losses exceed .005 times the hospital's operating budget, then that amount in excess of the loss estimated in the budget year may be carried forward to the forthcoming budget year. The estimated loss carried forward to the budget year must be reconciled to an audit in a subsequent filing (when the budget year becomes the prior year).

4. Excess capacity. For hospitals with occupancy rates, based upon staffed and set up beds, below the average occupancy

rate of other hospitals determined by the system to share common characteristics, the aggregate rate set on the basis of costs may produce unreasonable charges to patients. The system may assess the aggregate rate of such hospitals where the criteria of need for beds shall be consistent with the demand for beds as indicated on a hospital or a service center level by occupancy rates. In cases where low occupancy appears to affect the aggregate hospital rate, the hospital shall be considered to have excess capacity.

a. Prior to any determination by the system that excess capacity exists in a hospital, the system shall submit its preliminary determination to the appropriate health systems agency and to the State Health Planning and Development Agency, both of which are identified according to Public Law 93-641, Sections 1515 and 1521, as well as the appropriate professional standards review organization. These agencies may comment to the system regarding the consistency of this preliminary determination with health care standards regarding occupancy rates in their areas of expertise.

b. If these agencies comment that this preliminary determination is consistent with health planning standards and, if applicable, the declarations of an appropriateness review, then the system may determine a hospital to have excess capacity. This determination shall state in quantitative terms the extent of any determination of excess capacity and the basis for the determination.

c. In hospitals where excess capacity exists, the annual inflation factor and any debt principle payment to the plant capital fund which relates to beds, in excess of the depreciation allowance permitted by 7 MCAR S 1.487 A.1.b.(1), should be reduced by the proportion of excess beds to total beds available.

B. Investigations.

1. The system may investigate any or all hospital rates, rate components or rate structures established by a hospital or common to more than one hospital. Such investigations shall be supplemental to and not in place of review of reports of rate revenue and expense or interim increase reports as authorized by 7 MCAR S 1.487 C.2.

2. The system shall investigate the basis of existing rates as contained in the rate revenue and expense reports of hospitals in an effort to assess whether or not current rates are reasonable, equitable, and nondiscriminatory among insurers.

3. The system shall notify any hospital or hospitals whose rates, rate components or rate structures are to be investigated, as provided by (1) or (2) above, and shall state the objective of such an investigation.

4. Investigations and subsequent reports shall analyze

rates, rate components and rate structures in accordance with the bases for judging established by 7 MCAR S 1.487 A.

5. Investigative report. Subsequent to an investigation, the system shall issue an investigative report which shall detail its findings. The findings of an investigative report shall be considered in the review of any interim increase or rate revenue and expense report subsequently submitted by an investigated hospital.

C. Review of reports.

1. General provisions; completeness.

a. Each report required by these rules shall be reviewed by the system in order to ascertain that the report is complete. A report shall be deemed to be filed when the system has ascertained that the report is complete. Complete means that the report contains adequate data for the system to commence its review in a form determined to be acceptable by the system pursuant to 7 MCAR S 1.474 A., B., and C., as appropriate.

b. If the system has not responded to the hospital within ten working days after the receipt of a report by the system, the report is deemed to be complete and filed as of the initial day of receipt by the system. The system may stipulate any additional time it may need to ascertain a report's completeness in which case, the ten working day period does not apply. Such stipulated additional time shall not exceed 30 days after the day of the initial receipt of a report by the system. If a report is not found to be incomplete during such additional period, it shall be deemed to be complete and filed as of the initial day of receipt by the system.

c. A report determined by the system to be incomplete shall be returned immediately by the system to the hospital with a statement describing the report's deficiencies. The hospital shall resubmit an amended report to the system. Such a return and resubmittal shall be recorded in that hospital's file as maintained by the system. If the resubmitted report is determined to be complete by the system, then it shall be deemed to be filed on the date the resubmitted report is received by the system.

d. Reports filed with the system by hospitals prior to the effective date of this rule shall be deemed to be temporarily complete. Subsequent to the effective date of these rules, the system may require hospitals to amend these reports to conform with the requirements of these rules.

e. If a hospital discovers any error in its statements or calculations in any of its submitted reports ascertained by the system to be complete, it shall inform the system of the error and submit an amendment to a report.

(1) In the case of an interim increase report or a

rate revenue and expense report, the submittal of an amended report by a hospital to the system shall not affect the date of filing or the 60 day period required, providing:

(a) The hospital informs the system of any errors prior to the system's public comments on the reasonableness of the hospital's aggregate rate; and

(b) The errors are not of such great magnitude as to affect the system's ability to make a fair comment.

(2) An amended rate revenue and expense report or interim increase report not meeting the conditions established by 7 MCAR S 1.487 C.1.e.(1), above, shall be refiled as if it were a new report.

f. If the system discovers an error in the statements or calculations in a report filed with it which the system determines will have a noticeable impact upon its ability to render a fair comment on the report, it may require the hospital to amend and resubmit the report by a date determined by the system to be reasonable. The initial filing date is not affected if the hospital resubmits the report by the determined date. If the hospital fails to resubmit the amended report by that date, the date of filing shall be the date the system receives the resubmission.

2. Review of rate revenue and expense reports and interim increase reports.

a. These reports shall be reviewed on a basis of the rate and cost history of each hospital on an institutional and a service center basis. Statistical and financial information available for a hospital as a whole institution may be compared with the same type of information for other peer hospitals which share common characteristics. In instances where service centers among hospitals sharing common characteristics themselves share common characteristics, hospitals may be compared on a service center basis. Common characteristics may include:

(1) Similarity in available number of beds and related occupancy rates;

(2) Similarity in composition of areas of patient origin;

(3) Similarity in composition of patient services;

(4) The status of a hospital as a teaching or non-teaching institution;

(5) Similarity in size and composition of full-time-equivalent staff of the hospital and ratios of that staff to patient admissions; and

(6) Other data determined by the system to be appropriate which may be available pursuant to annual licensing report requirements as established pursuant to 7 MCAR S 1.078 (d)(1).

b. Comment. The system shall comment upon interim increase reports and rate revenue and expense reports to the hospital, the board and the public prior to the implementation of proposed budgets or aggregate rates. The comment shall state that a hospital's existing and proposed aggregate rates are reasonable or are in question.

(1) Bases which may be used to comment that a hospital's existing and prospective rates are reasonable, include:

(a) Aggregate rates and components of aggregate rates are similar to the average of the aggregate rates and components of aggregate rates in effect in the prior year for other hospitals in a peer group;

(b) Prospective aggregate rates and components of prospective aggregate rates represent a minimal increase which is consistent with the allowable increase limit established by 7 MCAR S 1.504;

(c) Aggregate rates and components of aggregate rates have been demonstrated by the hospital to be necessary and consistent with the principles of the bases of judging established by 7 MCAR S 1.487 A.;

(d) Aggregate costs and components of aggregate costs are similar to the average of the aggregate costs and components of aggregate costs incurred by other hospitals in a peer group during the prior year;

(e) Prospective aggregate costs and components of prospective aggregate costs represent a minimal increase which is consistent with the allowable increase limit established in 7 MCAR S 1.504 and components of the allowable increase limit that corresponds to natural expense categories presented in 7 MCAR S 1.474 A.2.f;

(f) Aggregate costs and components of aggregate costs have been demonstrated by the hospital to be necessary and consistent with the principles for judging established by 7 MCAR S 1.487 A.;

(g) Total prior and current year's actual aggregate rates and costs are similar to prior and current year's budgeted aggregate rates and costs;

(h) Actual and budgeted costs and revenues for each service center are similar.

(2) Bases which may be used to comment that a

hospital's existing and prospective rates are in question include:

(a) Aggregate rates and components of aggregate rates deviate from the average of the aggregate rates and components of aggregate rates in effect in the prior year for other hospitals in a peer group;

(b) Prospective aggregate rates and components of prospective aggregate rates do not represent a minimal increase which is consistent with the allowable increase limit established in 7 MCAR S 1.504;

(c) Rates provide revenue which is in excess of expenses which deviate from the past financial practices of that hospital, of hospitals sharing common characteristics, or which deviate from the principles of the bases for judging established by 7 MCAR S 1.487 A.;

(d) Aggregate costs and components of aggregate costs are not similar to the average of the aggregate costs incurred for other hospitals in a peer group during the prior year;

(e) Prospective aggregate costs and components of prospective aggregate costs do not represent a minimal increase which is consistent with the allowable increase limit established in 7 MCAR S 1.504 and components of the allowable increase limit that corresponds to natural expense categories presented in 7 MCAR S 1.474 A.2.f;

(f) Aggregate costs and components of aggregate costs have not been demonstrated by the hospital to be necessary and consistent with the principles for judging established by 7 MCAR S 1.487 A.;

(g) Total prior and current year's actual aggregate rates and costs are not similar to prior and current year's budgeted aggregate rates and costs;

(h) Actual and budgeted costs and revenues for each service center are not similar.

D. Public meetings. All official meetings of the system, including executive sessions, which occur for any purpose related to completion of an investigation, release of results of an analysis, or issuance of comment upon review of reports pursuant to these rules shall be open to the public. Public notice shall be given one week in advance of any official meetings of the system where the results of investigations, analyses or reviews are to be discussed or acted upon.

E. Burden of proof. In all matters relating to the review of interim increase reports or rate revenue and expense reports or other analyses or investigations, the burden of proof of the reasonableness, equity and lack of discrimination of established

or proposed rates under review shall rest with the hospital.

F. Consolidation. When two or more investigations, analyses or reviews involve common questions of fact, the system may address the common questions of fact and make comments applicable to all hospitals under consideration.

§ 1.496 Approval for operation of the system. The Commissioner of Health may approve the operation of the system by any voluntary, nonprofit rate review organization.

A. Application. Such an organization desiring this approval may apply for approval by the following procedure:

1. Open application period. A voluntary, nonprofit rate review organization may apply for approval of its reporting and review procedures after January 1 and before March 31 of a fiscal year, or within ninety days after the effective date of these rules, for operation of the Minnesota Hospital Rate Review System during the next subsequent fiscal year.

2. Contents of application. An application for approval shall include:

a. A detailed statement of the type of reports and administrative procedures proposed by the applicant which shall demonstrate that, in all instances, the reports and procedures are substantially equivalent to those established by the system, pursuant to 7 MCAR §§ 1.474, 1.481 and 1.487.

b. A statement that all reports determined to be complete and information filed with the applicant from its participating hospitals shall be available for inspection by the Commissioner of Health and the public within five working days after completeness of reports is proposed to be determined and at least prior to the proposed date of issuance of any findings and comments.

c. Provisions establishing a proposed enrollment period for hospitals which shall not extend beyond March 31 of any fiscal year, or beyond ninety days after the effective date of these rules in the first instance, for any eligible hospital that wishes to participate in the proposed program of the applicant for the next three subsequent fiscal years.

d. Provisions establishing any proposed criteria whereby a hospital may be judged by the applicant to be eligible for participation in its proposed program.

e. Any additional statements or information which is necessary to insure that the proposed reporting and review procedures of the applicant are substantially equivalent to all the rules established for the system, pursuant to 7 MCAR §§ 1.474, 1.481 and 1.487.

B. Review of application.

1. Within forty-five calendar days of the receipt of an application for approval by a voluntary, nonprofit rate review organization, the Commis-

sioner of Health shall issue its decision that the procedures for reporting and review proposed by the applicant are approved or disapproved. Approval by the Commissioner shall take effect immediately.

2. Disapproval. The Commissioner of Health may disapprove any application on demonstration that the reporting and review procedures of any voluntary, nonprofit rate review organization are not substantially equivalent to those established by the Commissioner.

3. Reapplication. An organization whose application has been disapproved by the Commissioner of Health may submit a new or amended application to the Commissioner within fifteen calendar days after disapproval of the initial application. An organization may only reapply for approval on one occasion during any fiscal year.

C. Annual review of applicant.

1. By March 31 of each year, any voluntary, nonprofit rate review organization whose reporting and review procedures have been approved by the Commissioner of Health for the fiscal year then in progress which desires to continue operation of the system shall submit an annual review statement of its reporting and review procedures.

2. The annual review statement shall include:

a. Attestation by the applicant that no amendments or modifications of practice contrary to the initially approved application have occurred;

or,

b. Details of any amendments or modifications to the initially approved application, which shall include justifications for those amendments or modifications.

3. The Commissioner of Health may require additional information from the applicant supporting that the applicant's reports and procedures are substantially equivalent to those established for the system.

4. Forty-five days from the receipt of the annual review statement, the Commissioner of Health shall issue a decision that the applicant has renewed approval or that the applicant has been denied renewed approval. Renewed approval shall be immediately effective.

5. Denial of renewed approval. The Commissioner of Health may deny renewed approval on the demonstration that the reporting and review procedures of any applicant are no longer substantially equivalent to those established for the system.

6. Reapplication. An applicant whose renewed approval has been denied by the Commissioner of Health may submit a new or an amended

annual review statement to the Commissioner within fifteen calendar days after denial of the initial statement. An applicant may only reapply on one occasion during the fiscal year.

7. A hospital enrolled with an applicant whose renewed approval has been denied and which has not enrolled with any other applicant whose reporting and review procedures have been approved by the Commissioner of Health shall become subject to the system as operated by the Commissioner for the next three subsequent fiscal years.

D. Revocation of approval. The Commissioner of Health may revoke its approval of any applicant's reporting and review procedures at any time upon demonstration that the reporting and review procedures of that organization are no longer substantially equivalent to those required by the system.

4598-4602

7 MCAR S 1.504 Commissioner of health determination of allowable increase limit.

A. The commissioner of health maintains the authority to establish allowable increase limits. Increases in rates which have minimal impact upon the average charges per patient admission for the hospital are allowed to meet expenses incurred by a hospital due to inflation. Increases are determined to have minimal impact if they do not exceed, for any projected accounting period or portion thereof, a cumulative total of the appropriate quarterly allowable increase limits established by the commissioner.

B. During the quarter of the first fiscal year that these rules are effective, the commissioner of health shall establish a quarterly allowable increase limit:

1. For each of the full quarter(s) of its current fiscal year which remain unexpired at the time rules are promulgated; and

2. For each quarter of its next subsequent fiscal years necessary to result in a total of six quarterly allowable increase limits corresponding to the next six quarters of the current and next subsequent fiscal years occurring immediately after the implementation of these rules.

C. At the beginning of each quarter subsequent to the effective date of these rules, the commissioner of health shall establish a quarterly allowable increase limit for the sixth subsequent quarter.

D. The commissioner of health shall provide each hospital and each approved applicant with information concerning the quarterly allowable increase limits on each occasion that the commissioner does establish such a limit.

E. Form. The quarterly allowable increase limit is a single percentage figure which is applicable to the average aggregate rate and average aggregate cost for the hospital.

F. Basis. This single percentage figure is based upon the average quarterly Consumer and/or Wholesale Price Indices, and/or relevant components of the consumer, wholesale price or other appropriate economic indices as published by the Division of Labor Statistics, U.S. Department of Commerce. The single percentage figure shall be so constructed so that it will contain the proportionate contribution of each of the natural expense categories presented in 7 MCAR S 1.474 A.2.f.

G. Compensation. Should quarterly allowable increase limits prospectively established by the commissioner according to these rules allow increases in aggregate rates in excess or less than any actual increases in the Consumer and/or Wholesale Price Indices, or relevant components of these indices the

commissioner may compensate for this excess by:

1. Measuring the difference between the prospective quarterly allowable increase limits and the actual changes in the Consumer Price Index for expired quarters; and,

2. adding or reducing by a reasonable proportion of that difference the next set of quarterly allowable increase limits to be established by the commissioner.

4598-4602

7 MCAR S 1.505 Acceptable increases in hospital gross acute care charges; exemptions from hospital rate review.

A. Each hospital that anticipates an increase in budget year gross acute care charges which is less than the acceptable increase determined by the commissioner of health may claim and shall be granted, an exemption from the filing of a rate revenue and expense report as required by 7 MCAR S 1.481 C. and as described in 7 MCAR S 1.474 B. and the review and comment provisions of 7 MCAR S 1.487 C.2., upon filing an abbreviated projected operating statement as described in 7 MCAR S 1.505 E.2.

B. Commissioner of health establishment.

1. The commissioner of health shall establish at the beginning of each quarter of the fiscal year (July 1, October 1, January 1, April 1), a percentage figure representing an acceptable increase in gross acute care charges for the succeeding six quarters (18 months).

a. Each hospital being reviewed by the commissioner of health pursuant to Minnesota Statutes, section 144.701 shall be notified of each quarterly established acceptable increase in and adjustments to the acceptable increase in gross acute care charges pursuant to 7 MCAR S 1.505 D.

b. Each voluntary nonprofit rate review organization approved pursuant to 7 MCAR S 1.496 shall be notified of each quarterly established acceptable increase in and adjustments to the acceptable increase in gross acute care charges and shall in turn notify each of the hospitals electing to be reviewed by said organization.

2. Basis. The single percentage figure established by the commissioner of health shall be the algebraic sum of the following percentages:

a. An estimate of the forthcoming annual rate of change in the average total cost of all goods and services to hospitals. This estimate shall be determined by summing the weighted change in price of each of the natural expense classifications described in 7 MCAR S 1.474 A.2.f. The weights shall be the proportionate contributions of each of these natural expense classifications to hospitals' total cost. The estimate shall explicitly recognize the expected overall level

of price change in the state's economy and shall be derived from expected annual changes in the Consumer and/or Producer Price Indices and/or relevant components of the consumer and/or producer price and/or other similar economic indices published by an agency of the federal or state government.

b. An estimate of the rate of change in the dollar value of the forthcoming annual statewide change in:

(1) the average mix of patients utilizing hospitals, and

(2) the average intensity of services received by patients during hospital stays or visits as is consistent with the delivery of medical care which is of generally accepted quality and efficiency. The estimate shall not be less than zero nor more than .036.

For the purposes of this section:

(1) "Mix" means the types of illnesses, injuries, and conditions treated in hospitals.

(2) "Intensity of services" means the styles and methods of treating illness, injuries, and conditions in hospitals.

c. An estimate of the forthcoming annual rate of change in the statewide number of hospital adjusted admissions per 1,000 population as is consistent with the delivery of medical care which is of generally accepted quality and efficiency.

C. Conformity.

1. Each exempted hospital, by the close of the third quarter of its fiscal year, shall assess its likely conformity with its most recently filed abbreviated projected operating statement. If the anticipated actual increase in gross acute care charges, to be reported pursuant to 7 MCAR S 1.474 A.9., for an exempt hospital is in excess of the acceptable increase in gross acute care charges under which exemption was claimed pursuant to 7 MCAR S 1.505 A., as adjusted pursuant to 7 MCAR S 1.505 D., then that hospital shall file a rate revenue and expense report for the coming budget year pursuant to 7 MCAR SS 1.474 B. and 1.481 C.

2. If an exempt hospital estimates that it is likely to conform with its most recently filed abbreviated projected operating statement and does not file a rate revenue and expense report pursuant to 7 MCAR S 1.505 C.1. and it is subsequently found that the actual increase in gross acute care charges was more than .00125 in excess of the acceptable increase in gross acute care charges under which exemption was claimed pursuant to 7 MCAR S 1.505 A., as adjusted pursuant to 7 MCAR S 1.505 D., then that hospital shall file a rate revenue and expense report

pursuant to 7 MCAR S 1.481 C. no later than 150 days after the close of the fiscal year in question.

D. Adjustments to the acceptable change. Each figure in 7 MCAR S 1.505 B. shall be adjusted and updated at the close of the third quarter after its establishment according to the criteria specified in 7 MCAR S 1.505 B.2.a. and shall reflect actual changes in the overall price change level throughout the state's economy. The updated figure shall be used when judging conformity to 7 MCAR S 1.505 C.1.

E. Abbreviated projected operating statement.

1. Each hospital claiming exempt status shall file an abbreviated projected operating statement no later than the commencement of its fiscal year or up to 60 days prior to the commencement of its fiscal year. Pursuant to Minnesota Statutes, section 144.701, subdivision 5 no change in rates may be made until 60 days have elapsed from the date of filing.

2. An abbreviated projected operating statement shall include the following data for the prior, current, and budget years:

a. Total acute care hospital operating expense.

b. Total institutional patient charges.

c. Total acute care hospital patient charges.

d. Total acute care hospital inpatient charges.

e. Total acute care hospital outpatient charges.

f. An expense analysis consisting of acute care:

(1) Direct costs for:

(a) Daily hospital services,

(b) Ancillary service,

(c) Non-revenue producing centers.

(2) Costs after allocation of non-revenue producing centers costs to:

(a) Daily hospital services,

(b) Ancillary service.

g. An acute care hospital statistical summary consisting of:

(1) Number of patient days (excluding nursery),

(2) Number of nursery days,

(3) Number of total patient days,

(4) Number of admissions,

(5) Average length of stay,

(6) Occupancy - licensed beds,

(7) Occupancy - staffed and set-up beds,

(8) Number of outpatient and emergency room visits.

h. An acute care hospital full-time equivalent summary consisting of salary and numbers of full-time equivalent personnel for:

(1) Daily hospital services,

(2) Ancillary services,

(3) Non-revenue producing centers,

(4) Total hospital,

(5) Total institution.

i. An acute care bed summary consisting of:

(1) Number of licensed beds,

(2) Number of physically present beds,

(3) Number of staffed and set-up beds.

j. Depreciation fund.

(1) Beginning balance,

(2) Ending balance.

3. The information provided on the abbreviated projected operating statement shall support the hospital's claim that it will achieve an increase in gross acute care charges less than that established by the commissioner of health pursuant to 7 MCAR S 1.505 B.

4598/4602 7 MCAR S 1.509 Fees.

Hospitals whose rates are reviewed by the commissioner of health as distinct from a voluntary, nonprofit rate review organization, shall submit filing fees with rate revenue and expense reports and interim increase reports which are submitted to the commissioner. These fees are based on the cost of

reviews and the number of beds licensed as acute care beds in a hospital, pursuant to Minnesota Statutes, sections 144.50 to 144.58.

A. Rate revenue and expense report fee. On each occasion which a hospital submits a rate revenue and expense report to the commissioner of health as distinct from a voluntary, nonprofit rate review organization, it shall accompany this report with a filing fee based upon the following schedules which shall be annually adjusted to reflect the impact of inflation upon these fees, providing the report is timely:

Hospital Gross Revenue	Filing Fee Is:
Under $2,500,000	.0005 x gross revenue or $200 (whichever is less) to a maximum of $800
$ 2,500,000 - $19,999,999	.004 x gross revenue to a maximum of $5,000
$20,000,000 +	.003 x gross revenue to a maximum of $7,500

B. Interim increase report fee. On each occasion which a hospital submits an interim increase report to the commissioner of health as distinct from the voluntary, nonprofit rate review organization, it shall accompany this report with a filing fee. This fee shall be one half of the rate revenue and expense report fee, as established by 7 MCAR S 1.509 A., providing the report is timely.

C. "Timely" means that each report has been submitted within the time prescribed by 7 MCAR S 1.481 C.1. or D.1., as appropriate, that an extension of these reporting times, as permitted by 7 MCAR S 1.481 F., has not been necessary, and that the report has been determined to be complete, pursuant to 7 MCAR S 1.487 C.1. If a report does not meet these standards, the commissioner may require the submission of an additional late fee according to the following late fee schedule:

1. A report submitted after the reporting times established by 7 MCAR S 1.481 C.1. or D.1., as appropriate, for which an extension in time has been permitted, pursuant to 7 MCAR S 1.481 F., shall be liable for a late fee in addition to the filing fee established by 7 MCAR S 1.509 A. or B., above, as appropriate. This late fee shall be ten percent of the filing fee established by 7 MCAR S 1.509 A. or B., above, and as appropriate for that hospital.

2. A report submitted by a hospital which is determined not to be complete, pursuant to 7 MCAR S 1.487 C.1., shall be liable for a late fee for each occasion on which a resubmission as provided by 7 MCAR S 1.487 C.1. occurs. This late fee shall be, for each such occasion of resubmission, five percent of the filing fee paid on submission of the initial report to the commissioner of health by the hospital as established by 7 MCAR S 1.509 A. or B., above.

3. Reports not submitted or submitted after the reporting times established by 7 MCAR S 1.481 C.1. or D.1., as appropriate, for which an extension has not been requested or permitted, pursuant to 7 MCAR S 1.481 F., shall be liable for the cost of a full audit by an independent public accountant, as necessary for the completion of the report in addition to the filing fee established by 7 MCAR S 1.509 A. or B., above, as appropriate.

D. The commissioner of health may suspend all or any portion of the filing fees and late fees herein established upon cause being shown by a hospital. Such cause may consider such factors as:

1. The inability of a hospital to pay the fees without directly affecting the rates.

2. The occurrence of any emergency financial condition of a hospital, including natural disasters or difficulties associated with completion of reports related to sickness or other absences of related hospital employees or other administrative complications resulting in delay in the completion of reports.

3. Other factors which relate to the economic condition or administrative condition of a hospital.

7 MCAR S 1.510 Official offices.

For purposes of these rules, the official offices of the commissioner of health are:

Minnesota State Department of Health

717 Delaware Street, Southeast

Minneapolis, Minnesota 55440

7 MCAR S 1.511 Severability.

If any section or provision of these rules is declared unconstitutional or void by any court of competent jurisdiction, or its applicability to any person or circumstances is held invalid, the constitutionality or validity of the remainder of the rules and the applicability to other persons and circumstances are not affected, and to this end, the sections and provisions of these rules are declared to be severable.

DEPARTMENT OF HEALTH

RULES RELATING TO THE OPERATION OF HEALTH FACILITIES GRIEVANCE MECHANISMS

Chapter Twenty-Nine: 7 MCAR §§ 1.521-1.527

§ 1.521 Applicability. These rules apply to hospitals and outpatient surgery centers.

§ 1.522 Definitions. Definitions for these rules are as follows:

A. "Grievance mechanism" means grievance and/or complaint procedures.

B. "Hospital" means any entity licensed as such pursuant to Minn. Stat. §§ 144.50 to 144.56.

C. "Outpatient surgery center" means a free standing facility organized for the specific purpose of providing elective outpatient surgery for preexamined prediagnosed low risk patients. Services provided at an outpatient surgery center shall be limited to surgical procedures which utilize local or general anesthesia and which do not require overnight inpatient care. "Outpatient surgery center" does not mean emergency medical services, or physician or dentist offices.

D. "Patient" means an individual in or admitted to a hospital or outpatient surgery center for the purpose of prevention of disease, medical diagnosis or medical treatment. The term "patient" includes inpatient, outpatient and emergency room patient.

E. "Representative" means a person designated by the patient as a responsible party, a parent of a minor, a guardian, or one who is in loco parentis to a patient unable to act for himself.

§ 1.523 Minimum standard. Every hospital and every outpatient surgery center shall establish, operate and maintain a grievance mechanism designed to process and resolve patient grievances in accordance with these rules.

§ 1.524 Procedural requirements.

A. Designated person. Every hospital and every outpatient surgery center, shall designate an individual, by name or by title, to be accountable for the operation of a grievance mechanism.

B. Complaints, generally.

1. Any patient, or his representative, may initiate any oral or written complaint related to those subjects specified in 7 MCAR § 1.525.

2. Such complaints may be made to a person designated by the facility under 7 MCAR § 1.524 A., or to any other person authorized to receive complaints by the facility. A person authorized to receive complaints shall be physically within the facility and able to receive complaints during ordinary business hours. Persons authorized to receive complaints, other than a person designated under 7 MCAR § 1.524 A., shall, in all complaint cases, report any response or resolution, or refer the complaint, to a person designated under 7 MCAR § 1.524 A.

C. Time for response. Response to a complaint, or notice of the resolution of a complaint, shall be provided to the complainant as soon as possible. Such responses, or notices of resolution, shall be in writing, if requested by the complainant.

D. Notice of time limit. The authorized individual to whom any oral complaint is made shall, upon receipt of the complaint, inform the complainant of his best estimate of when the facility could respond to the complaint.

E. Complaint records. The following complaint records shall be maintained by the facility for at least one year:

1. an annotation of the date, time and substance of each complaint made by, or in behalf of, any patient;

2. a reference to any previous complaints made by, or in behalf of, the same patient during his current stay in the facility; and,

3. an annotation of the date, time and substance of any response to, denial of, or resolution of, the complaint.

The arrangement of such records shall be such that identification of particular patients and complainants is possible.

F. Patient notice.

1. Notice of mechanism. Written notice of the existence and availability of the grievance mechanism shall be posted conspicuously in all facilities, along with the notice required under Minn. Stat. § 144.652, and furnished, unless an emergency prevents such furnishing, to the patient or his representative if and when the former is actually admitted to the facility. If an individual patient notice is required to be furnished to the patient or his representative under Minn. Stat. § 144.652, written notice under these rules shall be furnished at the same time.

2. Content of the notice. Such written notice shall include the following:

a. a statement that complaints or grievances related to rights expressed in the Patients' Bill of Rights (Minn. Stat. § 144.651), or to any other rights, may be able to be resolved within the facility;

b. a statement that the facility maintains a grievance mechanism for this purpose;

c. a statement specifying an individual or type of individual to whom such complaints or grievances can be directed; and,

d. a statement that any complainant has the right to request and to receive a written response to any complaint.

§ 1.525 **Patient complaints.** Complaints relating to at least the following shall be subject to being processed through a grievance mechanism:

A. lack of considerate or respectful care;

B. failure to provide complete, current and understandable information concerning diagnosis, treatment or prognosis;

C. failure to provide the name and specialty, if any, of the physician responsible for coordination of care;

D. failure to afford consideration of privacy;

E. failure to afford consideration of individual social, religious and psychological well-being;

F. failure to preserve the confidentiality of the medical care program;

G. failure to provide, upon request, information bearing on the individual case with respect to any relationship of the facility to other health services facilities, medical groups or other similar entities;

H. failure to afford continuity of care;

I. failure to provide requested information, prior to or at the time of admission and during the period spent in the facility, relating to charges for care;

J. failure to afford the opportunity to participate in the planning of medical treatment;

K. failure to inform of, or to offer an opportunity to refuse to participate in, experimental research;

L. retaliatory, arbitrary, or otherwise medically unjustifiable discharge;

M. interference with or retaliation for the free exercise of any legally prescribed rights;

N. mental and/or physical abuse;

O. medically unjustifiable physical and/or chemical restraints;

P. failure to comply with lawful requests to release or to withhold medical records;

Q. requiring the performance of services not included for therapeutic purposes in the plan of care;

R. restriction of the right to associate and communicate privately with others;

S. interference with the sending and receipt of personal mail;

T. restriction of the rights to meet with representatives and to participate in commercial, religious and community activities;

U. restriction of the right to retain and use personal clothing and possessions, to the extent that space permits; and,

V. failure to respond to questions concerning billing practices, the amount of a specific bill, and the like.

§ 1.526 Reports. Every hospital and every outpatient surgery center, shall, on or before each February first, submit to the commissioner of health a report on the experience of their respective grievance mechanisms during the immediately preceding calendar year. Such reports shall include at least the following information:

A. the name and location of the reporting institution;

B. the reporting period in question;

C. the name of the individual(s) responsible for the operation of the grievance mechanism;

D. the total number of complaints filed with the facility pursuant to 7 MCAR § 1.524 B.1.;

E. the total number of complaints, according to classification under 7 MCAR § 1.525;

F. the total number of any other complaints;

G. the number of patients by whom or for whom more than one complaint was made and the total number of such complaints; and,

H. the total number of complaints resolved to the patient's apparent satisfaction.

§ 1.527 Schedule of fines.

A. Patient notification and complaint mishandling.

1. Grounds; Fine amounts. The following violations of these rules shall constitute grounds for the automatic assessment of a per violation $50 fine:

a. failure to give individual patient notice, as required under 7 MCAR § 1.524 F.; and,

b. failure to respond to a patient complaint as soon as possible, as required under 7 MCAR § 1.524 C.

Multiple violations with respect to the current stay of a particular patient shall result in fines which in no case exceed $200. Such fines are payable within 30 days of the automatic assessment, unless there is a facility request for a hearing. Such a request shall stay the collection of the assessed fines, pending the outcome of the hearing.

B. Inadequate or improperly functioning mechanism.

1. Grounds. The following violations of these rules shall constitute grounds for the issuance of a correction order:

a. failure to have a grievance mechanism, as required under 7 MCAR § 1.523;

b. failure to designate an individual, by name or title, to be responsible for the operation of a grievance mechanism, as required under 7 MCAR § 1.524 A.;

c. failure to have an individual within the facility and able to receive complaints during ordinary business hours, as required under 7 MCAR § 1.524 B.2.;

d. failure to maintain complaint records, as required by 7 MCAR § 1.524 E.;

e. failure to post notice, as required by 7 MCAR § 1.524 F.;

f. failure to submit an annual report, as required by 7 MCAR § 1.526; and,

g. failure to fulfill the criteria for content of the annual report, as required by 7 MCAR § 1.526.

2. Time periods for correction. In no case may the allowable period for correction of any of the violations in 7 MCAR § 1.527 B.1. exceed 60 days. In no case may the allowable period for correction of violations in 7 MCAR § 1.527 B.1.d., f., or g. be less than 20 days.

3. Fine amounts. The amounts which shall be assessed in the event that the facility does not comply with correction orders within the allocated period of time are as follows:

a. violations as described in 7 MCAR § 1.527 B.1.a. - up to $200 per violation;

b. violations as described in 7 MCAR § 1.527 B.1.b. - up to $100 per violation;

c. violations as described in 7 MCAR § 1.527 B.1.c. - up to $150 per violation;

d. violations as described in 7 MCAR § 1.527 B.1.d. - up to $50 per violation;

e. violations as described in 7 MCAR § 1.527 B.1.e. - up to $100 per violation;

f. violations as described in 7 MCAR § 1.527 B.1.f. - up to $200 per violation;

g. violations as described in MHD 7 MCAR § 1.527 B.1.g. - up to $100 per violation;

Such fines are payable within 30 days of the assessment, unless there is a facility request for a hearing within that period. Such a request shall stay the collection of the assessed fines, pending the outcome of the hearing.

§§ 1.528-1.535: Reserved for future use.

4610 7 MCAR S 1.531.

A. General.

1. Authority and purpose. 7 MCAR S 1.531 has been developed as required by Minnesota Statutes, sections 15.0412, subdivision 3, 144.05, 144.051, and 144.052. The rule pertains to:

a. The types of information relating to numbers, distribution, and characteristics of health-related manpower which the commissioner of health deems necessary to collect as specified in this rule from individuals licensed or registered by the commissioner or the boards for the purpose of establishing an adequate information resource at the state level for making informed and reasonable decisions pertaining to health manpower; and

b. The forms which shall be used to collect the information.

2. Definitions. For the purposes of this rule, the words, terms, and phrases listed below shall have the meaning stated herein, unless the language or context clearly indicates that a different meaning is intended.

a. "Boards" means the health-related licensing boards as defined in Minnesota Statutes, section 214.01, subdivision 2.

b. "Commissioner" means the commissioner of health.

c. "Form of employment" means whether self-employed, working as employee, or other.

d. "Individual" means a natural person.

e. "Licensed" means the state government regulation of an occupation as defined in Minnesota Statutes, section 214.001, subdivision 3(d).

f. "Licensure or registration status" means the status of the individual license or registration as active or inactive under the regulatory authority of the commissioner or the boards. An active status means the individual is duly authorized to engage in the practice of activities for which he or she is licensed or registered. An inactive licensure or registration status means that the license or registration is not in effect.

g. "Locality" means city, state or foreign country, county and zip code.

h. "Occupation" means the health-related occupation for which an individual is licensed or registered by the commissioner or a board.

i. "Occupational specialty" means the area emphasized, such as clinical, teaching or specialty practice, in the activities the licensee or registrant performs in the health-related occupation for which he or she is licensed or registered.

j. "Permanent license or registration number" means the number assigned to each licensee or registrant by the commissioner or a board upon initial licensure or registration and retained by the licensee or registrant over the period of his/her licensure or registration. The permanent number may differ from a number the individual may receive upon periodic renewal of his/her license or registration.

k. "Professional activity status" means the licensee's or registrant's participation or potential participation in the practice of activities in the occupation for which he/she is licensed or registered. The individual's activity status may be identified as either active or inactive. If active, the extent to which the licensee or registrant is active is indicated by factors such as the duration over time of work in the occupation, whether currently working in the occupation, and by the average number of hours worked per week. If inactive, the potential for participation in the occupational labor force is indicated by the licensee's or registrant's status as retired, working in another occupation, disabled, or other employment statuses such as unemployed but seeking employment in the health-related occupation for which the individual is licensed or registered.

l. "Professional title" means the title which designates the position held by a licensee or registrant in his/her work setting in the health-related occupation for which he/she is licensed or registered.

m. "Registered" means the state government regulation of an occupation as defined in Minnesota Statutes, section 214.001, subdivision 3 (c).

n. "Type of setting" means the physical environment which may be institutional, such as a hospital, or non-institutional, such as the patients' homes, in which the individual engages in the occupation for which he or she is licensed or registered.

B. Types of information.

1. Individuals who are licensed or registered by the commissioner or the boards shall submit to the commissioner, on forms provided by him/her, the following types of information:*

a. Permanent license or registration number.

b. Race or ethnicity.

c. Locality of principal residence.

d. Educational background which shall include:

(1) Name and locality of school from which graduated with educational degree required for licensure or registration, and year degree was received.

(2) Name and locality of school from which post-secondary educational preparation was received if a specific type of educational degree is not required for licensure or registration, and year preparation completed.

(3) Degrees received from educational institutions.

(4) Professional training beyond first degree received.

e. Professional activity status in the occupation which shall include:

(1) Number of weeks worked in the occupation during the 12 months preceding data collection survey period.

(2) Whether currently working in the occupation.

(3) Average number of hours per week currently working in the occupation for which licensed or registered, apportioned by categories of activities in the occupation.

(4) If not currently working in the occupation, status as a member of the potential labor force for the occupation.

*In addition to the types of information listed in this rule, name, current (mailing) address, licensure or registration status (at the time of data collection), birth date, sex, professional activity status, and educational background shall be included in the required information, as specified in Minnesota Statutes, section 144.052, subdivision 1.

f. Locality where currently working in the occupation.

g. Type of setting where currently working in the occupation.

h. Category of current form of employment in the occupation.

i. Occupational specialty.

j. Current active licensure or registration held in other states.

2. The following types of information shall be collected only from the licensees or registrants in occupations for which the information is applicable given the practice characteristics of the occupation.

a. The approximate number of patients treated in the course of the licensee's or registrant's currently active practice during a specified period.

b. The range of employment of auxiliary personnel in the practice setting.

c. Professional title of licensee or registrant.

3. The commissioner may at his option reduce the types of information for which responses are requested from licensees and registrants residing and practicing out-of-state.

C. Types of forms for collection of information.

1. Information shall be collected on forms designed by the commissioner which shall contain statements of the statutory authority for collecting the information and of the data classification as classified pursuant to the Minnesota Government Data Practices Act. Whenever a survey form is sent to licensees or registrants in the same envelope as their license or registration renewal application, a statement will be added to the form to the effect that the survey is independent of licensure or registration renewal and that responses to the survey will have no bearing on license or registration renewal. The exact form and wording of the questions may vary depending upon the specific occupation surveyed:

a. So that the questions will be specific and relevant to the characteristics of each occupation; and

b. May change in form and wording over time so that a question can be classified or its emphasis modified.

2. When resources available to the commissioner permit, the form may include questions in addition to the types of information specified in 7 MCAR S 1.531 B.1. and B.2. Such questions may solicit:

a. Information sought by the commissioner for the purpose of making decisions pertaining to health manpower, but to be provided by the licensee or registrant on a voluntary basis:

b. Information sought by parties other than the commissioner for purposes of making decisions pertaining to health manpower. In these instances:

(1) The proposed additional questions may be included only if the commissioner determines that:

(a) The additional questions are relevant to making decisions pertaining to health manpower;

(b) Resources permit the inclusion of additional questions on the form;

(c) The information collection required by 7 MCAR S 1.235 B.1. and B.2. would not be delayed or otherwise inconvenienced by the inclusion of additional questions on the form.

(2) The form shall clearly identify the party requesting the additional information, the specific questions asked by the party, whether or not it is mandatory for the licensee or registrant to supply the information, and if mandatory, the citation to the mandating legal authority.

4611-4613

7 MCAR S 1.536 General.

A. Declaration of purpose and scope. 7 MCAR SS 1.536-1.540 establish the process to be used by the commissioner of health and the Human Services Occupations Advisory Council in carrying out the charges of Minnesota Statutes, sections 214.001, 214.13, and 214.14. They specify the procedures by which human services occupations are identified and decisions are made regarding the state's need to regulate persons in specific occupations. This rule applies to all human services occupations that are not now credentialed by the state.

B. Definitions. For the purposes of 7 MCAR SS 1.536-1.540, the words, terms and phrases listed below in this subdivision shall have the meaning stated herein, unless the language or context clearly indicates that a different meaning is intended.

1. "Administrative authority" means the state agency responsible for administering the law and rules establishing a credential for a human services occupation.

2. "Applicant group" means an occupational group that has submitted a letter of intent to begin the regulatory process.

3. "Career progression" means opportunity to move up a career ladder or enter a related profession without loss of credit for previous education and experience.

4. "Commissioner" means the commissioner of health.

5. "Competence" means possession of requisite abilities to fulfill work obligations.

6. "Conflict of interest" means:

a. A direct or indirect financial or self-serving interest in the matter under consideration so that the member is not so free from personal bias, prejudice or preconceived notion as to make it possible for the member to consider objectively the evidence presented and base a decision solely on such evidence.

b. Circumstances such that a member finds it difficult, if not impossible to devote himself or herself to a consideration of the matter with complete energy, loyalty, and singleness of purpose to the general public interest.

7. "Continuing education" means education or training beyond the individual's pre-credentialing preparation for an occupation.

8. "Council" means the Human Services Occupations Advisory Council.

9. "Credentialing" means licensure or registration and

the process by which they are obtained and administered.

10. "Department" means Minnesota Department of Health.

11. "Function" means a special task, duty or performance required in the course of work or activity.

12. "Functional differentiation" means those functions carried out by a particular occupational group that distinguish that group from others.

13. "Human services occupations" means an occupation whose principal functions are performed customarily for remuneration on behalf of individuals, families or groups to assist in achieving:

a. Optimal economic security through the provision of employment services, income security services and income maintenance and ancillary supportive services;

b. Optimal health through the provision of maintenance, diagnostic, treatment and ancillary supportive services in the area of physical health, environmental health, mental health and developmental disabilities;

c. Optimal knowledge and skills through the provision of formal educational services, supplementary educational services, and ancillary supportive services; or

d. Optimal social functioning through the provision of social adjustment services, social development services, protective services, correctional services, services to victims of abuse, neglect, exploitation or crime, and ancillary supportive services.

14. "Letter of intent" means an applicant group's written expression of aim to pursue regulation.

15. "Licensure" means a system whereby a practitioner must receive recognition by the state that he or she has met predetermined qualifications, and persons not so licensed are prohibited from practicing.

16. "Not now credentialed" means those occupations whose members are not currently licensed or registered by the state and those occupations whose members are currently licensed or registered by the state but who seek to expand or specialize their functions within that licensed or registered occupation such that the group members seek further state recognition by new, expanded or specialty licensure or registration.

17. "Occupational group" means human service workers who have common occupational functions.

18. "Public forum" means public meeting(s) called to obtain comments on an applicant group's questionnaire. The

meeting is open to the public, but it is not a hearing and does not require the hearings notification procedures called for by Minnesota Statutes.

19. "Questionnaire" means document designed to provide information about an occupational group for purposes of aiding in making a regulatory determination.

20. "Registration" means a system whereby practitioners who will be the only persons permitted to use a designated title are listed on an official roster after having met predetermined qualifications.

C. Prohibition. A council member may not be appointed to a subcommittee, may not participate in subcommittee or council discussions, and may not vote on any matter in which he or she has a conflict of interest.

D. Factors for determining the necessity of regulation. In the review of an applicant group questionnaire, the subcommittee, council, and commissioner shall base their recommendation or decision as to whether or not the applicant group shall be regulated upon the factors contained in Minnesota Statutes, section 214.001, subdivision 2.

1. In applying the factor of whether the unregulated practice of an occupation may harm or endanger the health, safety, and welfare of citizens of the state and whether the potential for harm is recognizable and not remote, at a minimum the relevance of the following shall be considered:

a. Harm shall be construed to be a condition representative of physical, emotional, mental, social, financial, or intellectual impairment resulting from the functions rendered or failed to be rendered by the applicant group.

b. Potential for harm may be recognizable when evidenced by at least one or more of the following:

(1) Expert testimony;

(2) Client, consumer, or patient testimony;

(3) Research findings;

(4) Legal procedents, financial awards, or judicial rulings;

c. Potential for harm may be recognizable when evidenced by at least one or more of the following characteristics of the applicant group;

(1) Inherently dangerous nature of the applicant group's functions;

(2) Dangerous nature of devices or substances used in performing applicant group's functions;

(3) Exercise by practitioners of the applicant groups of an observable degree of independent judgment when:

(a) Identifying or evaluating a consumer's or client's symptoms;

(b) Formulating a plan for consumer or client care, service delivery or treatment; and/or

(c) Providing consumer or client care, delivering service or implementing a plan of treatment.

d. Potential for harm may be remote when evidenced by at least one or more of the following:

(1) Infrequent or rare instances of impairment;

(2) Impairment which is minor in nature; or

(3) Secondary or tertiary effects of the applicant group's function.

2. In applying the factor of whether the practice of an occupation requires specialized skill or training and whether the public needs and will benefit by assurances of initial and continuing occupational ability, the existence of the following items shall be considered as indicating that specialized skill or training or their continuation is required:

a. That the functions performed by the practitioner are several and their performance necessitates a thorough understanding of the complex relationship between those functions;

b. That the one or more functions performed by the practitioner requires a detailed understanding of the specific components of the function and the relationship between the functions and the symptoms, problem or condition that function is intended to address or ameliorate;

c. That the absence of specialized skill or training is likely to increase the incidence and/or degree of harm as defined in 7 MCAR S 1.536 D.1. to the consumer as client.

d. That there occurs frequent or major changes in areas of skilled knowledge and technique of which the practitioner must keep informed in order to meet current standards.

3. In applying the factor of whether the citizens of this state are or may be effectively protected by other means, at a minimum the relevance of the following shall be considered:

a. Indicators of protection by other means shall include but not be limited to:

(1) Supervision by practitioners in a regulated occupation;

(2) Existence of laws governing devices and substances used in the occupation;

(3) Existence of laws governing the standard of practice:

(4) Existence of standards for professional performance:

(5) Employment in licensed human service facilities which are required to employ competent staff;

(6) Existence of federal licensing as credentialing mechanism;

(7) Existence of civil service procedures which effectively screen potential employees for competence;

(8) Graduation of members of the applicant group from an accredited educational institution or training program;

(9) Mandatory participation in on-the-job training programs which are required by law or by professional organization of the occupation;

(10) Existence of professional credentials and standards of performance which effectively sanction malpractice;

(11) Existence of a national certification process which effectively attests to the competency of recognized professionals.

b. Indicators of protection by other means shall be assessed and evaluated at least in view of the extent to which they:

(1) Address all practitioners within an occupational group;

(2) Appear sufficient to protect the general public from harm caused by the practice of the occupation in question;

(3) Appear to be permanent and ongoing mechanisms.

4. 7 MCAR S 1.536 D.1.-3. shall be considered nonlimiting guidelines to be used in applying the statutory factors contained in Minnesota Statutes, section 214.001, subdivision 2. Additional elements may be considered if necessary to permit a thorough review and evaluation of an applicant group questionnaire in light of the statutory factors; provided,

however, that the additional elements shall be identified during the course of the review and evaluation process, all interested persons given the opportunity to comment thereon, and shall be specifically addressed in the commissioner's written decision required by 7 MCAR S 1.538 B.6.

4611-4613

7 MCAR S 1.537 Identification of occupational groups, questionnaire contents, and processing priorities.

A. Applicant initiated identification.

1. The applicant group shall submit a letter of intent to the commissioner.

2. Upon receipt of the letter of intent the commissioner shall send these rules and a questionnaire to the applicant group.

3. The applicant group shall submit the completed questionnaire to the commissioner within six months or shall make a written request for an extension of the time period. Failure to comply with either of those conditions during the six month period voids the original letter of intent and discontinues the regulatory decision process. The applicant group shall submit a new letter of intent if it desires to pursue regulation.

4. When the questionnaire is deemed complete by the department, the commissioner shall transmit the questionnaire to the council. If the department deems the questionnaire to be incomplete, it shall return the questionnaire to the applicant group with a report describing the deficiencies. If the applicant group considers the questionnaire to be complete, it may request that the questionnaire be submitted to the commissioner to determine whether the questionnaire contains adequate data for the commissioner to commence the process. Nothing in this rule shall prevent the department from informally assisting the applicant group in the completion of the questionnaire.

B. Commissioner initiated identification.

1. When the commissioner, council, other groups, or individuals have reasons to suspect that an occupational group exists or is emerging but has not applied for credentialing and the question of regulation should be addressed the commissioner shall determine whether the need to regulate the group should be investigated. The determination shall be based upon evidence that raises the question of the need for occupational regulation. Such evidence may be derived from sources that include, but are not limited to court decisions, data collected by state and national regulatory agencies, federal law or rule, and information submitted by legislators, government or private agencies, or the public.

2. The commissioner may direct staff to collect data substantially equivalent to that on the questionnaire for evaluation in the manner specified in 7 MCAR S 1.538.

C. Contents of the questionnaire. The questionnaire shall direct an applicant group to submit information related to the following matters:

1. Evidence that an applicant group claiming to speak for an occupational group represents a significant portion of an occupational group and that other organizations representing members of that occupational group have been identified.

2. Evidence that the occupational group meets the regulatory factors contained in Minnesota Statutes, section 214.001, subdivision 2.

3. Such other and additional information or evidence consistent with the provisions of applicable statute and these rules as well as information necessary to clarify matters already contained in the application. Such information shall be requested for the sole purpose of enabling the commissioner to fairly, adequately and completely evaluate the applicant questionnaire to determine whether an occupational group should be regulated, and if an occupational group is credentialed, under which administrative authority it will be regulated. The commissioner may suspend or terminate the regulatory decision process for failure to supply the information requested.

D. Questionnaire processing priorities. The commissioner may determine the priority for processing questionnaires. The priority of an applicant group will be based on evidence available in the questionnaire, particularly that relating to the potential harm to the public that the continued practice of the unregulated group may cause. After a determination of priority for entering the regulatory decision process has been made, the commissioner shall take the actions listed in 7 MCAR S 1.538.

f611-4613

7 MCAR S 1.538 Regulatory decision process.

A. Delayed consideration. The commissioner shall proceed to notify the applicant group of the date at which its application might reasonably expect to be considered under 7 MCAR S 1.538 B. The notification will include the reasons for the delayed consideration.

B. Immediate consideration.

1. When a questionnaire is received by the council, the chairman of the council shall appoint a subcommittee of at least five members, none of whom shall have a conflict of interest, and shall name one of the members as subcommittee chairman. Insofar as possible the subcommittee shall be broadly representative of the council.

2. Subcommittee procedures.

a. The subcommittee will meet to study the questionnaire as it addresses the factors contained in Minnesota Statutes, section 214.001, subdivision 2, and materials available to the subcommittee and to raise any questions members feel ought to be addressed either in subcommittee meetings or at the public forum.

b. All written material related to the regulatory decision for an occupational group will be available as part of a public file retained at the Minnesota Department of Health and other locations the commissioner deems appropriate.

3. Public forum.

a. The subcommittee shall hold at least one public forum for the purpose of providing for public participation in the regulatory decision process, collecting information, raising and clarifying issues, and when possible, providing for the negotiation of differences.

b. The first public forum shall be held within four months of the subcommittee appointments.

c. The public forum shall be open to all persons.

d. Notification of the public forum shall be made in the following manner:

(1) All groups and persons identified by name as part of the occupational group by the questionnaire and through department study will be notified by mail.

(2) A news release will be sent out by the commissioner.

(3) Notice will be published in the department's monthly listing of health-related meetings.

(4) Notice will be sent to the public information offices of the Departments of Corrections and Public Welfare for inclusion in any bulletins they use for public notification of meetings.

(5) Notice will be published in the State Register.

e. The conduct of the public forum(s) will be in accordance with procedures adopted by the council and available in writing to the public at the public forum. All interested persons will be given an opportunity to make a presentation although time limits may be imposed.

4. Subcommittee recommendations. The subcommittee shall make recommendations to the council with respect to: the need for regulation, the type of regulation, whether any recommended

credential be licensure or registration and the administrative authority for any recommended credential. The department shall also make separate recommendations which accompany those of the subcommittee. Each recommendation shall be accompanied by the rational/justification used in arriving at the decision. Regulation of an occupational group shall be based on the factors contained in Minnesota Statutes, section 214.001, subdivision 2.

5. Council action. The council will review the subcommittee recommendation and approve or modify it as necessary. A council final report and recommendations, along with supporting documents, will be sent to the commissioner for action. The department report and recommendations, with supporting documents, will accompany the council report.

6. Commissioner actions. The commissioner, upon review of the council report and recommendations, will take one of the actions listed below. The commissioner's action will be accompanied by a report giving the reason for the decision. Notification of the action will be made in the same manner as that of the public forum as called for in 7 MCAR S 1.538 B.3.d.

a. If the commissioner determines that an occupational group shall be credentialed by registration with an existing health related licensing board acting as the administrative authority, the commissioner will establish procedures and adopt rules in cooperation with the identified board. The rules shall include, if appropriate, but not be limited to the following:

(1) Functional differentiation of the group;

(2) Qualifications for registration for all entry routes;

(3) Requirements for different levels of registered titles corresponding to steps in the occupation's career progression;

(4) Organizational structure of any advisory councils to the administrative authority;

(5) Procedures for registration;

(6) Requirements for registration renewal, including but not limited to provisions attempting to assure continued competency;

(7) Disciplinary procedures;

(8) Fee setting for initial application for registration and for renewal application;

(9) Such other information that the commissioner deems necessary for the regulation of the occupational group.

b. If the commissioner determines that an occupational group should be credentialed by licensure, with either an existing health related licensing board, the commissioner, or a new and separate licensing board, acting as administrative authority, the commissioner shall promptly so report to the legislature.

c. If the commissioner determines that an occupational group shall be regulated by registration, with the commissioner acting as administrative authority, the commissioner shall establish procedures and adopt rules to implement the decision. The rules will include, if appropriate, but not be limited to, the items contained in 7 MCAR S 1.538 B.6.a.(1)-(9).

d. If the commissioner determines that an occupational group should be regulated pursuant to Minnesota Statutes, section 214.001, subdivision 3(a), 3(b), or 3(d) or any combination thereof or in combination with credentialing under these rules, the commissioner shall promptly so report to the legislature.

e. If the commissioner determines that regulating the occupational group is not in the public interest, the applicant group (if the application was initiated by the group) or the council (if the application was initiated by the commissioner) shall be so notified.

f. If the commissioner determines that further study of the occupational group is required, the commissioner shall refer the recommendation back to the council for further study in accordance with the commissioner's instructions. The instructions shall include a specified time in which to complete this study. Extensions of time may be granted if needed to complete adequately the further study.

C. Reconsideration process.

1. If an interested person or the applicant group is dissatisfied with the decision of the commissioner, the person or applicant group may request, within 60 days of notification of that decision, that the commissioner reconsider the application. The person or applicant group shall submit in writing, along with the request for reconsideration, arguments detailing why the decision of the commissioner was not supported by the evidence presented or why new or changed evidence does not support the earlier decision of the commissioner.

2. The commissioner may reconsider the regulatory decisions or remand them, along with all reports, recommendations, and supporting documents to the council. If the matter is remanded, the council shall reconsider the application and recommend either no change or appropriate changes to the commissioner. The council may refer the matter to the subcommittee which initially considered the application. The recommendation of the council shall include substantiating documentation. Reconsideration by the council may include new

public forums if new or changed evidence warrants it.

3. The commissioner shall notify the person or applicant group of the results of the request to reconsider the regulatory decisions.

Repealed 7 SR 1044 1-10-83

4614-4616

Registration of Emergency Medical Technicians

7 MCAR S 1.541 Purpose and definitions.

A. Purpose. The purpose of 7 MCAR SS 1.541-1.545 is to establish the administrative structure, the procedures and the requirements for the registration of those persons with basic emergency care training as emergency medical technicians.

B. Definitions. For the purposes of Rules 7 MCAR SS 1.541-1.545, the words, terms and phrases listed below in this subdivision shall have the meaning stated herein, unless the language and context clearly indicates that a different meaning is intended.

1. "Applicant" means a person who applies, pursuant to these rules, either initially or on a renewal basis, to be registered as an emergency medical technician.

2. "Basic emergency care" means care given at the scene of a medical emergency, during transport to a medical care facility and/or until responsibility can be transferred to appropriate personnel. Such care may include (but not be limited to) recognizing a life-threatening situation, providing cardiopulmonary resuscitation, monitoring vital signs, controlling hemorrhage, clearing airway passages, treating shock, immobilizing fractures, dressing and bandaging wounds, assisting in childbirth, caring for burn or poison victims, diabetic or epileptic persons, managing unruly and disturbed persons, lifting and moving victims properly, extricating victims, providing safe transport and using such other skills which may be necessary to reduce the seriousness of an emergency situation.

3. "Basic emergency care course" means the course that is at least 81 hours of instruction in at least the following areas:

a. procedures and skills currently accepted and necessary to perform basic emergency care;

b. equipment currently used in providing basic emergency care; and

c. current legal requirements for emergency care.

4. "Continuing education in basic emergency care" means at least 24 clock hours of formal review of basic emergency care skills and instruction and examination in new knowledge and skills in basic emergency care skills, equipment, communication procedures and legal requirements. The formal review, instruction, and examination must cover at least the following skill areas:

a. setting up, adjusting and closing down oxygen equipment;

b. use of suction equipment, artificial airways, and bag mask resuscitator;

c. determination of blood pressure;

d. bandaging the head, eye and extremity;

e. performance of cardiopulmonary resuscitation, one and two rescuers;

f. performance of an examination of life-threatening problems and a systematic check of injuries;

g. splinting a fracture of the upper and lower extremity;

h. lifting and moving patients from bed-height surfaces and positioning them on a stretcher;

i. immobilization of neck and torso of a sitting patient on a short backboard; and

j. moving a patient with a suspected cervical spine injury from the floor and immobilizing him/her on a long backboard.

5. "Commissioner" means the commissioner of health.

6. "Council" means the emergency medical technicians advisory council defined in 7 MCAR S 1.543.

7. "Emergency medical technician" means a person registered pursuant to these rules to provide basic emergency care.

8. "EMT" means an emergency medical technician.

9. "Ambulance driver or attendant, police, fire or rescue squad member," means a person who provides basic emergency care for an ambulance service licensed by the state of Minnesota.

10. "National Registry of Emergency Medical Technicians" means the private national accrediting organization in Columbus, Ohio which establishes voluntary standards, training and examinations for qualifying ambulance personnel.

11. "Registration" or "registered" means that an applicant has been found to meet the qualifications specified in these rules for providing basic emergency care. Only persons so registered are permitted to use the designated title of "emergency medical technician" or "EMT".

Repealed 7 SR 1044 1-10-83

H614
H616

7 MCAR S 1.542 Registration requirements; career progression; disciplinary actions.

A. Initial registration.

1. All applicants for initial registration shall submit an application on a form provided by the commissioner and fees as prescribed in 7 MCAR S 1.542.

The information required by the commissioner on the application shall be so as to permit a complete evaluation of each applicant to determine whether the applicant meets the requirement for registration as specified in these rules and any applicable statutes. To clarify incomplete or ambiguous information presented in the application, the commissioner may require an applicant to submit additional information as may be necessary to determine the applicant's qualifications. In order to be registered, an applicant, except as specified in 7 MCAR S 1.542 A.2. and A.3. shall:

a. be at least 18 years old;

b. have successfully completed the basic emergency care course;

c. have passed the written examination administered by the National Registry of Emergency Medical Technicians or its agent; and

d. have passed a practical examination on basic emergency care administered by the commissioner or an agent of the commissioner.

2. An applicant need not have successfully completed a basic emergency care course if the applicant:

a. holds a current Advanced Red Cross First Aid card; and

b. has successfully completed continuing education in basic emergency care; and

c. has served as an ambulance driver or attendant, fire, police, or rescue squad member for one year immediately prior to submission of the application; and

d. has passed the written examination administered by the National Registry of Emergency Medical Technicians or its agent; and

e. has passed a practical examination on basic emergency care administered by the commissioner or an agent of the commissioner.

3. Applicants who are or have been licensed or registered in a state other than Minnesota may be registered pursuant to these rules without having met the criteria of 7 MCAR S 1.542 A.1 and A.2. if they had met the standards of the National Registry of Emergency Medical Technicians as those standards

existed on July 6, 1978.

4. An applicant shall not make more than two attempts in any 12-month period to successfully complete either the written examination of the National Registry of Emergency Medical Technicians or the practical examination of the commissioner.

B. Renewal registration.

1. An applicant's registration shall expire biennially on the anniversary date of the initial registration. Each applicant shall be required to renew his/her registration every two years. Every applicant shall submit a registration renewal application, on a form provided by the commissioner, together with a renewal fee for the biennium or part thereof. The information requested by the commissioner on the registration renewal application shall be such so as to permit a complete evaluation of each applicant to determine whether the applicant meets the requirements for registration renewal as specified in these rules and any applicable statutes. To clarify incomplete or ambiguous information presented in the renewal application, the commissioner may request an applicant to submit additional information as may be necessary to determine the applicant's qualifications for renewal. Applications submitted after the anniversary date of the initial registration must be accompanied by the late fee together with all other information required by this rule.

2. For registration renewal each registrant shall submit evidence of successful completion of 24 clock hours of continuing education in basic emergency care.

3. Applicants who have permitted their registrations to expire for more than one calendar year may regain registration when they:

a. successfully complete 24 clock hours of continuing education in basic emergency care; or

b. have met the standards of the National Registry of Emergency Medical Technicians, as those standards existed on July 6, 1978, and

c. have served as an ambulance driver or attendant, fire, police or rescue squad member for one year immediately prior to submission of the renewal application.

Applicants who cannot meet the requirements set forth above in 7 MCAR S 1.542 B.3. must meet requirements of 7 MCAR S 1.542 A. for initial registration application.

C. Application fees. Fees to be submitted with initial or renewal applications shall be as follows:

1. Initial application fee: $11.

2. Renewal application fee: $11 or $2 if registrant is a volunteer ambulance driver or attendant, police, fire, or rescue squad member who provides services without the expectation of remuneration and does not depend in any way upon the provision of these services for his or her livelihood.

3. Penalty fee for submission of renewal application after registration date: $10.

D. Denial of registration; disciplinary actions.

1. Upon receipt of a complaint or other communication, whether oral or written, which alleges or implies the existence of a ground for denial of registration or disciplinary action as specified in 7 MCAR § 1.542 D.2. the commissioner or council may initiate an investigation. In so doing, the council may request the registrant to appear before it to determine the merits of the situation in question. Prior to any disciplinary action, a written complaint will be obtained from a complaining party. In each case, the council shall make a recommendation to the commissioner as to whether proceedings under the Administrative Procedures Act would be appropriate and should be initiated.

2. The commissioner may refuse to grant or renew a registration, suspend or revoke a registration, or use any reasonable lesser remedy against a registrant for any of the following reasons:

a. submission of false or misleading information or credentials in order to obtain or renew registration;

b. Failure to meet the requirements for initial or renewal registration; or

c. incompetency, or inappropriate conduct in the performance of basic emergency care services or related functions.

3. Disciplinary actions shall comply with the provisions of the Administrative Procedures Act, Minnesota Statutes, chapter 15 (1976, as amended).

4. Upon revocation or suspension, the registrant shall return to the commissioner the registration ard current renewal certificates.

5. A registrant who has had his registration revoked shall not be entitled to apply for re-registration until at least one year following the effective date of the revocation or such longer period of time specified by the commissioner at the time of such revocation.

6. A suspended registration may be reinstated upon fulfillment of the terms of suspension; provided, however, that all requirements of the rules for registration renewal, if applicable, shall be met prior to reinstatement.

Repealed 7 SR 1044 1-10-83

46614
46616

7 MCAR S 1.543 The emergency medical technicians advisory council.

A. Membership. The council shall consist of seven members appointed by the commissioner as follows:

1. Two public members as defined by Minnesota Statutes, section 214.02 (1976, as amended).

2. One EMT representative of ambulance personnel, fire, police, or rescue squad members, who provides emergency care services for at least 1,560 hours per year for remuneration.

3. One EMT representative of ambulance personnel, fire, police or rescue squad members, who provides emergency care services for less than 1,560 hours a year with or without remuneration.

4. Two physicians who are knowledgeable in the national, regional and local development in the area of EMT training. One shall be from a metropolitan hospital and the other from an out-state hospital.

5. One full-time registered nurse employed in an emergency department of a hospital.

At least one of those persons referenced in 7 MCAR S 1.543 A.4. and A.5. shall be actively involved in the education of EMT's.

B. Organization, duties and responsibilities.

1. The council shall be organized and administered under the provisions of Minnesota Statutes, section 15.059 (1976, as amended) and the commissioner's policies relating to advisory councils.*

2. The council shall:

a. advise the commissioner regarding EMT registration rules;

b. advise the commissioner on the enforcement of the EMT rules;

c. provide for the dissemination of information regarding EMT registration standards;

d. assess the qualifications of each applicant before recommending credentialing to the commissioner; and

e. such other duties as directed by the commissioner not inconsistent with these rules.

*The commissioner's policies concern only internal

management which do not directly affect the rights of or procedures available to the public and are therefore not subject to rule-making.

4617-4619 Registration of Enviromental Health Specialists/Sanitarians

7 MCAR S 1.546 Purposes and definitions.

A. Purpose. The purpose of 7 MCAR SS 1.546-1.550 is to establish the administrative structure, the procedures and the requirements for the registration of those persons who are qualified to present themselves as environmental health specialists/sanitarians.

B. Definitions. For the purposes of 7 MCAR SS 1.546-1.550, the words, terms and phrases listed below in this subdivision shall have the meaning stated herein, unless the language and context clearly indicates that a different meaning is intended.

1. "Acceptable continuing education activity" means a learning experience in which a registrant has participated, evidence of which he/she submits to the council as part of the application for registration renewal, and which meets the requirements stated in these rules.

2. "Applicant" means a person who applies pursuant to these rules, either initially or on a renewal basis, to be registered as an environmental health specialist or sanitarian.

3. "Commissioner" means commissioner of health.

4. "Contact hour" means an instructional session of 50 consecutive minutes excluding coffee breaks, registration, meals (with or without speaker) or other social activities.

5. "Council" means environmental health specialists/sanitarians advisory council as referenced in 7 MCAR S 1.548.

6. "Environmental health specialist/sanitarian" means a person registered pursuant to these rules to plan, organize, manage, implement, and evaluate one or more program areas comprising the field of environmental health. Environmental program areas include but are not limited to: food, beverage and lodging sanitation; housing; refuse disposal; water supply sanitation; rodent, insect and vermin control; accident prevention; swimming pool and public bathing facility sanitation; radiation safety; air and water quality, noise pollution, and institutional and industrial hygiene. Implementation includes community education, investigation, consultation, review of construction plans, collection of samples and interpretation of laboratory data, enforcement actions, review and recommendation of policy and/or regulation.

7. "Registration" or "registered" means that an applicant has been found by the commissioner to meet the qualifications specified in these rules to protect environmental health. Only persons so registered are permitted to use the designated titles of "environmental health specialist" or "sanitarian" or the

initials "R.S."

8. "Registration examination" means the examination approved by the commissioner and administered by the commissioner or his designated agent. For approval the examination must meet the following criteria:

a. The examination has been validated by a content validity study which consists of data showing that the examination covers a representative sample of the job tasks, work behaviors, performance skills to be performed on the job for which the applicant is to be evaluated; and/or

b. The examination has been validated by a criterion related validity study which consists of empirical data demonstrating that the selection procedure is predictive of, or significantly correlated with, job performance and which has a validity coefficient significant at the .05 level of significance; and

c. Validity studies are based upon a review of information about the job for which the examination is to be used, which shall include but is not limited to an analysis of job tasks, work behaviors, or performance skills that are relevant to the job; and

d. Job tasks, work behaviors, or performance skills used as a basis for test developments and validity studies must include but are not limited to the knowledge areas in the definition of environmental health specialist/sanitarian as outlined in 7 MCAR S 1.546 B.6; and

e. The examination has been determined to be reliable utilizing the parallel forms or internal consistency methods of estimating reliability and the reliability coefficient is no less than .70; and

f. The examination is revised or a new form is issued when technical advances in the field indicate the examination should be updated to acknowledge related changes in the definition of environmental health specialist/sanitarian as outlined in 7 MCAR S 1.546 B.6. The commissioner may adopt for use at his discretion any standardized national test which meets these criteria.

4617-4619

7 MCAR S 1.547 Registration requirements; career progression; disciplinary action.

A. Initial Registration.

1. All applicants for initial registration shall submit an application on a form to be prepared by the commissioner and fees as prescribed in 7 MCAR S 1.547 C. The information requested by the commissioner on the application shall be such so as to permit a complete evaluation of each applicant to

determine whether the applicant meets the requirements for registration as specified in these rules and any applicable statutes. To clarify incomplete or ambiguous information presented in the application, the commissioner may request an applicant to submit additional information as may be necessary to determine the applicant's qualifications. In order to be registered, an applicant shall provide:

a. Evidence of receiving a baccalaureate or post-baccalaureate degree in environmental health, sanitary science, sanitary engineering or other related environmental health field which includes at least 30-semester or 45-quarter-hour credits in the physical or biological sciences; and

b. Evidence of at least one year of supervised employment in one or more of the program areas listed in 7 MCAR S 1.546 B.6. definition of "environmental health specialist/sanitarian." Supervision shall be provided by an environmental health specialist or a sanitarian or a licensed health professional, or an engineer or other professional with a graduate degree in one of the physical or biological sciences, or other person whom the commissioner deems has equivalent environmental health background.

c. Evidence of passing the registration examination.

2. For a period of six months following the effective date of the rules, an applicant may be registered without having received a baccalaureate or higher degree as provided in 7 MCAR S 1.547 A.1. if the applicant:

a. Submits evidence of experience in one or more of the program areas listed in 7 MCAR S 1.546 B.6. definition of an "environmental health specialist" or "sanitarian" for at least the five years immediately preceeding his/her application;

b. Submits a statement of satisfactory employment by the employer or supervisor which indicates that the applicant has performed competently in one or more of the program areas listed in the definition of environmental health specialist/sanitarian;

c. Submits evidence of having passed a civil service or other qualifying exam for a job classification of "environmental health specialist" or "sanitarian" or inspector or public health officer or engineer or other similar equivalent job title classification or of having successfully completed the registration exam.

3. No applicant shall make more than two attempts within the same calendar year any 12-month period to successfully complete the registration examination.

4. Persons who have attained a registration or license outside of Minnesota may be entitled to registration in

Minnesota if they can provide evidence of meeting the requirements set forth in 7 MCAR S 1.547 A.1.a.,b. and c.

B. Renewal registration.

1. An applicant's registration shall expire biennially on his/her birthday unless it is renewed. Each applicant shall be required to renew his/her registration every two years except that following the initial registration date, an applicant shall renew his/her registration no less than 24 months and no more than 36 months if he/she is registered for the first time on a date other than his/her birthday. Every applicant shall submit a completed registration renewal application, on a form provided by the commissioner together with the renewal fee for the biennium or part thereof. The information requested by the commissioner on the registration renewal application shall be such so as to permit a complete evaluation of each application to determine whether the applicant meets the requirements for registration renewal as specified in these rules and any applicable statutes. To clarify incomplete or ambiguous information presented in the application, the commissioner or his agent may request an applicant to submit additional information as may be necessary to determine the applicant's qualifications for renewal. Applications submitted after the applicant's birthday must be accompanied by the late fee of $10 together with all other information required by this rule.

2. For registration renewal, each registrant shall submit evidence of successful completion of 24 contact hours of acceptable continuing education activities the content of which is related to one or more of the environmental program areas contained in 7 MCAR S 1.546 B.6.

3. A continued education activity must meet the following criteria in order for credit to be given:

a. It must have a specific, written objective(s) which describe expected outcomes for the participant;

b. It must be presented by knowledgeable person(s) who have reviewed the development in the subject being covered in the program within the last two years. His/her qualifications must be documented by one of the following:

(1) specialized training in the subject matter;

(2) experience in teaching the subject matter; or

(3) experience in working in the subject areas.

c. It must last at least one contact hour.

d. It must have stated in written form what mechanism was utilized to demonstrate whether or not learning did occur. The mechanism may include, but is not limited to, a successfully completed written test or a performance component.

e. It must utilize a mechanism to validate participation. This may include, but is not limited to, earned credits and/or verification of attendance. Program sponsors shall maintain attendance sheets for three years.

4. The council shall review the submitted evidence and decide if the evidence demonstrates that the registrant has complied with the renewal requirements set forth in 7 MCAR S 1.547 B.2. and 3. If the council decides that the evidence demonstrates that the registrant has so complied, the council will recommend to the commissioner that the registrant's continuing education activities should be accepted.

If the council decides that the evidence does not demonstrate that the registrant has complied with 7 MCAR S 1.547 B.2. and 3., the council will so inform the applicant who will then have an opportunity to submit additional evidence, decide if it demonstrates that the registrant has complied with 7 MCAR S 1.547 B.2. and 3., and recommend to the commissioner that the registrant's continuing education activities should or should not be accepted. The commissioner will then make the final decision regarding the acceptability of the registrant's continuing education activities.

5. Applicants who have permitted their registrations to expire for more than two years may regain their registration when they successfully complete the registration examination, complete continuing education requirements, and submit the required renewal forms and fees.

C. Application fees. Fees to be submitted with initial or renewal applications shall be as follows:

1. Initial application fee: $30 plus examination fees.

2. Biennial renewal application fee: $30.

3. Penalty for late submission of renewal application: $10, if not renewed by designated renewal date.

D. Disciplinary actions.

1. Upon receipt of a complaint or other communication, whether oral or written, which alleges or implies the existence of a ground for denial of registration or disciplinary action as specified in 7 MCAR S 1.547 D.2. the commissioner or council may initiate an investigation.

Prior to any disciplinary action a written complaint shall be obtained from a complaining party. In so doing, the council may request the registrant to appear before them to determine the merits of the situation in question. In each case, the council shall make a recommendation to the commissioner as to whether proceedings under the Administrative Procedures Act would be appropriate and should be initiated.

2. The commissioner may refuse to grant or renew a resignation, suspend or revoke a registration, or use any reasonable lesser remedy against a registrant for any of the following reasons:

a. Submission of false or misleading information or credentials in order to obtain or renew registration; or

b. Failure to meet the requirements for initial or renewal registration; or

c. Incompetency; negligence or inappropriate conduct in the performance or environmental health duties or related functions.

3. Disciplinary actions shall comply with the provisions of the Administrative Procedures Act, Minnesota Statutes, chapter 15 (1976, as amended).

4. Upon revocation or suspension, the registrant shall return to the commissioner his/her registration and current renewal certificates.

5. A registrant who has had his/her registration revoked shall not be entitled to apply for re-registration until at least one year following the effective date of the revocation or such longer period of time specified by the commissioner.

A suspended registration may be reinstated upon fulfillment of the terms of suspension; provided, however, that all requirements of the rules for registration renewal, if applicable, shall be met prior to reinstatement.

4617-4619

7 MCAR S 1.548 The environmental health specialist/sanitarian advisory council.

A. Membership. The council shall consist of seven members appointed by the commisioner as follows:

1. Two public members as defined in Minnesota Statutes, section 214.02 (1976, as amended);

2. One educator or a representative from a regulated industry for which environmental health specialists/sanitarians are charged with enforcement of the regulation;

3. Four environmental health specialists/sanitarians representative of county, municipal and state agencies which reflect the distribution of environmental health specialists/sanitarians among these employers at the time of appointment.

B. Organization, duties and responsibilities.

1. The council shall be organized and administered under

the provisions of Minnesota Statutes, section 15.059 (1976, as amended) and the commissioner's policies relating to advisory councils.

2. The council shall:

a. Advise the commissioner regarding environmental health specialist/sanitarian registration standards;

b. Advise the commissioner on enforcement of the environmental health specialist/sanitarian rules;

c. Provide for the dissemination of information regarding environmental health specialist/sanitarian registration standards;

d. Review applications and recommend applicants for registration or registration renewal.

Insert new: 7 MCAR SS 1.601-1.630, AR01005T

Basic and Advanced Life Support Transportation Services
7 MCAR §§ 1.601-1.611
(effective June 1, 1980)

7 MCAR § 1.601 Definitions.

A. "Air ambulance" means an ambulance that is designed and manufactured to travel by air, and includes fixed wing aircraft and helicopters.

B. "ALS" means advanced life support transportation service.

C. "BLS" means basic life support transportation service.

D. "Central base of operation" means a base of operation for a life support transportation service that serves as the coordinating point for other bases of operation of a licensee within a single primary service area.

E. "Change" means an action or occurrence by which a situation relevant to licensure has become distinctly and materially different such that it can reasonably be expected that the licensee will not meet the conditions of its current license.

F. "Change in type of service" means any change in the schedule of:

1. skills and equipment used in patient care;

2. hours during which service will be available; or

3. group(s) of individuals for whom services will be provided exclusively such that a new type or types of licenses are required.

G. "Change of base of operation" means a change involving a relocation of vehicles, related equipment, and personnel housed at one location for housing at another location such that it is no longer possible for the service making the change to meet the conditions of its license regarding its designated primary service area.

H. "City of the first class" and "city of the second class" have the meanings given to them in Minn. Stat. ch. 410.

I. "Commissioner" means Commissioner of Health.

J. "Communications base" means the location at which equipment is housed for use in two-way radio communications with ambulances or medical facilities.

K. "Disaster" means a sudden occurrence or other temporary condition determined to have resulted or to be likely to result in such widespread damage and such mass casualties or threats to the health and safety of members of

the public that available life support transportation services cannot reasonably be considered adequate to respond to the emergency needs of the affected public.

L. "Full operating condition and good repair" means a condition whereby all systems, parts, elements and components are completely workable, operational and reliable.

M. "Land ambulance" means an ambulance that is designed and manufactured to travel on land.

N. "Medical control" means the direction by physicians of out-of-hospital emergency medical care delivered by non-physicians that is provided directly on the scene or through direct oral communication by radio or telephone, or indirectly through written patient triage, treatment, and transfer guidelines or protocols, and that includes the following:

1. providing advice on training and orientation of personnel,

2. providing advice on upgrading and purchasing equipment,

3. prescribing and maintaining any standing orders,

4. providing triage and transporting guidelines to assure that patients requiring care are transported to appropriate medical facilities for treatment, and

5. assisting with the development and operation of an internal quality assurance mechanism that includes review of services provided.

O. "Nonbreakable" means not easily broken and not liable to be broken through normal use and minor abuse such as dropping.

P. "Osteopath" means a person licensed to practice osteopathy pursuant to Minn. Stat. §§ 148.11-148.16 prior to 1963 or licensed to practice medicine pursuant to Minn. Stat. ch. 147.

Q. "Physician" means a person licensed to practice medicine pursuant to Minn. Stat. ch. 147.

R. "Registered Nurse" means a person licensed to practice professional nursing pursuant to Minn. Stat. ch. 148.

S. "Scheduled advanced life support transportation service" means an advanced life support transportation service that:

1. restricts the availability of its services to specified periods of time;

2. restricts the availability of its services to a specified group of people; or

3. restricts the type of services it provides to a specified medical category or categories.

T. "Scheduled basic life support transportation service" means a basic life support transportation service that:

1. restricts the availability of its service to specified periods of time;

2. restricts the availability of its services to a specified group of people; or

3. restricts the type of services it provides to a specified medical category or categories.

U. "Scheduled life support transportation service" means basic or advanced life support transportation service that:

1. restricts the availability of its services to specified periods of time;

2. restricts the availability of its services to a specified group of people; or

3. restricts the type of services it provides to a specified medical category or categories.

V. "Single-service" means designed and manufactured to be used once and then disposed of, not to be re-used.

W. "Sterile" means the state of being free from microorganisms.

X. "Telemetry" means the direct transmission of electronic signals indicating measurement of patient physiological parameters.

Y. "Treatment" means the use of the skills or equipment required by these rules for the management and care of an ill or injured person or of a pregnant woman for the purpose of combating disease, minimizing disability, preventing death, or preserving health.

Z. "Variance" means permission to comply in a manner other than that generally specified.

AA. "Waiver" means permission not to comply.

7 MCAR § 1.602 Applications for licensure.

A. Contents of all applications.

1. An application for license renewal, or for licensure of a new service, change in primary service area, change in base of operations, or type of service provided shall be made on a form provided by the commissioner and

shall include, at a minimum, the following categories of information to allow a determination of compliance with the requirements of Minn. Stat. §§ 144.801 *et seq.* and to provide sufficient information for local and regional reviews as prescribed in Minn. Stat. § 144.802:

a. identification, location and pertinent telephone numbers for the proposed service and the name of the individual responsible for accuracy of the application;

b. the address of all bases of operation;

c. the names, addresses, and telephone numbers of the following:

(1) the medical advisor or medical director of the service, and

(2) the base hospital or affiliated medical facility, if any, for the service;

d. the location of the communications base and a description of the communications equipment on the licensee's ambulances and at its communications base;

e. the type of action requested (new license, license renewal, change in primary service area, change of base of operations, or change in type of service provided);

f. the type and identification of ownership;

g. the type and identification of the entity responsible for operation, if different from ownership;

h. a declaration of proposed primary service area according to the requirements of 7 MCAR § 1.608 F.;

i. back-up coverage including reserve ambulance(s) owned by applicant, back-up services, and indication of signed mutual aid agreements with neighboring providers;

j. other licensed providers in the primary service area;

k. a description of the population to be served;

l. type of service to be licensed;

m. actual past and estimated future utilization of service;

n. basic actual or estimated financial data, including:

(1) revenue or income (actual and in-kind),

(2) actual or projected charges,

(3) sources of revenue by type, and

(4) expenses (actual and imputed) by category;

o. qualifications of personnel, including:

(1) numbers and credentials of attendants and drivers, and

(2) names and addresses of key personnel; and

p. a listing and description of all ambulances to be used by the service if licensed.

2. Applicants shall also furnish such other information that may be needed by the commissioner to clarify incomplete or ambiguous information presented in the application.

3. Applicants shall furnish or retain in file documentation of all statements made in application for licensure.

B. Contents of applications for license of new services, expansions of primary service area, and changes in base of operation or type of service.

1. An application for licensure of a new service or for a change in base of operation, primary service area, or type of service shall include, at a minimum, the following categories of information to allow for a determination of need for the proposed service by local units of government, local boards of health, and Health Systems Agencies, as prescribed in Minn. Stat. § 144.802, subd. 3, and to allow for a determination of the applicability of Minn. Stat. §§ 145.832-144.845, the Minnesota Certificate of Need Law:

a. a description of the proposed new service, change in base of operation, expansion of primary service area, or change in type of service;

b. a justification of the need for the proposed new service or modification in service;

c. a description of the population to be served by the proposed new service or modified service;

d. a description of the geographic features of the primary service area that have a direct bearing on the proposed service or modified service; and

e. a statement of all costs associated with the new service, including any capital costs as defined in Minn. Stat. §§ 145.832-145.845, operating costs and projected patient charges for at least one year, and other related information.

2. Applicants shall also furnish such other information that may be

needed by the commissioner to clarify incomplete or ambiguous information presented in the application.

C. Contents of applications for life support licensure by health care facilities subject to certificate of need review under Minn. Stat. §§ 145.832-145.845.

1. Applicants for life support licensure that are health care facilities as defined in Minn. Stat. § 145.833, subd. 2, shall submit sufficient information on the forms described in 7 MCAR § 1.602 A. and B. above to allow for a determination of the need for review for a certificate of need as prescribed in Minn. Stat. § 145.834.

2. Applicants for life support licensure that are determined to be subject to certificate of need review by the commissioner shall provide such additional information as may be required by Minn. Stat. § 145.836; such information shall be submitted on forms provided by the commissioner and shall meet all criteria specified in rule and statute for certificate of need applications.

7 MCAR § 1.603 Standards for operation of basic life support transportation services.

A. Personnel.

1. Qualifications.

a. No person shall function as an attendant or driver or represent himself or herself as an attendant or driver of a basic life support transportation service (BLS) ambulance unless that person:

(1) possesses a current American Red Cross advanced first aid certificate; or

(2) possesses a current emergency care certificate issued by the commissioner pursuant to Minn. Stat. § 214.13; or

(3) possesses a current emergency care certificate that complies with the provisions of 7 MCAR § 1.609; or

(4) meets the qualifications of 7 MCAR § 1.604 A. for an advanced life support transportation service ambulance.

b. The requirement set forth in 7 MCAR § 1.603 A. 1. a. shall not apply to persons functioning as pilots of air ambulances.

2. Staffing.

a. Each BLS licensee shall employ or otherwise have on staff a minimum of five persons qualified under 7 MCAR § 1.603 A. 1. a. and shall maintain:

(1) a current roster, including the name, address and qualification of such persons; and

(2) files documenting personnel qualifications.

b. By July 1, 1985, each licensee shall have a physician medical advisor responsible for at least:

(1) providing advice on training and orientation of personnel;

(2) providing advice on upgrading and purchasing equipment;

(3) prescribing and maintaining any standing orders;

(4) providing triage and transporting guidelines to assure that patients requiring care are transported to appropriate medical facilities for treatment; and

(5) assisting with the development and operation of an internal quality assurance mechanism that shall include review of services provided.

c. The name and address of the medical advisor and a written statement signed by the medical advisor indicating his or her acceptance of the responsibilities as specified in 7 MCAR § 1.603 A. 2. b. shall be maintained in the files of the licensee.

d. If a life support transportation service finds it impossible to arrange for an attendant to accompany a driver in responding to a medical emergency, the driver may proceed to the site of the emergency and transport the patient to a health care facility without an accompanying attendant, provided that the service shall:

(1) make all reasonable efforts to arrange for an attendant to be present at the site of the emergency and enroute to a health care facility;

(2) document each case in which it was impossible to arrange for an attendant to be present at the site of the emergency and to accompany the driver during transport of the patient (such documentation shall include an explanation of what reasonable efforts were made to arrange for an attendant to be present); and

(3) maintain such documentation in its files.

3. Operational requirement. An attendant shall be in the patient compartment while transporting a patient or patients except as allowed by Minn. Stat. § 144.804, subd. 2.

B. Equipment.

1. Minimum standards.

a. All ambulances shall carry equipment that complies with the following standards:

(1) splinting equipment that shall include:

(a) one lower-extremity traction splint;

(b) fixation splints for fractures of both legs and both arms;

(c) one short and one long backboard with head immobilization gear and patient fixation straps;

(2) ventilation assistance and airway maintenance equipment that shall include:

(a) one portable oxygen system complying with the following specifications:

(i) high-pressure tank regulated to 50 psi at flowmeter;

(ii) calibrated to deliver to patient two to 15 liters per minute;

(iii) minimum of 20 minutes supply at a rate of 15 liters per minute;

(iv) single service tubing from regulator valve outlet to patient;

(v) single service nasal cannula and single-service inhalation mask;

(vi) one each of infant, child and adult masks for administration of oxygen at a concentration of at least 40%; and

(vii) capability for use as oxygen source as described in 7 MCAR § 1.603 B. 1. a. (2) (c) below.

(b) one oxygen system for use in the ambulance that complies with 7 MCAR § 1.603 B. 1. a. (2) (a) (i), (ii), (iv)-(vii); such a system shall be capable of delivering a minimum of 60 minutes supply at a rate of 15 liters per minute;

(c) one each clear-domed mask for infant, child and adult patients with a 15/22 mm adapter and oxygen inlet port for mouth-to-mask or mechanical-device mask ventilation; or one each of infant, child and adult masks with an oxygen-powered manually cycled valve connected to an oxygen source capable of delivering a minimum of 30 minutes oxygen supply at 15 liters per minute;

(d) portable suction apparatus with catheter or oral suction equipment that shall:

(i) use a non-breakable bottle for collection of the aspirated material, and

(ii) be capable of producing a vacuum of 150 mmHg with an air flow rate of 15 liters per minute for a period of at least five minutes (if the power source is oxygen, this requirement shall be in addition to the time requirement for the administration of oxygen to the patient); and

(e) one each of oropharyngeal airways in adult, child and infant sizes;

(3) dressings, bandages, and bandaging equipment that shall include, at a minimum:

(a) two universal or multitrauma dressings approximately ten inches by 30 inches;

(b) twelve sterile gauze pads or twelve sterile abdominal pad dressings;

(c) two rolls of adhesive tape;

(d) six soft rolled bandages, approximately six inches wide and five yards long; and

(e) bandage shears;

(4) one poison-treatment kit that shall include:

(a) two ounces of syrup of ipecac, and

(b) one quart drinking water in a non-breakable container;

(5) one emergency obstetric kit that shall include:

(a) three sterile towels and two sterile drapes;

(b) bulb syringe;

(c) four sterile pads or sterile sanitary napkins;

(d) plastic bag or basin;

(e) two sterile cord clamps or ties;

(f) one 18-inch by 25-foot roll of aluminum foil or one aluminum blanket, either of which must be sterile and wrapped;

(g) sterile shears or scalpel; and

(h) single service sterile gloves;

(6) equipment for determination of vital signs that shall include:

(a) one stethoscope, and

(b) one sphygmomanometer with cuffs for use with child and adult patients;

(7) a detailed current map for use in locating all points in the primary service area;

(8) extrication equipment that shall include either one twenty-four-inch wrecking bar or a commercial extrication device (KT tool or similar device); and

(9) other equipment that shall include:

(a) one stretcher 72 to 84 inches long and 18 to 24 inches wide;

(b) two sheets, two blankets, and one pillow;

(c) emesis container;

(d) one flashlight; and

(e) one fire extinguisher, five-pound dry-chemical type with A:B:C rating.

b. Inflatable anti-shock trousers may be carried and used by BLS services only if:

(1) all attendants and drivers have been trained in their use;

(2) use of such equipment has been authorized by the medical advisor; and

(3) documentation of (1) and (2) is retained in the licensee's files.

c. All equipment carried by an ambulance shall be stored so that the patient, attendant and/or driver are not injured or otherwise interfered with in the event of sudden stop or movement of the ambulance during tansport.

d. All equipment required by 7 MCAR § 1.603 B. 1. a. shall be permanently stored and kept on or in the ambulance unless otherwise provided for in 7 MCAR § 1.603 B. 2.

2. Air ambulance equipment.

a. Air ambulances licensed to provide basic life support transportation service shall carry all equipment listed in 7 MCAR § 1.603 B. 1. a. with the exception of the equipment in 7 MCAR § 1.603 B. 1. a. (8) and (9) (e).

b. Air ambulances shall comply with the regulations of the Federal Aviation Administration and the rules of the Minnesota Department of Transportation, Aeronautics Division.

c. Equipment required in 7 MCAR § 1.603 B. 2. a. that is not permanently stored on or in an air ambulance shall be kept separate from the air ambulance in a modular pre-packaged form so as to be available for rapid loading and easy access aboard the aircraft at the time of response to a call.

3. Maintenance and sanitation.

a. All equipment shall be maintained in full operating condition and in good repair.

b. All equipment and containers used for storage of equipment shall be kept clean so as to be free from dirt, grease, and other offensive matter.

c. Sheets and pillowcases shall be changed after each use.

d. Single-service equipment shall be wrapped, stored and handled so as to prevent contamination and shall be disposed of after use.

e. Re-usable equipment shall be cleaned after each use so as to be free from dirt, grease and other offensive matter.

f. Equipment soiled or otherwise not free from dirt, grease and other offensive matter, shall be kept in plastic bags or securely covered containers until disposed of or prepared for re-use.

g. Procedures for the periodic performance testing of mechanical equipment listed in 7 MCAR § 1.603 B. 1. a. (2) and (6) (b) shall be developed, maintained and followed; and records of such performance testing shall be kept in the licensee's files.

C. Ambulance standards.

1. Land ambulances.

a. All new land ambulances purchased by a licensee after June 30, 1981, shall comply with the following standards:

(1) the size of the patient compartment shall be a minimum of 116 inches long and 54 inches high (floor to ceiling) and shall provide in width:

(a) not less than 69 inches (wall to wall); or

(b) attendant walkway and kneeling space that shall consist of:

(i) not less than 12 inches of clear walkway between stretcher and fixed bench and between stretchers, and

(ii) not less than 25 inches width and 9 inches height of kneeling space for attendants along the right-hand side of the forward half of the primary stretcher, measured at floor level from the forward right-hand corner of the primary stretcher;

(2) the door openings to the patient compartment shall be a minimum of 30 inches wide and 42 inches high and the doors to the patient compartment must be operable from inside the ambulance;

(3) the interior storage areas shall provide a minimum of 30 cubic feet of storage space to accommodate all required equipment and other equipment carried and shall be located so as to provide for easy access to all equipment;

(4) the interior lighting in the patient compartment shall include overhead or dome lighting and be designed so that no glare can be reflected to the driver's line of vision while the ambulance is transporting the patient; illumination shall provide a minimum intensity of 40 foot candles at the floor level to allow illumination for administering life support services;

(5) environmental equipment shall include a heater for the patient compartment that shall have a minimum output of 21,000 BTUs; and

(6) the ambulance shall:

(a) have an overall height, including roof-mounted equipment except for radio antenna, of 110 inches or less,

(b) have fuel capacity to provide no less than 175-mile range;

(c) have ground clearance of at least six inches when loaded to G.V.W. rating; and

(d) be capable of full performance at ambient temperatures of -30 degrees F. to 125 degrees F.

b. Land ambulances that comply with the standards issued by the Department of Transportation in Federal Specifications KKK-1822 for Ambulance Emergency Medical Care Vehicle (dated January 2, 1974 and amended June 25, 1975), with the exception of sections 3.14, 3.15, and 3.16, are deemed to comply with the standards contained in this section.

c. All ambulances purchased by a licensee on or before June 30, 1981, shall substantially comply with the standards contained in this section as determined by the commissioner according to the following considerations:

(1) size of patient compartment to allow adequate space for administering life support services;

(2) dimensions of door openings to patient compartment and operation of doors to patient compartment to allow for easy access;

(3) design and location of interior storage areas to allow for adequate storage and easy access;

(4) design and operation of interior lighting in patient compartment to allow adequate illumination for administering life support services;

(5) design and operation of environmental equipment to allow for proper heating; and

(6) design, operation and suspension to allow for safe and stable transport.

2. Air ambulances.

a. Air ambulances shall comply with the regulations of the Federal Aviation Administration and the rules of the Minnesota Department of Transportation, Aeronautics Division.

3. Standards for ambulances other than land or air ambulances.

a. Ambulances other than land or air ambulances shall substantially comply with 7 MCAR § 1.603 G. 1. a. as determined by the commissioner according to the considerations set forth in 7 MCAR § 1.603 C. 1. c. (1)-(6).

4. Restraining devices.

a. All ambulances shall be equipped with restraining devices for the stretcher and all seating places in the patient compartment for patient and attendant.

5. Maintenance and sanitation.

a. Each ambulance shall be maintained in full operating condition and in good repair and documentation of such maintenance shall be kept in the licensee's file.

b. The interior of the ambulance, including all storage areas, shall be kept clean so as to be free from dirt, grease, and other offensive matter.

c. If an ambulance has been used to transport a patient who is

known or should be known by the attendant or driver to have a contagious disease (other than a common cold) liable to be transmitted from person to person through exposure or contact, surfaces in the interior of the ambulance and surfaces of equipment that come in contact with such patient shall, immediately after each use, be cleaned so as to be free from dirt, grease and other offensive matter and be disinfected so as to prevent the presence of a level of microbiologic agents injurious to health.

D. Communications.

1. Compliance. All BLS services shall comply with these communication standards by June 30, 1981.

2. Standards and radio frequency assignments.

a. Ambulances shall have a two-way Very High Frequency (VHF) mobile radio, with Continuous Tone Coded Squelch System (CTCSS), capable of operating on at least two VHF high-band radio-frequency (r-f) channels.

b. Each BLS service shall have the capability of using a communications base that has a two-way VHF base radio, with CTCSS, capable of operating on at least two VHF high-band r-f channels.

c. Ambulances and their communication bases shall use Channel One of the mobile and base radios as the main operating channel for medical communications as provided in 7 MCAR § 1.603 D. 2. d. and shall use Channel Two for statewide communications.

d. Ambulances and communications bases shall operate Channel One at the radio-frequency assigned to the district within which the communications base is located as follows:

(1) Agassiz district (Kittson, Roseau, Lake of the Woods, Marshall, Beltrami, Polk, Pennington, Red Lake, Clearwater, Hubbard, Norman and Mahnomen Counties) shall have Channel One r-f of 155.325 MHz;

(2) Arrowhead district (Koochiching, St. Louis, Lake, Cook, Itasca, Carlton and Aitkin Counties) shall have Channel One r-f of 155.355 MHz;

(3) Min-Dak district (Clay, Becker, Wilkin, Ottertail, Grant, Douglas, Stevens, Traverse and Pope Counties) shall have Channel One r-f of 155.355 MHz;

(4) Central district (Cass, Wadena, Crow Wing, Todd, Mille Lacs, Isanti, Pine, Chisago, Kanabec, Morrison, Stearns, Benton, Sherburne, and Wright Counties) shall have Channel One r-f of 155.385 MHz;

(5) Southwest district (Swift, Kandioyohi, Meeker, Lac qui Parle,

Chippewa, Yellow Medicine, Renville, McLeod, Lincoln, Lyon, Redwood, Pipestone, Murray, Cottonwood, Rock, Nobles, Big Stone and Jackson Counties) shall have Channel One r-f of 155.400 MHz;

(6) South Central district (Sibley, LeSueur, Nicollet, Brown, Watonwan, Blue Earth, Waseca, Martin and Faribault Counties) shall have Channel One r-f of 155.355 MHz;

(7) Southeastern district (Rice, Goodhue, Wabasha, Steele, Dodge, Olmsted, Winona, Freeborn, Mower, Fillmore and Houston Counties) shall have Channel One r-f of 155.385 MHz; and

(8) Metropolitan district (Anoka, Hennepin, Ramsey, Washington, Carver, Scott and Dakota Counties) shall have Channel One r-f of 155.325 MHz.

e. The CTCSS tone operation on Channel One of the mobile radio shall be the same as the CTCSS tone operation of the base radio.

f. Ambulances and communications bases shall operate Channel Two at an r-f of 155.340 MHz and shall use a CTCSS tone of 210.7 Hz for channel two.

g. Ambulances and communications bases shall communicate by telephone and other alternative means of communication rather than radio communications when radio communications are not necessary and when readily available.

h. Mobile telephone services shall not be acceptable as an alternative to the required two-way radio operation.

3. Equipment performance. All communications equipment shall be capable of transmitting and receiving clear and understandable voice communications to and from the licensee's communications base and all points within the licensee's primary service area.

4. Equipment maintenance. All communication equipment shall be maintained in full operating condition and in good repair, and documentation of such maintenance shall be kept in the licensee's file.

7 MCAR § 1.604 Standards for operation of advanced life support transportation services.

A. Personnel.

1. Qualifications and training requirements.

a. No person shall function as an attendant or represent himself or herself as an attendant of an advanced life support transportation service (ALS) ambulance unless that person:

(1) is registered by the commissioner pursuant to Minn. Stat. § 214.13 to provide paramedic services; or

(2) has successfully completed the written examination and the practical examination approved by the commissioner according to the provisions of 7 MCAR § 1.604 A. 2. and fulfills the continuing education requirements set forth in 7 MCAR § 1.604 A. 3.

b. No person shall function as a driver or represent himself or herself as a driver of an ALS ambulance unless that person:

(1) possesses a current emergency care certificate issued by the commissioner pursuant to Minn. Stat. § 214.13; or

(2) possesses a current emergency care certificate that complies with the provisions of 7 MCAR § 1.609; or

(3) meets the requirements of 7 MCAR § 1.604 A. 1. a.

c. The requirement set forth in 7 MCAR § 1.604 A. 1. b. shall not apply to persons functioning as pilots of air ambulances.

2. Written and practical examinations.

a. A written examination for attendants of ALS ambulances shall test for competency in the subject areas identified below in order to be approved by the commissioner:

(1) role, responsibilities and training of paramedics,

(2) human systems and patient assessment,

(3) shock and fluid therapy,

(4) general pharmacology,

(5) respiratory system,

(6) cardiovascular system,

(7) central nervous system,

(8) soft tissue injuries,

(9) musculoskeletal system,

(10) medical emergencies,

(11) obstetric/gynecological emergencies,

(12) pediatrics and neonatal,

(13) management of the emotionally disturbed patient,

(14) rescue techniques, and

(15) telemetry and communications.

b. A practical examination for attendants of ALS ambulances shall test for competency in the subject areas identified below in order to be approved by the commissioner:

(1) trauma management including primary and secondary assessment, treating of trauma victims and setting priorities for BLS and ALS management;

(2) cardiology including electrocardiogram interpretation and treatment and related questions;

(3) cardiac arrest, including intubation, intravenous therapy, administration of intravenous medication, and defibrillation;

(4) cardiopulmonary resuscitation (CPR) including one- and two-person CPR, obstructed airway care, and infant resuscitation; and

(5) fracture immobilization.

c. Examiners for practical examinations shall be physicians or nurses with the exception that persons who qualify as attendants under 7 MCAR § 1.604 A. 1. a. or drivers under 7 MCAR § 1.604 A. 1. b. may serve as examiners for the competencies specified in 7 MCAR § 1.604 A. 2. b. (4) or (5).

d. Written and practical examinations shall be administered by the commissioner or by a designated representative.

e. The National Registry of Emergency Medical Technicians Examination for Emergency Medical Technician-Paramedics as of the effective date of these rules is deemed to comply with 7 MCAR § 1.604 A. 2. a.-c.

3. Continuing education requirements.

a. Continuing education requirements for persons qualifying as ALS ambulance attendants pursuant to 7 MCAR § 1.604 A. 1. a. (2) are as follows:

(1) successful completion every two years of 48 hours of refresher training in the subject areas listed in 7 MCAR § 1.604 A. 2. a. (1)-(15);

(2) successful completion every year of a course in CPR; up to four hours of a course of such instruction, if successfully completed, may be applied as partial fulfillment of the 48 hours required every two years;

(3) successful completion every two years of instruction in advanced cardiac life support; up to sixteen hours of a course or such instruction, if successfully completed, may be applied as partial fulfillment of the 48 hours required every two years; and

(4) retention of the competencies listed in 7 MCAR § 1.604 A. 2. b. (1)-(5) as documented in a statement of satisfaction by the medical director.

b. Continuing education courses taken to fulfill the requirements of 7 MCAR § 1.604 A. 3. a. shall be approved in writing by the licensee's physician medical director; documentation of such approval shall be maintained in the licensee's file.

c. Successful completion of the National Registry of EMT-Paramedics continuing education requirements for EMT-Paramedic re-registration shall be deemed to be complete fulfillment of the continuing education requirements set forth in 7 MCAR § 1.604 A. 3. a.

4. Issuance of certificates.

a. Persons successfully completing the written and practical examinations approved by the commissioner pursuant to 7 MCAR § 1.604 A. 2. shall be issued a certificate by the commissioner or a designated representative.

b. The certificate shall remain valid for two years from the date of issuance. The certificate may be renewed after each successful completion of the continuing education requirements specified in 7 MCAR § 1.604 A. 3. and only for periods of two years.

5. Staffing requirements.

a. Each ALS service shall have on staff a minimum of:

(1) five persons meeting the qualifications of attendants set forth in 7 MCAR § 1.604 A. 1. a.; or

(2) three persons meeting the qualifications of attendants set forth in 7 MCAR § 1.604 A. 1. a. and three persons meeting the qualifications of drivers set forth in 7 MCAR § 1.604 A. 1. b.

b. In addition, each ALS service shall maintain:

(1) a current roster, including the names and addresses of all current attendants and drivers, and

(2) files documenting current personnel qualifications.

c. Each licensee shall have a physician medical director responsible for at least the responsibilities set forth in 7 MCAR § 1.603 A. 2. b. (1)-(5).

d. The staffing requirements for BLS services as set forth in 7 MCAR § 1.603 A. 2. c.-d. shall be applicable to ALS services.

e. Each ALS service shall have a formal affiliation with a medical facility capable of providing medical control for patient care by means of immediate two-way voice communication 24 hours a day, seven days a week. The name and address of the affiliated medical facility and a statement signed by the administrator of the medical facility and the medical director of the ALS service documenting the terms of the formal affiliation shall be maintained in the files of the licensee.

6. Operational requirement. An attendant shall be in the patient compartment while transporting a patient or patients except as allowed by Minn. Stat. § 144.804, subd. 2.

B. Equipment.

1. Minimum standards.

a. Equipment standards for BLS ambulances set forth in 7 MCAR § 1.603 B. 1. a. through B. 2. c. shall be applicable to ALS ambulances.

b. In addition to compliance with the equipment standards in 7 MCAR § 1.604 B. 1. a., all ALS ambulances shall be required to have the following equipment:

(1) advanced cardiac care equipment that shall include one portable cardioscope and defibrillator;

(2) airway maintenance equipment that shall include one esophageal obturator airway;

(3) equipment for intravenous therapy and the administration of intravenous medication;

(4) medications and medication administration equipment and supplies; and

(5) one set inflatable anti-shock trousers.

c. All equipment or supplies specified in 7 MCAR § 1.604 B. 1. b. (3) and (4) and any additional equipment and supplies used to provide advanced life support shall be specified in writing by the medical director and documented in the licensee's files.

d. Medications shall be securely stored according to written procedures developed and maintained by the licensee's medical director and shall comply with applicable rules of the Minnesota Board of Pharmacy.

2. Maintenance and sanitation.

a. The maintenance and sanitation requirements for BLS services set forth in 7 MCAR § 1.603 B. 3. a.-b. shall be applicable to ALS services.

b. Procedures for the periodic performance testing of airway maintenance and electronic equipment shall be developed, maintained and followed; and records of such testing shall be kept in the licensee's files.

C. Compliance with ambulance standards. All ALS ambulances shall comply with 7 MCAR § 1.603 C.

D. Communications.

1. Compliance. All ALS services shall comply with these communication standards by June 30, 1981.

2. Standards and radio frequency assignments.

a. Each ALS service shall have the capability of using a communications base that complies with the provisions of 7 MCAR § 1.604 D. 2. b.-c.

b. Ambulances and their communications bases that operate telemetry shall have:

(1) one two-way Ultra High Frequency (UHF) radio, with CTCSS, capable of operating on ten UHF voice and telemetry r-f channels, or

(2) one two-way UHF radio, with CTCSS, capable of operating on eight UHF voice and telemetry channels and one UHF or one VHF radio, with CTCSS, capable of operating on two dispatching r-f channels.

c. Ambulances and communications bases that do not operate telemetry shall comply with 7 MCAR § 1.604 D. 2. b. or 7 MCAR § 1.603 D. 2. a.-b.

d. Ambulances and communication bases using VHF shall comply with 7 MCAR § 1.603 D. 2. c.-f.

e. Ambulances and communications bases using UHF for dispatching shall have the capability of using the following radio frequencies for such functions:

(1) 462.950 MHz or 467.950 MHz for the mobile radio and 462.950 MHz for the base radio; and

(2) 462.975 MHz or 467.975 MHz for the mobile radio and 462.975 MHz for the base radio.

f. Ambulances and communications bases while operating telemetry shall use only the following radio frequencies for medical control:

(1) 468.000 MHz or 463.000 MHz for mobile radio and 463.000 MHz for base radio;

(2) 468.025 MHz or 463.025 MHz for mobile radio and 463.025 MHz for base radio;

(3) 468.050 MHz or 463.050 MHz for mobile radio and 463.050 MHz for base radio;

(4) 468.075 MHz or 463.075 MHz for mobile radio and 463.075 MHz for base radio;

(5) 468.100 MHz or 463.100 MHz for mobile radio and 463.100 MHz for base radio;

(6) 468.125 MHz or 463.125 MHz for mobile radio and 463.125 MHz for base radio;

(7) 468.150 MHz or 463.150 MHz for mobile radio and 463.150 MHz for base radio; and

(8) 468.175 MHz or 463.175 MHz for mobile radio and 463.175 MHz for base radio.

g. Ambulances and communications bases shall have the capability of communicating on the statewide VHF radio frequency specified in 7 MCAR § 1.603 D. 2. f. Documentation of such capability shall be kept in the licensee's file.

h. Ambulances and communications bases shall comply with the provisions of 7 MCAR § 1.603 D. 2. e., g., and h.

3. Equipment performance. Communications equipment shall comply with 7 MCAR § 1.603 D. 3.

4. Equipment maintenance. Communications equipment shall comply with 7 MCAR § 1.603 D. 4.

7 MCAR § 1.605 Standards for the operation of scheduled life support transportation services.

A. General standards.

1. Scheduled life support transportation services shall be either basic or advanced life support transportation services.

2. Scheduled basic life support transportation services shall comply with the provisions of 7 MCAR § 1.603, and scheduled advanced life support transportation services shall comply with provisions of 7 MCAR § 1.604, except that such services shall be exempt from those provisions that would

specifically prohibit or are not required for their operation as scheduled BLS or ALS services in accordance with 7 MCAR § 1.605.

B. Declaration of and adherence to schedule.

1. An applicant for licensure as a scheduled life support transportation service shall declare at the time of application the specific schedule of its intended restrictions as to time, group served, and type(s) of service provided.

2. A licensed scheduled life support transportation service shall provide only the declared schedule of services approved by the commissioner in the granting of the license pursuant to Minn. Stat. § 144.802. Any change in this schedule is subject to the provisions of Minn. Stat. § 144.802.

C. Primary service area. An applicant for licensure as a scheduled life support transportation service shall comply with 7 MCAR § 1.608 F., with the exception of 7 MCAR § 1.608 F. 1. c.

7 MCAR § 1.606 Life support transportation services operated by a nonprofit entity and limited exclusively to providing service by contract for special events and meetings. Life support transportation services operated by a nonprofit entity and limited exclusively to providing service by contract for special events and meetings are scheduled life support transportation services and shall comply with the provisions of 7 MCAR § 1.605.

7 MCAR § 1.607 Life support transportation services provided by an employer for the benefit of its employees. Life support transportation services that are operated by or for an employer for the benefit of its employees are scheduled life support transportation services and shall comply with provisions of 7 MCAR § 1.605.

7 MCAR § 1.608 General provisions.

A. Waivers.

1. Application for waiver. A life support transportation service may apply to the commissioner for a time-limited waiver of any of these rules. Such a waiver will be granted if the applicant affirmatively substantiates that:

a. the rule or rules in question do not address a problem of significance to the public in relation to the applicant's service;

b. the application of the rule or rules would impose an undue burden upon the applicant; and

c. the granting of a waiver will not adversely affect the public health or welfare.

2. Renewal, revocation, and reporting.

a. A waiver may be renewed upon re-application in conformance with the process described in 7 MCAR § 1.608 A. 1.

b. A waiver may be revoked if a material change in the circumstances justifying its granting occurs.

c. Any life support transportation service that has been granted a waiver shall immediately notify the Department of Health in writing of any such material change in circumstances.

B. Variances.

1. Application for variance. A life support transportation service may apply to the commissioner for a time-limited variance from any of these rules. Such a variance will be granted if the applicant specifies alternative practices or measures equivalent or superior to those prescribed in the rule or rules in question and affirmatively substantiates that:

a. the rationale for the rule or rules in question can be met or exceeded by the specified alternative practices or measures;

b. the application of the rule or rules would impose an undue burden upon the applicant; and

c. the granting of the variance will not adversely affect the public health or welfare.

2. Compliance. Any life support transportation service that is granted a variance shall comply with the alternative practices or measures specified in its successful application for the variance.

3. Renewal, revocation, and reporting.

a. A variance may be renewed upon re-application in conformance with the process described in 7 MCAR § 1.608 B. 1.

b. A variance may be revoked if a material change in the circumstances justifying its granting occurs.

c. Any life support transportation service that has been granted a variance shall immediately notify the Department of Health of any such material change in circumstances.

C. Disasters.

1. These rules shall not apply to life support transportation services provided during time of disaster, mass casualty or other public emergency.

2. The commissioner reserves the right to determine whether a disaster, mass casualty or other public emergency is occurring or has occurred so as to cause these rules to be nonapplicable.

D. Advertisement.

1. No life support transportation service may advertise itself, allow itself to be advertised, or otherwise hold itself out as providing services of a type different from those life support transportation services that it is licensed to provide under these rules.

2. All life support transportation services shall observe designated primary service areas as prescribed in 7 MCAR § 1.605 C. or 7 MCAR § 1.608 F. in conducting or allowing any form of advertisement for its service(s).

E. Enforcement provisions.

1. Inspections. Life support transportation services shall not hinder the inspection activities of authorized agents of the commissioner pursuant to Minn. Stat. § 144.808.

2. Correction order. Violation of any of these rules or of the provisions of Minn. Stat. §§ 144.801-144.808 shall constitute grounds for the issuance of a correction order. Any life support transportation service that is issued a correction order shall correct the violation within the time period specified in the correction order.

3. Time periods for correction of violations.

a. Violations of these rules or of Minn. Stat. §§ 144.801-144.808 that create a risk of serious harm to patients of the life support transportation service shall be corrected within time periods ranging from 0 to 14 days as specified by the commissioner or authorized agent.

b. All other violations of these rules or of Minn. Stat. §§ 144.801-144.808 shall be corrected within time periods ranging from 15 to 120 days as specified by the commissioner or authorized agent.

4. Noncompliance. If, upon re-inspection, it is determined that a life support transportation service has not complied with the provisions of a correction order, such noncompliance shall constitute grounds for the initiation of suspension, revocation or non-renewal proceeding pursuant to Minn. Stat. § 144.803.

F. Primary service area.

1. Designation of primary service area.

a. An applicant for licensure as a service shall, at the time of application for new service, for a change in type of service or base of operation, or for an expansion of primary service area, declare the primary service area that it intends to serve as a primary provider of life support transportation service and for which it seeks designation. Such a primary service area shall contain one or more bases of operation.

b. In applying for initial designation of a primary service area or an expansion of a primary service area, an applicant shall affirmatively substantiate the reasonableness of the primary service area for which designation is sought according to the following considerations:

(1) the average and maximum probable response times in good and severe weather from its proposed base of operations to the most distant boundary in its proposed primary service area; or, if the applicant's primary service area is to contain more than one base of operation, the average and maximum probable response times in good and severe weather from each base of operation to the most distant point covered by that base of operation;

(2) the projected distances to be traveled to provide such service;

(3) the specific type(s) of service to be provided;

(4) the applicant's current status as a licensed provider of life support transportation services to the population of that area; and

(5) the applicant's intention to be responsible to the general population of the declared primary service area or to a specified group of persons as a primary source of the life support transportation service for which it requests licensure.

c. The maximum primary service areas designated, as measured from a base of operation, shall not exceed:

(1) eight miles or distance equivalent to ten minutes travel time at maximum allowable speeds in good weather, whichever is greater, for proposed primary service areas that include any portion of a city of the first and second class; or

(2) twenty-five miles or distance equivalent to 30 minutes travel time at maximum allowable speeds in good weather, whichever is greater, for proposed primary service areas that do not include any portion of a city of the first or second class.

d. Licensees that have declared primary service areas in licensure applications current as of September 30, 1980, shall have those declared primary service areas designated in licensure beginning October 1, 1980, provided:

(1) that such primary service areas are consistent with 7 MCAR § 1.608 F.;

(2) that no change in primary service area base of operations, type or schedule of services, schedule of patients to be served, or schedule of availability has been made by the licensee since the receipt of the current effective license; and

(3) that licensees are eligible for licensure beginning October 1, 1980.

Licensees that do not meet criteria set forth in 7 MCAR § 1.608 F. 1. d. (1)-(3) shall comply with the provisions of 7 MCAR § 1.608 F. 1 a.-c.

2. Observance of primary service areas.

a. No life support transportation service shall regularly provide its services within an area other than its primary service area(s).

b. Nothing in 7 MCAR § 1.608 F. 2. a. shall prohibit a life support transportation service from responding to a request for service in any location in the state when it can reasonably be expected that:

(1) such a response is required by the immediate medical need of an individual, and

(2) no other licensed life support transportation service is capable of or available for immediate and appropriate response.

3. Air life support transportation services. 7 MCAR § 1.608 F. 1. c. shall not apply to life support transportation services provided by air ambulances.

G. Mutual aid.

1. Life support transportation service other than scheduled services shall have written agreements with at least one neighboring life support transportation service for coverage during times when the licensee's ambulances are not available for service in its primary service area. Such agreements shall specify the duties and responsibilities of the agreeing parties.

2. A copy of each mutual aid agreement shall be maintained in the files of the licensee.

H. Compliance with approved local ordinances. Life support transportation services that are subject to local ordinances, rules or regulations that have been approved by the commissioner pursuant to Minn. Stat. § 144.804, subd. 5, shall comply with the provisions of such ordinances, rules and regulations.

7 MCAR § 1.609 Emergency care course and emergency care refresher course approval.

A. Emergency care course.

1. Application for initial course approval.

a. Application for initial approval of an emergency care course shall be made on a form provided by the commissioner, and shall include

information so as to permit a complete evaluation of whether the applicant meets the requirements for course approval as specified by 7 MCAR § 1.609 A. 3.-7. The information provided on the application shall include the following:

(1) course content;

(2) the length of course and course schedule;

(3) the number of times per year the course will be given;

(4) the number of trainees anticipated per year;

(5) identification of source materials, text books, references and equipment to be used;

(6) name, address and qualifications of physician medical advisor;

(7) names and addresses and qualifications of physician, nurse and lay instructors;

(8) name and address of affiliated hospital;

(9) admission requirements of trainees; and

(10) other information as the commissioner may require to clarify incomplete or ambiguous information presented in the application.

b. Applicants shall furnish or retain in file documentation of all statements made in application for licensure.

c. The approval of an emergency care course shall expire two years from the date of approval unless renewed according to the requirements of 7 MCAR § 1.609 A. 2.

2. Application for renewal of course approval.

a. Applications for renewal of emergency care course approval shall be made on a form provided by the commissioner and shall specify any changes from the information provided for initial approval, and other information as the commissioner may require to clarify incomplete or ambiguous information presented in the application.

b. An applicant for renewal shall have given the emergency care course at least two times during the previous biennial approval period.

3. Course personnel.

a. Each course shall have a physician medical advisor, who shall be present for a minimum of three (3) hours during each course.

b. A minimum of fourteen (14) hours of the curriculum shall be taught by a physician or physicians.

c. Instructors shall be physicians, nurses, or others qualified as specified in 7 MCAR § 1.603 A. 1. a. (2)-(4).

d. Documentation including the name, address and qualifications of the medical advisor, and each of the instructors shall be maintained in the files of the applicant.

e. At least one instructor shall be required for every ten (10) students in the practical skill sessions and at least one instructor shall be required for every one hundred (100) students in the classroom didactic sessions.

4. Course content.

a. An emergency care course shall have a total of not less than 81 hours of instruction with a minimum of 60 hours classroom didactic and practical skills instruction and a minimum of 10 hours clinical experience.

b. The following subjects shall be included in the course content:

(1) role, responsibilities and equipment of BLS ambulance attendant;

(2) ambulance operation;

(3) communications;

(4) emergency room procedures;

(5) airway obstruction and cardiopulmonary resuscitation;

(6) mechanical aids to breathing and pulmonary resuscitation;

(7) determination of vital signs;

(8) introduction to intravenous therapy;

(9) bleeding;

(10) shock;

(11) wounds, dressings, bandages and bandaging;

(12) fractures of upper and lower extremities;

(13) injuries to chest, abdomen and pelvis, face, eye, head, neck, spine and genitalia;

(14) medical conditions including poisons, stings, bites, unconscious state, stroke, heart attack, epilepsy, acute abdomen, intestinal bleeding, communicable disease, diabetes, and dyspnea;

(15) medical conditions due to environmental factors including burns, cold, heat, radiation, electrical hazards, water accidents, and explosions;

(16) emergency childbirth;

(17) care of the pediatric patient;

(18) care of the disturbed and unruly patient;

(19) emergency care of the drug abuser; and

(20) extrication and rescue techniques.

5. Equipment and supplies.

a. Courses shall have student and instructor texts and current reference sources in emergency care.

b. Courses shall have standard teaching aids consisting of such items as projectors, screens, films, slides and other equipment and material used by the instructor to facilitate learning.

c. Courses shall use emergency care equipment of the following types so as to train each student as a BLS ambulance attendant:

(1) splinting equipment;

(2) ventilation assistance and airway maintenance equipment;

(3) dressings, bandages and bandaging supplies;

(4) emergency obstetrical kit;

(5) poison treatment kit;

(6) burn treatment supplies;

(7) equipment for determination of vital signs; and

(8) extrication and rescue equipment.

6. Testing. In order to complete an approved emergency care course successfully, each student shall pass the written and the practical examinations approved by the commissioner and administered by the commissioner or a designated representative.

7. Test approval.

a. The written and the practical examinations that test for competency in the subjects specified in 7 MCAR § 1.609 A. 4. b. are eligible for approval by the commissioner.

b. The written portion of the National Registry of Emergency Medical Technicians Examination for Emergency Medical Technicians-Ambulance as of the effective date of these rules is deemed to comply with 7 MCAR § 1.609 A. 7. a.

B. Emergency care refresher course.

1. Applications for initial course approval shall comply with 7 MCAR § 1.609 A. 1.-7., with the exception of 7 MCAR § 1.609 A. 3. b. and A. 4.

2. Course content.

a. A refresher course shall provide a total of not less than 20 hours of instruction and four hours of testing.

b. The content of a refresher course shall include the subjects listed in 7 MCAR § 1.609 A. 4. b.

C. Issuance of certificates.

1. Persons successfully completing an emergency care course shall be issued a certificate by the commissioner or a designated representative.

2. The certificate shall expire two years from the date of issuance and may only be renewed for a period of two years on successful completion of a refresher course.

D. Course audit. Approved applicants shall cooperate with and in no way hinder the audit activities of authorized agents of the commissioner.

E. Enforcement. Failure to comply with the provisions of 7 MCAR § 1.609 A. 3.-D. shall constitute grounds for disapproval or nonrenewal.

7 MCAR § 1.610 Documentation.

A. Documentation requirements for licenses.

1. Personnel records and documentation shall include:

a. current roster and documentation of qualifications of attendants and drivers required in 7 MCAR § 1.603 A. 2. a. and 7 MCAR § 1.604 A. 5. b.;

b. name and address of and signed statement by the medical advisor or director required in 7 MCAR § 1.603 A. 2. c. and 7 MCAR § 1.604 A. 5. d.;

c. documentation of reasonable efforts to arrange for second attendants under special circumstances as required in 7 MCAR § 1.603 A. 2. d. (2)-(3) and 7 MCAR § 1.604 A. 5. d.;

d. Continuing education course approval required by 7 MCAR § 1.604 A. 3. b.; and

e. the name and address of the affiliated medical facility and signed statement required by 7 MCAR § 1.604 A. 5. e.

2. Equipment records and documentation shall include:

a. documentation by the medical advisor regarding the use of inflatable anti-shock trousers as specified in 7 MCAR § 1.603 B. 1. b.

b. performance testing of equipment required in 7 MCAR § 1.603 B. 3. g. and 7 MCAR § 1.604 B. 2. b.;

c. any written approval of the medical director of the advanced life support equipment and supplies required in 7 MCAR § 1.604 B. 1. c.; and

d. any written procedures for secure storage of medications required in 7 MCAR § 1.604 B. 1. d.

3. Ambulance records and documentation shall include maintenance of ambulance required in 7 MCAR § 1.603 C. 5. a. and 7 MCAR § 1.604 C.

4. Communications records and documentation shall include:

a. maintenance of communications equipment as required in 7 MCAR § 1.603 D. 4. and 7 MCAR § 1.604 D. 4.; and

b. communications capability as required in 7 MCAR § 1.604 D. 2. g.

5. Other records and documentation shall include:

a. licensure application information required in 7 MCAR § 1.602;

b. a copy of mutual aid agreements required in 7 MCAR § 1.608 G. 2.;

c. copies of all pertinent correspondence between the Department of Health to the licensee; and

d. trip reports for every run in which patient care was offered to be

provided or provided, so as to meet the reporting requirements of Minn. Stat. § 144.807.

B. Documentation requirements for approved emergency care and refresher courses. Approved emergency care and refresher courses shall comply with the following documentation requirements:

1. approval application information required in 7 MCAR § 1.609 A. 1. b., and

2. the names, addresses and qualifications of the physician medical advisor and instructors required in 7 MCAR § 1.609 A. 3. c.

7 MCAR § 1.611 License fees and expiration dates.

A. License fees. Each application for a license to operate a life support transportation service, as defined in Minn. Stat. § § 144.801 to 144.806, shall be accompanied by a basic fee of $35.00 plus a $10.00 fee for each ambulance to be operated by the applicant. The licensee shall pay an additional $10.00 fee for each ambulance added to the life support transportation service during the period for which the license is issued.

B. Expiration dates. Life support transportation services shall be licensed annually for a period from October 1 (or from the date the original license is issued) until September 30. Applicants for license renewal shall submit complete applications by June 30 of each year on a form provided by the commissioner. The licenses of life support transportation services that are licensed as of the effective date of these rules are hereby extended until September 30, 1980.

DEPARTMENT OF HEALTH

RULES OF THE MINNESOTA DEPARTMENT OF HEALTH RELATING TO THE SERVICES FOR CHILDREN WITH HANDICAPS and ADULTS WITH CYSTIC FIBROSIS AND HEMOPHILIA FOR ELIGIBILITY, COST-SHARING AND REIMBURSEMENT

CHAPTER THIRTY-ONE: 7 MCAR §§ 1.651-1.657

7 MCAR § 1.651 General.

A. Declaration of purpose, scope and applicability. These rules apply to the parent(s) or guardian(s) of handicapped and potentially handicapped children under the age of 21, self-supporting handicapped and potentially handicapped individuals under 21 years of age, individuals 21 years of age or over with cystic fibrosis or hemophilia, and those health professionals and institutions that provide services to eligible individuals with handicaps. The Federal Act (Title V, USC 42, Chapter 7) authorizing Services for Children with Handicaps (SCH) provides annual formula funds to the state, which are augmented by state appropriation; therefore, reimbursement to providers under these rules is subject to the limitation of these funds and the funds appropriated under Minnesota law.

The purpose and scope of these rules is to specify the Services for Children with Handicaps (SCH) criteria, procedures and responsibilities relating to applicant eligibility, applicant cost-sharing and reimbursement to service providers for service(s) authorized by SCH for physically handicapping conditions in children.

B. Definitions. For the purposes of these rules, the following terms shall have the meaning given them:

1. "Adjusted gross income" means all of the income received by the applicant, less the deductions allowed by the IRS for business and professional expenses as declared on the most recent IRS statement of federal adjusted gross income for the immediately preceding tax year.

2. "Administrative Review Committee" means the committee, as identified by the Commissioner of Health, composed of administrative personnel from the Division of Community Services and the SCH Program and a representative from the SCH field staff who have responsibility for the review of SCH decisions relating to eligibility and cost-sharing for those applicants who wish such reconsideration.

3. "Allowable deductions" means those expenses incurred by household members for the following items:

a. Medical/dental expenses for treatment and other health care re-

lated expenses paid during the previous twelve months which were not reimbursed by a third-party payer such as insurance or Title XIX (Medical Assistance.)

b. Transportation costs in order to obtain medical/dental care and services during the previous twelve months.

(1) Travel expenses by car are calculated at $ .17 a mile.

(2) Actual costs of train, airplane, bus and taxi fares.

4. "Applicant" means the individual who requests the services offered by SCH or the parent(s) or legal guardian(s) of such an individual.

5. "Application" means a written request for service and/or cost-sharing determination signed by the applicant on forms specified by SCH.

6. "Authorization form" means the document designed and supplied by SCH to the service provider with a copy to the applicant, outlining the service(s) requested for the individual and the conditions of payment by SCH to the service provider.

7. "Child with a handicap" means an individual under 21 years of age who has a disease or physiological condition which might hinder the achievement of normal growth and development.

8. "SCH" means the Services for Children with Handicaps Program.

9. "SCH adjusted income" means the income figure derived after SCH applies cost-sharing calculations pursuant to 7 MCAR § 1.654 B. 4.

10. "Comprehensive Care Center" (applicable to services for hemophiliacs only) means a medical facility in which a multidisciplinary team coordinates a program of total care for hemophiliacs, including emergency and consultation services.

11. "Cost-sharing" means the financial participation in the cost of treatment service(s) on the part of the applicant and established on the basis of ability to pay pursuant to these rules.

12. "Cost-sharing schedule" means the schedule set out in 7 MCAR § 1.654 B. 4. which specifies income levels by number of members in the household and the corresponding percentage of that income level an applicant shall be required to share in the cost of treatment service(s), depending upon the level of their SCH adjusted income.

13. "Diagnostic evaluation" means the initial history, examination and necessary tests to establish the diagnosis and outline the plan of treatment. This evaluation is performed by a team of professionals under the direction of a physician who is board-certified or board-eligible in a specialty area.

14. "Federal Act" means the Social Security Act, as amended, Title V, (USC 42, Chapter 7).

15. "Hemophilia" means a bleeding tendency resulting from a genetically determined deficiency and/or abnormality of a blood plasma factor or component.

16. "Household member" means any of the following individuals who shall be counted as part of a household for the purposes of these rules:

a. Spouse

b. Parent(s) and their children who are not self-supporting whether residing in the household or absent from the home.

c. The unborn child/children of a current pregnancy of a spouse. Self-supporting individuals 18 years and over shall not be included as members of the household.

17. "Household member deduction" means an amount of $1,000 for each household member which is deducted from the total of the includable assets.

18. "Includable assets" means cash and those fluid assets readily convertible into cash such as commercial paper and negotiable paper instruments. The amount of these instruments is added by SCH to the adjusted gross income. Includable assets include:

a. Cash.

b. Checking accounts.

c. Certificates of deposit.

d. Savings accounts.

e. Bonds.

f. Stocks.

g. Income not reportable to IRS.

19. "Handicapping condition" means a physical condition which requires extended, sequential, medical, surgical and/or rehabilitative intervention as determined by a diagnostic evaluation and approved by SCH.

20. "Medical Director" means the physician assigned responsibility by the Commissioner of Health for the administration and management of SCH in the State of Minnesota.

21. "One-person household" means any of the following individuals who shall be counted as a one-person household for the purposes of these rules:

a. An adult living alone.

b. An adult living with individual(s) other than a spouse or children who are not self-supporting.

c. A child living with a relative other than a parent or legal guardian.

d. An individual 18 years of age or over who is a self-supporting individual and living with parent(s).

22. "Prior authorization" means a written agreement between SCH and a service provider which details service(s) requested for payment by SCH for the benefit of an applicant. The service(s) and conditions of payment must be approved by an agent of SCH prior to provision of the service(s).

23. "Reimbursement" means the payment by SCH to a service provider for diagnostic evaluation or treatment service(s) of SCH eligible individuals.

24. "Self-supporting individual" means an individual who contributes 50% or more toward his/her living costs.

25. "Service provider" means any of those facilities and personnel whose services are requested by SCH and who meet the criteria for participation as specified in these rules.

26. "State gross median income" means the income level at which 50% of the people in the state have incomes higher than the median and 50% of the people have incomes which are lower, as computed by the Minnesota Department of Employment Services in 1977.

27. "Third-party reimbursement sources" means a third-party payer, other than the applicant who pays for service(s) not directly received by the payer, such as insurance (including Health Maintenance Organizations) and/or Title XIX (Medical Assistance).

28. "Title XIX" (Medical Assistance) means the program authorized by the Social Security Act USC 42, Section 1901-1910 to provide reimbursement for medical care for individuals whose resources do not enable them to purchase such care.

29. "Treatment service(s)" means the ongoing medical case management for a child diagnosed as having a handicapping condition. This medical case management includes definitive medical, surgical, dental, rehabilitative and follow-up services related to the condition.

30. "Treatment plan" means a written statement developed by a physician who is board-certified or board-eligible in a specialty area in concert with

other professionals and which delineates the service(s) required to correct or ameliorate an individual's physically handicapping condition.

7 MCAR § 1.652 Applicant eligibility for diagnostic evaluation.

A. An applicant shall complete an application provided by SCH as described in 7 MCAR § 1.654 A. Any applicant, regardless of income, who meets all of the following criteria shall be eligible for a diagnostic evaluation authorized by SCH:

1. A resident of the State of Minnesota.

2. A child under 21 years of age or an adult 21 years of age or over with cystic fibrosis or hemophilia.

3. A child who is suspected to be a child with a handicap.

B. In addition to the above criteria:

1. An applicant shall be required to make use of available third-party reimbursement sources for the examinations and tests necessary for a diagnostic evaluation. There shall be no out-of-pocket cost to the applicant.

2. Prior written authorization shall be required for a diagnostic evaluation to be reimbursed in full or for that part not reimbursed by third-party payers by SCH.

7 MCAR § 1.653 Applicant eligibility for treatment services.

A. An applicant shall complete an application provided by SCH and described in 7 MCAR § 1.654 A. Any applicant who meets all of the following criteria shall be eligible for SCH reimbursement to service providers for the cost of treatment service(s):

1. A resident of the State of Minnesota.

2. A child under 21 years of age or an adult 21 years of age or older with cystic fibrosis or hemophilia.

3. A child who has a diagnosed handicapping condition as defined in these rules.

B. In addition to the above criteria:

1. An applicant shall agree to participate in cost-sharing if any is required, according to the specifications set out in 7 MCAR § 1.654 B.

2. An applicant shall be required to make use of available third-party reimbursement sources for treatment service(s).

3. Prior written authorization shall be required for treatment service(s) to be reimbursed in full or in part by SCH.

C. An applicant who meets all of the criteria and requirements for eligibility, but whose handicapping condition may not require extended or sequential care, shall be eligible for SCH reimbursement to service providers in those instances where the cost of treatment is anticipated to exceed 40% of the applicant's adjusted gross income as defined in these rules.

← see new: AR038957

7 MCAR § 1.654 Application and cost-sharing for applicant(s).

A. Application for service(s).

1. SCH shall provide an application form upon request. Each submitted application shall contain a signed statement by the applicant that the information given is true and complete to the best of his/her ability and knowledge.

2. SCH shall review the completed application within 30 days of receipt. This review determines whether the applicant is eligible for SCH reimbursement of treatment service(s) pursuant to 7 MCAR § 1.653 A. and determines any cost-sharing requirements.

3. SCH shall notify the applicant in writing of any decision related to eligibility for SCH reimbursement to service providers for service(s).

4. For applicants for treatment service(s), SCH shall prepare the cost-sharing agreement, if cost-sharing is indicated under 7 MCAR § 1.654 B. An applicant shall not be eligible to have treatment service(s) authorized through SCH until the cost-sharing agreement is signed by the applicant and received in the SCH office.

5. An applicant who is determined ineligible for reimbursement of treatment costs may reapply when and if he/she feels there are changes of circumstances which are related to the eligibility criteria as contained in these rules.

6. The period in which an applicant shall remain eligible for SCH authorization for reimbursement to service providers of treatment costs shall be as follows:

a. One year from the date of receipt by SCH of the signed cost-sharing agreement, when cost-sharing is required.

b. One year from the date of the original eligibility determination, when no cost-sharing is required.

c. SCH shall make an exception regarding the beginning date of eligibility in those instances where the child is in an unanticipated treatment situation and the applicant was unaware of the program before this time.

Where the time required to process the application will cause delay in the provision of treatment service(s), the documented, initial contact with SCH shall be considered the beginning of eligibility if the application and signed cost-sharing agreement are received within 60 days of this initial contact.

7. SCH shall send the applicant written notification of the date upon which eligibility begins.

8. To maintain eligibility, an applicant must complete another application at the end of the eligibility period.

B. Cost-sharing.

1. Any applicant whose SCH adjusted income as defined and described in 7 MCAR § 1.651 B. 9. is above 60% of the state gross median income shall be required to share in the treatment costs of all service(s) authorized by SCH. SCH shall reimburse service providers for remaining expenses for authorized treatment service(s) which are not covered by the applicant's cost-sharing or third-party reimbursement sources.

2. No cost-sharing shall be required of an applicant who is currently eligible for Medical Assistance (Title XIX), a ward of the state or whose SCH adjusted income falls below 60% of the state gross median income.

3. The adjusted gross income used in any cost-sharing calculations shall be that of the applicant as defined in 7 MCAR § 1.651 B. 4. The income of a step-parent who does not adopt a child is not considered in cost-sharing calculations.

4. The amount of cost-sharing required of an applicant is determined in the following manner:

Step No. 1: The includable assets are totalled. If applicable, the household member deduction is subtracted from this total.

Step No. 2: The amount derived in Step No. 1 is then added to the adjusted gross income.

Step No. 3: The total of the allowable deductions is subtracted from the amount derived in Step No. 2. This figure indicates the SCH adjusted income.

Step No. 4: The percentage that the applicant must share in the cost of treatment is based on the applicant's SCH adjusted income level and on the number of members in the household. This percentage is calculated according to the following chart.

5. Adjustments in cost-sharing shall be made when extenuating circumstances occur which may alter the ability of an applicant to assume cost-sharing in the amount indicated. The following constitute criteria for a review of an applicant's cost-sharing requirement during the eligibility period:

SCH Cost-sharing Schedule

For each number of household members, the beginning income level on the schedule represents the range of income from 0 to 60% of the state gross median income. Increments of $1,000 have been used to establish each succeeding income level for that size household in 1977. The percentage at the left of the schedule rises 1% for every $1,000 rise in the SCH adjusted income level.

Percentage which eligible applicants share in the cost of treatment	Income Levels by Number of Members in the Household				
	1	2	3	4	5
0	0-$5,606	0-$7,332	0-$9,057	0-$10,782	0-$12,507
1	5,607- 6,606	7,333- 8,332	9,058-10,057	10,783- 11,782	12,508- 13,507
2	6,607- 7,606	8,333- 9,332	10,058-11,057	11,783- 12,782	13,508- 14,507
3	7,607- 8,606	9,333-10,332	11,058-12,057	12,783- 13,782	14,508- 15,507
4	8,607- 9,606	10,333-11,332	12,058-13,057	13,783- 14,782	15,508- 16,507
5	9,607-10,606	11,333-12,332	13,058-14,057	14,783- 15,782	16,508- 17,507
6	10,607-11,606	12,333-13,332	14,058-15,057	15,783- 16,782	17,508- 18,507
7	11,607-12,606	13,333-14,332	15,058-16,057	16,783- 17,782	18,508- 19,507
8	12,607-13,606	14,333-15,332	16,058-17,057	17,783- 18,782	19,508- 20,507
9	13,607-14,606	15,333-16,332	17,058-18,057	18,783- 19,782	20,508- 21,507
10	14,607-15,606	16,333-17,332	18,058-19,057	19,783- 20,782	21,508- 22,507
11	15,607-16,606	17,333-18,332	19,058-20,057	20,783- 21,782	22,508- 23,507
12	16,607-17,606	18,333-19,332	20,058-21,057	21,783- 22,782	23,508- 24,507
13	17,607-18,606	19,333-20,332	21,058-22,057	22,783- 23,782	24,508- 25,507
14	18,607-19,606	20,333-21,332	22,058-23,057	23,783- 24,782	25,508- 26,507
15	19,607-20,606	21,333-23,332	23,058-24,057	24,783- 25,782	26,508- 27,507
16	20,607-21,606	22,333-23,332	24,058-25,057	25,783- 26,782	27,508- 28,507
17	21,607-22,606	23,333-24,332	25,058-26,057	26,783- 27,782	28,508- 29,507
18	22,607-23,606	24,333-25,332	26,058-27,057	27,783- 28,782	29,508- 30,507

SCH Cost-sharing Schedule (Cont.)

	6	7	8	9	10
0	0-14,232	0-14,556	0-14,879	0- 15,203	0- 15,526
1	14,233-15,232	14,557-15,556	14,880-15,879	15,204- 16,203	15,527- 16,526
2	15,233-16,232	15,557-16,556	15,880-16,879	16,204- 17,203	16,527- 17,526
3	16,233-17,232	16,557-17,556	16,880-17,879	17,204- 18,203	17,527- 18,526
4	17,233-18,232	17,557-18,556	17,880-18,879	18,204- 19,203	18,527- 19,526
5	18,233-19,232	18,577-19,556	18,880-19,879	19,204- 20,203	19,527- 20,526
6	19,233-20,232	19,557-20,556	19,880-20,879	20,204- 21,203	20,527- 21,526
7	20,233-21,232	20,557-21,556	20,880-21,879	21,204- 22,203	21,527- 22,526
8	21,233-22,232	21,557-22,556	21,880-22,879	22,204- 23,203	22,527- 23,526
9	22,233-23,232	22,557-23,556	22,880-23,879	23,204- 24,203	23,527- 24,526
10	23,233-24,232	23,557-24,556	23,880-24,879	24,204- 25,203	24,527- 25,526
11	24,233-25,232	24,557-25,556	24,880-25,879	25,204- 26,203	25,527- 26,526
12	25,233-26,332	25,557-26,556	25,880-26,879	26,204- 27,203	26,527- 27,526
13	26,233-27,232	26,557-27,556	26,880-27,879	27,204- 28,203	27,527- 28,526
14	27,233-28,232	27,557-28,556	27,880-28,879	28,204- 29,203	28,527- 29,526
15	28,233-29,232	28,557-29,556	28,880-29,879	29,204- 30,203	29,527- 30,526
16	29,233-30,232	29,557-30,556	29,889-30,879	30,204- 31,203	30,527- 31,526
17	30,233-31,232	30,557-31,556	30,880-31,879	31,204- 32,203	31,527- 32,526
18	31,233-32,232	31,557-32,556	31,880-32,879	32,204- 33,203	32,527- 33,526

a. An increase or decrease of 5% in the annual adjusted gross income from that indicated on the application.

b. A change in the number of members included in the household from that indicated on the application.

c. Uninsured property damage of at least $2,500.

d. Extraordinary expenses for travel, lodging, child care incurred by families as a result of current treatment of eligible children.

6. An applicant shall be responsible for reporting any change in the number of household members or a change of 5% of the adjusted gross income to SCH within 15 days. Failure to provide such information shall constitute grounds for review of an applicant's cost-sharing.

7. The amount that an eligible applicant shall share in the cost of treatment shall remain the same regardless of the number of children in the household eligible for treatment under the SCH Program. For example, if the cost-sharing amount is $780, this amount is not changed if there are two or more children in the household eligible for service.

7 MCAR § 1.655 Reimbursement for service(s).

A. SCH shall only reimburse for diagnostic evaluation and/or treatment service(s) for which a prior written authorization has been provided in a format designated by SCH.

B. Emergency authorization of reimbursement for treatment service(s) shall be provided by SCH in situations which are later determined by the SCH Medical Director to be life threatening or to have the potential for irrevocable damage, injury or long-term consequences if treatment is not provided immediately. In these instances, SCH shall be notified by the physician or hospital staff within 72 hours after admission to a hospital. Eligibility for further authorization shall be determined according to the criteria contained in these rules.

C. Limitations on authorization of reimbursement for treatment service(s).

1. SCH shall authorize reimbursement to a service provider only for treatment that is part of the treatment plan for an individual's handicapping condition.

2. SCH shall not authorize reimbursement for the treatment of conditions determined by SCH to be primarily cosmetic in nature.

3. SCH shall not authorize reimbursement for costs of equipment such as hospital beds or wheel chairs unless no other resource is available.

4. Within any 12-month period, SCH shall pay no more than $10,000 for the care of an individual.

5. SCH shall not authorize reimbursement for treatment service(s) not associated with an individual's eligible condition. An exception shall be made and routine care shall be authorized by the SCH Medical Director when, as the result of the eligible condition, it is more probable than not that a life threatening situation or irrevocable damage or injury might occur during what otherwise would be routine care.

6. SCH shall not authorize reimbursement for treatment services for individuals 21 years of age or over with hemophilia except as specified in 7 MCAR § 1.655 D.

D. Reimbursement for care and treatment of hemophiliacs 21 years of age or over shall be available for:

1. Blood, blood components, blood derivatives.

2. Home infusion kits.

3. Other chemical agents suitable for effective treatment in hospitals, medical and dental facilities and at home.

4. Orthopedic braces, splints and special shoes.

5. Periodic evaluation at a comprehensive care center.

E. The following services are not reimbursable under this rule for hemophiliacs 21 years of age or over:

1. Hospital care other than that hospital care necessary to provide those services as specified in 7 MCAR § 1.655 D.

2. Physician care other than that physician care necessary to provide those services as specified in 7 MCAR § 1.655 D.

3. Dental care other than that dental care necessary to provide those services as specified in 7 MCAR § 1.655 D.

4. Medical transportation unless it is a medical emergency as determined by the Medical Director.

7 MCAR § 1.656 Administrative review procedures.

A. An applicant and/or staff person of any agency may request, at any time, a review by the Administrative Review Committee of their eligibility status or cost-sharing requirement.

1. A written request for review shall be submitted to the SCH Medical Director containing the reasons for the request, the issues involved and a brief summary of any previous actions.

2. The review shall take place within 30 days of the receipt of the request. The applicant shall be notified at least 15 days in advance of the date, time and place of the review.

3. If an applicant, through no fault of his/her own, cannot attend the review and wishes to do so, the reasons should be stated in writing. SCH will then reschedule the review.

4. The applicant and/or his/her representative may be present at this review. During this review, the applicant shall have further opportunity to explain his/her circumstances.

5. SCH shall inform the applicant in writing of the decision and the grounds upon which the decision is based.

B. Formal hearing. In the event that an applicant seeks to appeal the decision of SCH such an appeal shall be conducted by the Minnesota Department of Health pursuant to the Minnesota Administrative Procedures Act and the Rules of the Office of Hearing Examiners.

7 MCAR § 1.657 Responsibilities between SCH and service providers.

A. SCH.

1. SCH shall supply, with the written consent of the applicant, referral information to service providers for applicants authorized to receive diagnostic evaluations or treatment service(s).

2. SCH shall pay service providers at the same rates for medical, dental, and hospital care up to the maximum allowable charges as set forth in the Medical Assistance Rates Schedule (revised September 7, 1978) established by the Minnesota Department of Public Welfare (Title XIX) pursuant to its authority found in 12 MCAR § 2.047.

a. In instances where there are no established rates, SCH shall reimburse service providers at rates based upon the following criteria:

(1) Complexity of service.

(2) Time involved in completing the service.

(3) Training and skills of the service provider.

(4) Reasonableness of fees in the context of the community.

b. SCH is the payer of last resort. SCH reimbursement of treatment costs to service providers shall be made only after arrangements have been made by the service provider to collect third-party and cost-sharing payments.

3. SCH shall review reimbursement requests submitted by service pro-

viders within 45 days of receipt. This review shall be made to assure that the service(s) rendered were in keeping with those detailed on the authorization form and that arrangements have been made by the service provider for all other third-party and cost-sharing payments.

4. Potential service providers must submit their credentials to the SCH Medical Director. Those service providers who shall be utilized by SCH shall meet the following criteria and, if acceptable, indicate in writing a willingness to participate in the SCH Program in keeping with the goals and procedures of SCH:

a. Hospitals and specialized medical centers shall be approved by the Joint Commission on the Accreditation of Hospitals (JCAH) or their appropriate accreditation body and licensed by the Minnesota Department of Health or their respective states.

b. Physicians and dentists shall:

(1) Be board-eligible or board-certified or, in the instances of dentists not certified, have demonstrated special expertise in pediatric dentistry either through the percentage of their patients, publications they have written or training, and,

(2) be part of a multi-disciplinary group or work closely with other specialists to provide a comprehensive approach to the care of the identified handicapping conditions, and,

(3) be licensed to practice medicine and/or dentistry in Minnesota or their respective states.

c. Other service provider personnel shall be licensed by their respective boards or associations in the State of Minnesota. Those service provider personnel whose professions do not require licensure may be utilized when they have completed the training and experience requirement specified by the individual professional association to be considered qualified and the child's treatment plan indicates their services are necessary.

d. Service provider personnel who provide a product such as hearing aids or orthopedic appliances shall be registered with the Department of Public Welfare as approved Title XIX vendors.

5. Service providers who are not approved to provide service(s) to SCH eligible children may request reconsideration of their credentials by the SCH Medical Director. In the event that a service provider seeks to appeal the decision of SCH, such an appeal shall be conducted by the Minnesota Department of Health pursuant to the Minnesota Administrative Procedures Act and the rules of the Office of Hearing Examiners.

6. SCH shall maintain case records containing administrative, medical, and case planning information, and shall, consistent with state and federal law and rule, protect the privacy of individual case records.

B. Service providers.

1. A service provider shall receive prior written authorization before providing service to a SCH eligible child, with the exception of emergency situations as specified in 7 MCAR § 1.655 B.

2. A service provider shall supply case report and cost-related information in a format as specified by SCH.

3. A service provider shall arrange for third-party reimbursement and the cost-sharing prior to billing SCH for the remaining costs. In instances where third-party reimbursements are delayed more than 90 days, a service provider may bill SCH for reimbursement and refund SCH within 90 days of the receipt of third-party reimbursements.

4. A service provider shall not charge the applicant for treatment service(s) authorized by SCH beyond the cost-sharing amount detailed on the authorization form.

ILLUSTRATION OF COST-SHARING DETERMINATION

Footnote 1

Step No. 1	Total of Includable Assets	$ 6,000
	-Household Member Deduction, if applicable	- 4,000
		$ 2,000
	$	
Step No 2	Adjusted Gross Income	$ 12,000
	+Amount Derived in Step No. 1	+ 2,000
		$ 14,000
	$	
Step No. 3	Amount Derived in Step No. 2	$ 14,000
	-Total of Allowable Deductions	- 1,300
	SCH ADJUSTED INCOME	$ 12,700
Step No. 4	Using the cost-sharing schedule, take the percentage for the income level indicated in Step No. 3 and adjusted for the number of members in the household. The figure obtained from this calculation equals the amount of cost-sharing an applicant will be required to share for the cost of treatment.	Number of members in the household = 4. The percentage for this income level is 2%. 2 % of $12,700 = $254.00. $254.00 is the amount required for this applicant.

AR00925

7 MCAR S 1.661 General provision.

A. Purpose.

1. These rules, 7 MCAR SS 1.661-1.665, are intended to govern the implementation, enforcement and administration of the Minnesota Certificate of Need Act. The rules do not repeat provisions of the act which are clear and complete without rules; therefore, the act should be read with the rules. References to the act are made in these rules in order to assist the public in cross-referencing the act with the rules.

2. The commissioner has, within the limits of the act, developed review procedures and criteria which involve a minimum period of time, require only essential information, and involve the least cost for the applicant, the health systems agency (HSA), and the department. These rules promote health planning cooperation by health care facilities and health systems agencies before the certificate of need review and encourage health system innovations and alternatives, as well as beneficial price competition.

B. Definitions. The definitions contained in Minnesota Statutes, section 145.833 apply to the terms as used in these rules. Some of the terms defined in Minnesota Statutes, section 145.833 are also defined in these rules in order to clarify certain sections or parts of the statutory language. Unless the context clearly requires otherwise, the following terms shall have the meanings ascribed to them:

1. "Act" means the Minnesota Certificate of Need Act, Minnesota Statutes, sections 145.832 to 145.845.

2. "AIP" means annual implementation plan as defined in the act, Minnesota Statutes, section 145.833, subdivision 11.

3. "Application" means the submission by a person of the information required by 7 MCAR S 1.663 A. in requesting the issuance of a Certificate of Need.

4. "Capital expenditure" means any expenditure, regardless of type of financing mechanism, including gifts, donations and other philanthropic activities, utilized to purchase, acquire, renovate, remodel or substantially alter or modify real property, buildings, fixtures, equipment or a service. Whenever real property, buildings, fixtures or equipment are acquired by capitalized lease or any type of rental agreement, that capital expenditure for lease or rental agreement shall be the fair market value of the real property, buildings, fixtures or equipment at the date upon which the agreement is executed. Expenditures which, under generally accepted accounting principles, are properly chargeable as an expense of operation and maintenance are not capital expenditures. Capital expenditures include the total of all anticipated expenditures for a single undertaking with

interdependent or interrelated components whether or not any individual expenditure exceeds the threshold of the act.

5. "Category," as used in Minnesota Statutes, section 145.833, subdivision 5(a)(2), means classification of beds within a health care facility according to licensure (such as, general hospital, psychiatric, alcoholic, nursing home, boarding care home and supervised living) or classification of beds within a health care facility according to certification status under the provisions of Title XVIII of the Social Security Act as found in 42 United States Code, Section 1395x(e), hospital; Section 1395x(f), psychiatric hospital; Section 1395x(g), tuberculosis hospital; and Section 1395x(j), skilled nursing facility; and in Title XIX of the Social Security Act in 42 United States Code, Section 1396a (a) (28), skilled nursing facility; Section 1396d(c), intermediate care facility; and Section 1396d(d), intermediate care facility for the mentally retarded.

6. "Commissioner" means the Commissioner of Health and includes any duly authorized representative of the commissioner.

7. "Construction or modification" means:

a. Any erection, building, alteration, renovation, reconstruction, conversion of any existing building, modernization, improvement, expansion, extension or other acquisition by or on behalf of a health care facility which:

(1) Requires a total capital expenditure in excess of $150,000; or

(2) Changes the bed capacity of a health care facility by more than ten beds or more than ten percent of the facility's total licensed bed capacity, whichever is less, over a two year period following the most recent bed capacity change, in a way which:

(a) Increases the total number of beds; or

(b) Changes the distribution of beds among various categories; or

(c) Relocates beds from one physical facility or site to another;

b. Any capital expenditure in excess of $150,000 by or on behalf of a health care facility, which is used to acquire diagnostic or therapeutic equipment. If the equipment is being updated rather than totally replaced, the capital expenditure shall be considered to be the cost of the equipment parts to be replaced, plus the cost of manufacturer's labor and installation, as well as any related financing costs which are considered, according to generally accepted accounting principles, to be incurred;

c. Any expansion or extension of the scope or type of existing health service by a health care facility which requires a capital expenditure in excess of $50,000 during any consecutive 12 month period for that service. Change in scope or type of existing service means the difference between the range and nature of the present service and the range and nature of the services contemplated under the proposal. An expansion or extension does not occur if the result is solely increased efficiency of operations or increased square footage or spatial allocation. An expansion or extension shall occur if at least one of the following factors is required by or a direct result of the proposed project:

(1) A material increase in volume of services provided;

(2) The ability to perform treatments or procedures not previously performed;

(3) A material increase in personnel associated with the capital expenditure;

(4) A material change in proportion of patient mix; or

(5) A material change in geographic source of referrals to the facility;

d. Any establishment of a new health care facility;

e. Any reviewable predevelopment activity by or on behalf of a health care facility; or

f. Any establishment by a health care facility of a new institutional health service, other than a home health service, which is to be offered in or through that facility and which was not offered on a regular basis in or through that facility prior to the twelve months before that service will be offered under the terms of the proposal.

8. "Direct patient care service" means any health service designed to provide diagnosis, treatment, nursing, preventive care, rehabilitative care or habilitative care to any person.

9. "Exemption" means the decision by the commissioner to authorize an HMO or health care facility to proceed with a project reviewable under the act, without request for a waiver or application for a certificate of need.

10. "Evidence" means any exhibit, oral or written testimony or other data or information submitted to an HSA prior to the close of the public hearing for the purpose of affecting the determination of whether a certificate of need should be issued.

11. "Health maintenance organization" or "HMO" means any

organization which operates or proposes to operate pursuant to Minnesota Statutes, sections 62D.01 to 62D.29.

12. "Hearing body" means:

a. The governing body of an HSA;

b. In the case of the Metropolitan Council, the Metropolitan Health Board; or

c. For HSAs other than the Metropolitan Council, a project review committee, the membership of which complies with the requirements of Minnesota Statutes, section 145.845, clauses (2), (3), (4) and (5) and 7 MCAR S 1.661 C.2.b.(2).

13. "HSA" means health systems agency as defined in the act, Minnesota Statutes, section 145.833, subdivision 7.

14. "HSP" means health systems plan as defined in the act, Minnesota Statutes, section 145.833, subdivision 10.

15. "Institutional health service" means any health service as defined in the act, Minnesota Statutes, section 145.833, subdivision 3, wherever and however that health service is provided.

16. "Long range development plan" means a health care facility's written description of its present and anticipated configuration of health services which is developed in consideration of the HSP for the health care facility's health service area.

17. "On behalf of" means in the principal interest of, at the behest of, or for the principal benefit of, a health care facility.

18. "Patient" means any person receiving care in a health care facility and is synonymous with the term "resident."

19. "Predevelopment activity" means any activity by or on behalf of a health care facility or any person which involves architectural designs, plans, working drawings, specifications, feasibility studies, surveys, site acquisitions, contractual agreements, legal services, fund-raising and any other related pursuit and which occurs with intention to embark upon a program of construction or modification.

a. "Reviewable predevelopment activity" means any predevelopment activity which occurs with intention to offer or develop a new institutional health service if:

(1) The predevelopment activity would require an expenditure in excess of $150,000; or

(2) The predevelopment activity involves any arrangement or committment for financing the new institutional

health service.

b. "Non-reviewable predevelopment activity" means any predevelopment activity not included in a.

20. "Project" means the proposed construction or modification. Project is used synonymously with proposal.

21. "Provider" means any person:

a. Whose primary occupation involves, or involved within the last 12 months previous to appointment to the HSA, provision of health services to individuals or the administration of health care facilities or other health service activities;

b. Who is, or was, within the 12 months previous to appointment to the HSA, employed by a health care facility as a health or mental health professional;

c. Who has a fiduciary interest in or position with a health care facility or other entity which has the provision of health services as its primary purpose;

d. Who has, or has had within the twelve months previous to appointment to the HSA, a material financial interest (more than one-fifth of the person's gross annual income) from any one or a combination of the following:

(1) Fees or other compensation for research into or instruction in the provision of health care;

(2) Producing or supplying drugs or other materials, articles or devices for individuals in the provision of, research into, or instruction in health care;

(3) Issuing any policy or contract of a health insurance company, a health service plan or a health maintenance organization;

(4) Any other material financial interest in rendering of a health service; or

e. Who is a spouse of an individual described in items a., b., c. or d. above.

22. "Recommendation of the HSA" means the report of the HSA to the commissioner which contains its recommendation as to what action should be taken with respect to judging if an application is complete or incomplete, if a project is subject to review, if a waiver should be granted or if a certificate of need should be issued. The recommendation includes submission to the commissioner of all information presented by the applicant and delineation of all rationales developed by the HSA to support its recommendation.

23. "Region" means the geographic area designated by the Secretary of the United States Department of Health and Human Services upon recommendation of the Governor to be under the jurisdiction of an HSA for the purposes of health systems planning.

24. "Requester" means a licensed medical doctor or a group of licensed medical doctors, however legally organized.

25. "State Health Plan" means the document, developed by the Department of Energy, Planning and Development pursuant to 42 United States Code, Section 300m-3 (c)(2)(A) and (B), which addresses statewide health needs and incorporates the HSPs of all Minnesota HSAs.

C. Membership of health systems agencies and their governing bodies.

1. Membership of HSA. HSAs may specify in their corporate bylaws provisions regarding eligibility for membership, categories of members and similar items.

2. Membership of the HSA governing body.

a. Each HSA shall select from its membership a governing body to conduct its business and to carry out its duties and functions. The Metropolitan Council shall use its health board to advise it. The establishment of a governing body shall not prohibit any delegation of HSA duties and functions to staff except as provided in these rules. Documentation of any such delegation shall be filed with the commissioner.

b. The membership of the governing body and the health board of the Metropolitan Council shall, in addition to complying with the requirements of Minnesota Statutes, section 145.845:

(1) Be chosen by election or other appropriate method approved by the Department of Energy, Planning and Development and consistent with provisions of 42 United States Code, Section 3001-1 for a term of office not to exceed three years. No director may serve more than six consecutive years.

(2) Include only residents of, or individuals having their principal place of business in, the region in which the HSA has jurisdiction.

c. The membership of all HSA committees or subcommittees making recommendations to the governing board of an HSA or the Health Board of the Metropolitan Council on proposals for a certificate of need shall consist of a majority of consumers, and it shall include providers.

D. Conflicts of interest.

1. No HSA member or other person who assists the HSA in the review of a project may participate at any level of review, formally or informally, or in discussing or voting upon any project for a certificate of need if a conflict of interest exists. Persons having a conflict of interest, however, may participate in the proceedings in the same manner as any party who is not a member of a hearing body or the Metropolitan Council.

2. A conflict of interest exists when a person:

a. Has a direct or indirect financial interest in the applicant;

b. Has a contract or has had within the preceding twelve months a contractual, creditor or consultative relationship with the applicant;

c. Is an employee, director, trustee, officer or has another fiduciary relationship with the applicant; or

d. Is a spouse of any person falling under a., b., or c. above.

3. A person who is a member of a hearing body or the Metropolitan Council and who has a conflict of interest shall declare it in writing to the HSA before it starts its review of the application or when it becomes apparent to him that he has such a conflict.

4. Any person may question the HSA orally or in writing as to whether or not a conflict of interest exists in regard to any person involved in the review of a project on behalf of an HSA. The HSA shall determine in such case whether a conflict of interest exists.

5. Any person who has a conflict of interest shall be so identified in the recommendation of the HSA.

6. The minutes of the HSA hearing or meeting at which a project is being considered shall record a person having a conflict of interest as "absent" rather than "abstaining due to conflict of interest." Such a person shall not be counted in determining whether a quorum is present for consideration of the application being reviewed.

7. Nothing in this rule precludes any HSA from adopting bylaws or other procedures for determining conflicts of interest which are more stringent than these rules.

E. Ex parte communication.

1. "Ex parte communication" means a written or oral communication by any person as to the merits of an application which is not in a hearing record and with respect to which notice to all parties is not given. The term does not include

any requests for status reports on any application or any communication among HSAs, the Department of Energy, Planning and Development and the commissioner or their staffs which relates solely to information found in a hearing record, the act, these rules or any application or request for formal action under the act.

2. Ex parte communication to or among the HSAs, the Department of Energy, Planning and Development, the commissioner or their staffs and any other party is prohibited, except when the communication relates to an allegation of material misrepresentation, inaccuracy or omission in information necessary to determine whether an action under the act should be taken.

3. Ex parte communication received by the HSA, Department of Energy, Planning and Development or commissioner shall not be considered in the review of the project and shall not be part of the record, except as provided under E.2.

F. Extension of review period.

1. The applicant, the HSA or the commissioner may request that the time periods for review as prescribed in the act and these rules be extended.

2. The party requesting the extension shall notify the other two parties in writing specifying the length of the extension and the reasons therefor.

3. Within five working days of receipt of the request, the other two parties shall notify the requesting party in writing whether they agree to the extension. If all three parties agree to the extension, the new time period shall be in effect. If the parties do not agree to the extension, the time periods in effect prior to the making of the request shall remain in effect.

G. Time computation.

1. Computation of any period of time prescribed or allowed by these rules shall be controlled by Minnesota Statutes, sections 645.15 and 645.151.

2. Whenever a person has the right or is required to do some act within a prescribed period after the service of a document upon him, or whenever some service is required to be made in a prescribed period before a specified event, and the document is served by mail, the time period for exercising that right or performing that action shall begin to run upon receipt of the document and not upon it being mailed. However, an act or event which must be accomplished within a specific time period shall be considered complete upon mailing of the document.

3. Time periods prescribed under these rules shall be deemed directory and not mandatory.

H. Evasions.

1. No health care facility may divide a single project into separate components in order to evade the cost limitations of Minnesota Statutes, section 145.833, subdivision 5. Division of a single project shall be deemed to have occurred if either of the following conditions exists:

a. Components which have been jointly planned are separated; or

b. Components which are so interdependent or interrelated that they could not feasibly be undertaken separately are separated.

2. The annual capital expenditure budget or long range development plan of the health care facility or health maintenance organization does not, in and of itself, constitute a single undertaking.

AR008257

7 MCAR S 1.662 Determination of applicability and waivers.

A. Submission of notice of intent.

1. If a person intends to embark upon a program of construction or modification, as defined in Minnesota Statutes, section 145.833, subdivisions 5 and 7 MCAR S 1.661 B.7., prior to engaging in any predevelopment activities with respect to the program of construction or modification, that person shall submit a notice of intent to the appropriate HSA.

2. The notice of intent shall be submitted in writing to the HSA at least 60 days prior to the submission of an application. No HSA may accept or act upon an application until proper notice has been given.

3. Within ten days of receipt of a notice, the HSA shall forward a copy of such notice to the commissioner and to the Department of Energy, Planning and Development. Upon receipt of a notice proposing construction or modification, the HSA shall notify the applicant of the schedule for submission of a certificate of need application as established pursuant to 7 MCAR S 1.663 A.

4. The notice of intent shall:

a. Identify the nature of:

(1) Architectural services;

(2) Professional consulting services; and

(3) Fund-raising services;

b. Identify the name, address, contact person, and

planned commencement date for activities listed above;

c. Describe the proposed construction or modification;

d. Estimate the capital expenditure associated with the construction or modification;

e. Specify the intended location or neighborhood of the project; and

f. Estimate the date of commencement of the construction or modification.

5. A notice of intent submitted by an applicant shall not preclude any other person from submitting a notice of intent for a similar undertaking.

6. A notice of intent shall be valid for a one year period within which time an application or an updated notice of intent may be submitted to the HSA.

7. If the applicant provides written verification that the necessity for an application could not have been reasonably anticipated 60 days prior to submission of an application for a certificate of need, the commissioner may reduce the time requirement for advanced submission of a notice of intent to less than sixty days.

B. Determination of applicability.

1. Written determination of applicability of the act shall be made by the commissioner when an informational request for such determination is submitted from any person directly affected by the proposed construction or modification. Such request may be submitted at any time regardless of whether a notice of intent has been submitted. The foregoing shall not prohibit the commissioner from making his own determination, regardless of whether a notice of intent has been submitted, as to whether a proposed undertaking is subject to review under the act as part of his general authority to enforce the provisions of the act.

2. The HSA or the commissioner, when necessary to obtain all relevant information in order to make a recommendation or to make the final determination respectively, may request additional clarifying information about the proposed undertaking. Any information requested shall relate to the provisions of Minnesota Statutes, section 145.833, subdivision 5, and to 7 MCAR S 1.661 B.7. Failure to supply the information in a timely manner shall be sufficient grounds for determining that the proposed undertaking is subject to the act.

3. Upon receipt of a request for determination of applicability, the HSA shall, within 30 days, submit a recommendation to the commissioner as to the applicability of the act to the subject of the request. Within 30 days of

receipt of the recommendation from the HSA, the commissioner shall review the matter and the HSA recommendation and shall notify the applicant in writing as to whether the act is applicable to the subject of the request and the reasons for the decision.

C. Acquisition of equipment by physicians.

1. A requester proposing to purchase, lease, or otherwise acquire diagnostic or therapeutic equipment which requires a total capital expenditure in excess of $150,000 for one or more related items of diagnostic or therapeutic equipment shall submit a notice to the HSA and the commissioner of the proposed equipment acquisition. Such notice shall contain the following information:

a. The legal structure or organization of the requester;

b. A description of the equipment which is proposed to be acquired;

c. The proposed location of the equipment;

d. The estimated capital expenditure necessary to acquire the equipment as well as an estimate of those capital expenditures needed for installation and other related costs;

e. The source of funds to be used to acquire the equipment;

f. The source and estimated volume of patients utilizing the proposed equipment for the first three years of operation;

g. The party responsible for the operation of the proposed equipment;

h. The recipient of revenue generated by the proposed equipment;

i. The party responsible for any financial losses from the operation of the proposed equipment;

j. Delineation and description of the nature of any proposed existing formal or informal arrangement with a health care facility for use of equipment, including the proportions of total patients who will be either inpatients or outpatients of a health care facility during the time such equipment will be used on or for them; and

k. Whether the requester desires a public hearing.

2. Within 20 days of receipt of the notice, the commissioner shall decide whether the information submitted pursuant to 7 MCAR S 1.662 C.1. is complete.

a. If the commissioner decides that the information is not complete, he shall immediately notify the requester and specify in detail why the information is incomplete and what additional data must be submitted. A determination of incompleteness may occur under the following conditions:

(1) The items specified in 7 MCAR S 1.662 C.1. have not been fully answered or the answers need clarification; or

(2) The answers provided raise additional questions which must be answered in order to fully understand the situation.

b. The 60 day period in which the commissioner must decide whether the proposed acquisition is designed to circumvent the act shall commence to run upon receipt of the notice, or, if the commissioner determines that the notice is incomplete pursuant to 7 MCAR S 1.662 C.2.a., upon receipt of the additional information required to complete the notice.

3. Within twenty days after the commissioner determines the notice is complete, the HSA shall forward comments to the commissioner regarding the proposed acquisition of the equipment and may request that a hearing be held.

4. If a hearing is requested by the requester or the HSA, a public hearing shall be held pursuant to the Administrative Procedure Act. The hearing results shall be considered to be fact-finding and advisory to the commissioner.

5. The following direct or circumstantial evidence shall be considered in determining whether a proposed acquisition is designed to circumvent the act:

a. The existence of an explicit agreement to circumvent the act;

b. The projected proportion of patients who will use the equipment while also being inpatients or outpatients of a health care facility, if such inpatient use is not on a temporary basis, such as a result of a natural disaster, major accident or equipment failure;

c. The existence of a relationship between the requester and a health care facility for purposes of making available the proposed equipment to the health care facility;

d. The needs of a health care facility to purchase such equipment if the proposed equipment were not acquired by the requester;

e. The past occurrence of a denial of a certificate of need for the same or similar equipment to a health care facility the patients of which would receive health services from the requester as a result of the proposed acquisition;

f. The financial ability of a health care facility to purchase or acquire the same or similar equipment, if patients of the health care facility would receive health services from the requester as a result of the proposed acquisition;

g. The past or present existence of an intention to acquire such equipment, as expressed in its long range development or other plan, on the part of a health care facility, the patients of which would receive health services from the requester as a result of the proposed acquisition;

h. The accrual to a health care facility of material benefit from the proposed acquisition and that, if the acquisition were made by the health care facility, the project would be reviewable under the act; and

i. The existence of other information which shows that the acquisition of the equipment is designed to circumvent the act.

6. Within 60 days of determining the notice to be complete, the commissioner shall review the notice, any hearing record and hearing examiner recommendation and any information submitted by the requester, HSA and other persons, and make a decision as to whether the proposed acquisition is designed to circumvent the act. The applicant and the HSA shall be informed in writing of the commissioner's decision and underlying rationale.

7. If the commissioner decides that the proposed acquisition is designed to circumvent the act, a certificate of need must be obtained according to the process described by the act and these rules.

D. Waivers.

1. A proposed construction or modification involving an existing health care facility may be granted a waiver based upon the information forwarded by the HSA with its recommendation and the determination of the commissioner that the factors in 7 MCAR S 1.662 D.2. are substantially fulfilled and that any one of the following situations exists:

a. The proposed construction or modification falls within the situations described in Minnesota Statutes, section 145.835, subdivision 4(a) or (b). Additional examples or items that come within subdivision 4(b) are business related equipment, telephone systems, energy conservation measures, warehouse storage, activities space, site acquisition and other projects of a like nature.

b. The proposed project is solely for acquisition of diagnostic or therapeutic equipment which is to replace existing equipment only when the existing and replacement equipment have approximately the same capabilities.

c. The proposed project is subject to Minnesota Statutes, section 145.833, subdivision 5(a)(2) which governs changes in bed capacity of a health care facility; and is not reviewable under any other provisions of the act or these rules.

d. The proposed project is solely to conduct reviewable predevelopment activity pursuant to 7 MCAR S 1.661 B. 19.a.

e. The proposed project is solely for acquisition of an existing health care facility and the change is not reviewable under the provisions of the act other than 7 MCAR S 1.661 B.7.a.(1).

2. Waiver shall be granted for projects involving eligible situations if the following factors are substantially fulfilled:

a. The proposed project shall not result in an increase in patient charges of more than five percent over existing charges in either the average charge for all patients or the average charge for those patients who will benefit from the project; provided, for proposed waiver of changes in bed categories involving federal certification status of nursing homes, the proposed project shall not result in an increase in patient charges of more than 20 percent over existing charges in either the average charge for all patients or the average charge for those patients who will benefit from the project. The percentages shall be calculated after including any projected inflation increases based upon the allowable increase limit established by the commissioner pursuant to 7 MCAR S 1.504.

b. The applicant has documented that the project:

(1) Is not unnecessarily duplicative of similar services in the facility's service area;

(2) Will be adequately utilized compared with minimal utilization rates consistent with the efficient delivery of health care; and

(3) Will otherwise result in an effective and efficient operation.

c. The proposed project conforms to the facility's long range development plan, if any, and to the guidelines, criteria and goals for such services in the applicable HSP, AIP and the State Health Plan.

d. The applicant is not a health care facility against whom proceedings pursuant to Minnesota Statutes, section 144.55 or 144A.11 have been initiated. This factor shall not be considered if the proposed construction or modification is intended to correct, to the extent practicable, the causes of the violations.

3. The request for a waiver shall be submitted by the applicant to the HSA at the same time as submission of a notice of intent for a proposal would have been submitted. In situations in which the applicant has previously submitted a notice of intent alone, nothing shall preclude the applicant from submitting an amended or updated notice of intent concurrently with the waiver request. The waiver request shall include the following information:

a. Description of the project;

b. Estimated capital expenditures;

c. Annual operating budget of the current year;

d. Anticipated impact of the project on facility costs and patient charges; and

e. Information pertaining to the factors for a waiver specified in 7 MCAR S 1.662 D.2.b.

4. The HSA shall not proceed with a recommendation until complete information is received. If any additional information is requested of an applicant, it shall be relevant to the eligibility standards specified in 7 MCAR S 1.662 D.1. and the factors specified in 7 MCAR S 1.662 D.2.

5. Within 30 days of the receipt of a request accompanied by complete information, the HSA shall submit to the commissioner its recommendation for granting or denying the waiver. This recommendation shall be accompanied by supporting rationale based on the applicable item in 7 MCAR S 1.662 D.1. and the factors in 7 MCAR S 1.662 D.2. and all information submitted by the applicant.

6. Within 30 days of receipt of the recommendation of the HSA, the commissioner shall notify the applicant and the HSA of the decision.

7. Emergency waivers may be granted by the commissioner if the need for the project is a result of fire, tornado, flood, storm damage or other similar disasters.

a. The applicant shall submit a written request for an emergency waiver to the commissioner with a corresponding copy sent to the HSA. This request shall describe the project, estimated cost and type of disaster which occurred.

b. Within three working days, the HSA shall forward a recommendation and comments to the commissioner.

c. Within five working days of the receipt of the request from the applicant, the commissioner shall notify the applicant and HSA of the decision to grant or deny an emergency waiver.

d. An emergency waiver shall be granted if the need for the project is a result of fire, tornado, flood, storm damage or other similar disaster, and if both of the following conditions are found to exist:

(1) Adequate health care facilities are not available for the people who previously used the applicant facility; and

(2) The projected repair does not exceed the guidelines and goals for such services in the applicable health systems plan or State Health Plan.

e. A request for an emergency waiver shall be limited in nature and scope to only those repairs necessitated by fire, tornado, flood, storm damage or similar disasters.

8. For purposes of Minnesota Statutes, section 145.842 and for the periodic reports in 7 MCAR S 1.664 E. of these rules, granting of a waiver of certificate of need review shall be considered to have the same effect as issuance of a certificate of need.

9. The applicant shall resubmit a request for a waiver if the construction or modification for which a waiver was initially granted is not commenced, as described in 7 MCAR S 1.664 C., within 18 months of the granting of waiver or within 90 days of the granting of an emergency waiver.

10. A project may not be separated into component parts if the granting of a waiver for one part would not subject the remaining parts to certificate of need review and if, when all parts are taken together, the project constitutes a single undertaking which is reviewable under the act. If, however, the remaining component parts of a project would still be subject to review, a waiver may be requested for a specific component part of a project.

AR00825T

7 MCAR S 1.663 Review process, procedures, and criteria.

A. Submission and contents of application for certificate of need.

1. The commissioner shall establish a schedule specifying dates when applications may be submitted to the applicable HSA. The schedule may be revised periodically by the commissioner subject to a 60 day notice which shall be printed in the State Register and shall be provided to each HSA by written notice. The schedule shall provide that all applications may be submitted as specified but in no case less frequently than every 30 days.

2. Fourteen copies of an application for certificate of need shall be submitted. The HSA, immediately upon receipt of the application, shall send a copy to both the commissioner and

the Department of Energy, Planning and Development.

3. The application shall be submitted on a form prepared by the commissioner and available through the HSA. Forms shall be printed for:

a. Hospitals;

b. Nursing homes and boarding care homes;

c. Supervised living facilities certified or proposing to be certified as intermediate care facilities for the mentally retarded and persons with related conditions. This form shall allow substitution of acceptable alternative sets of pertinent information which have been prepared for the Department of Public Welfare to carry out its responsibility for determination of need, location and programming for the mentally retarded and for the purposes of program licensure and rate setting. In order to be acceptable substitutes, alternative sets of information shall be identifiable according to the topics specified in 7 MCAR S 1.663 A.4.; and

d. Other applicants.

4. The following information and other clarifying information shall be considered to be germane to the project and shall be in a prescribed form, as related to each type of application described in 7 MCAR S 1.663 A.3.

a. Description of the project.

(1) A description of any building or services to be constructed, modified or provided, including a comparison to existing building and services.

(2) A description of the present number and kinds of staff positions and those new staff positions to be created by the project, as well as the basis for anticipation of the successful recruitment of these new staff positions.

(3) A statement from the architect or other construction specialist describing the status of the project's conformance with applicable building codes and state licensure and federal certification requirements for physical plants.

(4) A description of the methods and projected costs of providing energy for operating the project, as well as methods of conserving energy.

(5) A statement of the anticipated dates for commencement and completion of the project.

b. Financial aspects of the project.

(1) Capital expenditures and financing.

(a) The estimated total capital expenditure for the project. There shall be a breakdown of the total capital expenditure based upon the following eight categories. The information provided with respect to each category shall include the major component expenditures within the category.

(i) Predevelopment activity;

(ii) Site acquisitions;

(iii) Land improvements;

(iv) New construction of buildings;

(v) Renovations of buildings;

(vi) Fixed equipment;

(vii) Movable equipment; and

(viii) Financing costs and any contingencies.

(b) A description of the effect of this project on the general solvency of the applicant, including the future effect on financial indicators, including ratio of debts to total assets, operating revenue to total assets, operating revenue to fixed assets, total revenue to fixed assets and interest to total expense plus interest.

(c) A description of the availability and method of financing, including the amount of all projected loans, refinancing of existing debt (if any), estimated interest rate and the projected debt service amount as a percentage of the cost per patient day, or, for hospitals, as a percentage of cost per adjusted admission, as defined in 7 MCAR S 1.472 U.

(2) Operating costs. An estimate of the total annual operating costs upon completion of the project for at least five years. The total annual operating costs shall include anticipated salary requirements of new staff. The estimated costs shall conform with the cost centers and other requirements of at least one of the following:

(a) The requirements for cost allocation under Title XVIII of the Social Security Act, 42 United States Code, Section 1395x and 42 Code of Federal Regulations, Sections 405.401-405.406 and 405.453;

(b) The requirements for cost allocation under Title XIX of the Social Security Act, 42 United States Code, Section 1396a, and 42 Code of Federal Regulations, Sections 405.401-405.406 and 405.453;

(c) The requirements for cost allocation under Minnesota Statutes, sections 144.695 to 144.703 (Minnesota hospital rate review system); or

(d) The cost allocation requirements utilized in generally accepted reports by applicants to any other agency or program of the state of Minnesota.

(3) Revenue.

(a) An estimate of the total annual revenue of the health care facility upon completion of the project for at least five years.

(b) A description of the anticipated effect of the project for the first five years of operation on the total patient charges per patient visit or service if applicable, and in the case of hospital projects, the total patient charges per adjusted admission as defined in 7 MCAR S 1.472 U. Average patient charges by service which are affected by the project shall be detailed.

(c) Where a health care facility does not already exist, a projection of the anticipated patient charges for the first five years of operation.

c. Geographic area to be served.

(1) A narrative description of and graphic identification of the health care facility's service area or areas, in terms of standard political boundaries.

(2) An identification of patient origin data, local surveys and other sources utilized in determining the service area of the project.

d. Requirements of the population served.

(1) Current and projected population for the anticipated life of the project or 20 years, whichever is less, by applicable demographic categories, such as age, sex and occupational status, which will be served by the project and identification of sources of the information.

(2) Incidence and prevalence rates of diagnoses or conditions within the population related to the services proposed.

(3) The impact of the project upon the health needs of people who have traditionally experienced difficulties in obtaining equal access to health care.

(4) A description of the applicant's performance during the past five years related to access to health services including:

(a) Extent to which the facility met its obligations, if any, under federal regulations or state rules requiring provision of uncompensated care, community services or access to programs receiving federal financial assistance;

(b) The extent to which Medicare, Medicaid and medically indigent patients are served by the applicant; and

(c) The range of methods by which a person may have access to its services, such as, outpatient services, admission by house physicians or admission by physicians in the community.

e. Relationship to other health care facilities.

(1) Existing institutions within and contiguous to the proposed project that offer, or propose to offer, the same or similar service;

(2) The occupancy or utilization rates of the similar existing institutions during the past five years, only if such information is accessible to the applicant. Determination of incompleteness shall not be made solely because the applicant is unable to provide occupancy or utilization information for existing institutions due to inaccessibility of such information to the applicant;

(3) The anticipated effect that the project will have on existing facilities and services; and

(4) The relationship of the project to health professional training programs, biomedical and behavioral research projects and medical referral facilities.

f. A description of the applicant's participation, if any, in consumer choice health plans and any other methods for offering health services based upon giving the purchaser choices in services and knowledge about the price and quality of such health services. The description shall include:

(1) Current and five-year projected number of consumers involved and

(2) Procedures by which public information regarding price and quality of health services will be made available to potential consumers and payors.

g. Anticipated need for the facility or service to be provided by the project and identification of the factors which create the need, including at least the following:

(1) Data, information and findings collected by the applicant which establish need for each service component of the project; and

(2) Relationship of the project to the facility's long range development plan.

h. Occupancy and utilization rates.

(1) Occupancy rates for the health care facility,

based on both licensed beds and on beds which are set-up and staffed, for the following:

(a) Each of the past five years;

(b) Each of the preceding 12 months; and

(c) Each of the first five years after completion, including explanation of assumptions.

(2) Utilization rates for the health services related to the projected project for the following:

(a) Each of the past five years;

(b) Each of the preceding 12 months; and

(c) Each of the first five years after completion, including explanation of assumptions.

i. A copy of all survey reports during the last three years of operation from the Minnesota Department of Health or from other quality assurance programs recognized in federal or state laws, such as the accreditation program of the Joint Commission on Accreditation of Hospitals.

j. Alternatives which were considered and found not to be acceptable as a substitute for the project and the reasons why they were determined to be unacceptable.

k. Relationship of project to the HSP, AIP and State Health Plan including established planning objectives pertaining to cost, availability, accessibility, need, quality and financial viability of health services.

B. Determination of completeness.

1. Within ten days of the receipt of an application the HSA shall review the application's contents and forward a recommendation to the commissioner and the Department of Energy, Planning and Development as to whether it is complete. If the recommendation states that the application is incomplete, the HSA shall identify the sections which it found to be incomplete and explain why it concluded that they were incomplete. A determination of incompleteness may occur under the following conditions:

a. The items specified in 7 MCAR S 1.663 A.4. have not been fully addressed or the information needs clarification.

b. The information provided raises definite questions directly relevant to the proposed project and which are critical and essential in order for the HSA and commissioner to perform their review under the act and these rules.

2. Within ten days of receipt of the recommendation from

the HSA, the commissioner, after reviewing the application in conjunction with the HSA recommendation and comments, shall notify the applicant, HSA and Department of Energy, Planning and Development in writing as to whether the application is complete. If the application is declared incomplete, the applicant shall be informed what additional information must be submitted.

a. If the applicant submits the required additional information to the HSA, Department of Energy, Planning and Development and commissioner within five working days of receipt of the commissioner's determination, the commissioner shall review the new information and notify the applicant, HSA and Department of Energy, Planning and Development within five working days of receipt of the new information as to whether the application is complete. The result of this clause is that the application may be found to be complete without being deferred to another cycle of reviews.

b. If the required information is submitted after five working days, but within 60 days of receipt of the commissioner's determination, the complete review will be made according to the schedule specified pursuant to 7 MCAR S 1.663 A.1. The result of this clause is that the application is considered for completeness in the next cycle of the commissioner's completeness determination process.

c. If an applicant has not fully responded to a request for additional information within 60 days of the request, the incomplete application shall be returned to the applicant.

3. A determination that an application is complete shall mean only that information has been given pertaining to each component part of the application as prescribed in 7 MCAR S 1.663 A.4. Determination that the application is complete shall carry no implication with respect to the quality of the information nor shall it preclude the HSA or the commissioner from requesting additional clarifying information during the review period.

4. The 60 day review period on the HSA level shall commence on the date that the HSA receives the notice from the commissioner that the application has been determined to be complete.

C. HSA hearing process and procedures for determining recommendations on certificate of need applications. No proposal may be reviewed nor may any recommendation on an application be made by an HSA in a manner which does not comply with the act or these rules.

1. Upon determination by the commissioner that the application is complete, the HSA shall schedule the date, time and place of a public hearing at which a determination will be made as to whether to recommend issuance of a certificate of

need.

2. Notice of the hearing shall be published in a legal newspaper as required in Minnesota Statutes, section 145.837, subdivision 2 (2). The notice shall contain a brief description of the project and the date, time and place of the hearing. A separate notification shall be mailed to all other affected persons, including at least the applicant, any contiguous HSA and all health care facilities located in the applicant's proposed service area. This separate notification shall contain information similar to that in the published notice, except that contiguous HSAs shall be requested to provide written comment prior to the public hearing or to appear at the public hearing to offer an opinion as to the need for the project and the factual basis for that opinion.

3. A hearing body shall conduct the public hearing. The chairman of the hearing body, or a member designated by the chairman, shall be the presiding officer and shall conduct the hearing and rule on all motions and on the admissibility of all evidence and testimony. The presiding officer shall designate a hearing secretary who shall tape record the proceedings and provide to the commissioner a verbatim transcript or a written summary of the hearing.

4. A majority of the members of the hearing body shall constitute a quorum. No hearing may be held, nor recommendation made nor any other action be taken unless a quorum is present.

5. The hearing body, if other than the governing body of the HSA, shall forward its recommendation, findings of fact, conclusions and all evidence to the governing body, which shall vote on the project as required in 7 MCAR S 1.663 C.7. The governing body shall not hear or receive evidence other than that forwarded by the committee unless it holds an additional hearing after first publishing a notice of hearing pursuant to the act and 7 MCAR S 1.663 C.2.

6. All interested persons shall be given the opportunity to be heard, to be represented by counsel, to present any relevant oral or written evidence and to examine and cross-examine witnesses. The applicant and any person who testifies orally or otherwise submits evidence or testimony at the hearing shall be subject to questioning by any member of the hearing body. All relevant evidence shall be heard and considered, and the inadmissibility of such evidence in a court of law shall not be grounds for its exclusion. Evidence presented in the form of governmentally issued or sponsored planning documents, studies and guidelines, such as the State Health Plan and health systems plans, shall be specifically considered. The hearing may be recessed to another day if the hearing body finds that additional evidence or time is necessary. When the presiding officer determines that all available and relevant evidence has been heard, the hearing body shall then commence its deliberations.

7. The hearing body, if other than the governing body of the HSA, and the governing body, after receipt of a hearing body's recommendation and necessary deliberation, shall vote on the project as follows:

a. After a motion has been made with respect to the project, each member present and qualified to vote, including the chairman or presiding officer, shall vote, or abstain from voting, on the motion. The vote of each member, or the fact of his abstention, shall be recorded in the minutes of the hearing or meeting.

b. No member may vote on behalf of a member not present.

c. A motion for approval of a project shall not pass unless a majority of the members voting, including abstentions, vote in favor of the motion. Failure to obtain a majority vote in favor of approval shall constitute the recommendation of denial.

d. An approval of the project with revisions may be recommended based upon findings of fact, conclusions and supporting evidence pursuant to 7 MCAR S 1.663 G.

(1) Within 30 days after the receipt of the HSA recommendation, the applicant shall notify the HSA and the commissioner by certified mail as to whether it accepts or rejects the revisions.

(2) If the applicant does not respond or rejects the revisions, the recommendation of the HSA to the commissioner shall remain as a recommendation for approval with revision including the findings of fact and conclusions which support revision of the application.

8. The recommendation of the HSA shall be forwarded to the commissioner and the Department of Energy, Planning and Development in the format prescribed in 7 MCAR S 1.663 G.

9. If the applicant decides to withdraw from the review, it shall so inform the HSA and the commissioner in writing.

D. Consolidated review of life support transportation service projects. If a project subject to review under the act is also subject to review under the process described in Minnesota Statutes, section 144.802 for the licensure of life support transportation services, a single consolidated review of the project may occur in conformance with Minnesota Statutes, sections 144.802 and 145.836 and the commissioner will make available to anyone who requests it a recommended process for consolidated review. In order to facilitate consolidated review of such projects, the HSA shall, upon agreement of the applicant pursuant to Minnesota Statutes, section 145.837, subdivision 3, extend its certificate of need review period from 60 to 90 days to coincide with the 90 day life support transportation service

licensure review period prescribed in Minnesota Statutes, section 144.802, subdivision 3(d). Within that 90 day period, the HSA shall make both recommendations to the commissioner. If mutual agreement pursuant to Minnesota Statutes, section 145.837, subdivision 3, cannot be reached, the HSA shall attempt to make both the licensure and certificate of need recommendations within the 60 day period. If the HSA finds that making both recommendations within the 60 day period is not possible, it shall make the certificate of need recommendation within the 60 day period and a separate licensure recommendation within 90 days, as required by Minnesota Statutes, section 144.802, subdivision 3(d).

E. Review criteria. In reviewing a proposal, the HSA and the commissioner shall consider all evidence in the record and shall evaluate the evidence based upon the following factors, where applicable. In addition, these factors shall be specifically addressed in the findings of fact and conclusion required by 7 MCAR S 1.663 G.

1. Health plans and population needs.

a. The relationship of the project to, and the degree to which it is consistent with, the applicable HSP, AIP and State Health Plan.

b. The relationship of the project to, and the degree to which it is consistent with, the applicant's long range development plan.

c. The need for the project as determined by past, present and future utilization data with specific attention given to the following:

(1) Utilization rates of similar facilities within the facility's health service area for the most recent five years;

(2) Utilization rates of the existing facility or service for the most recent five years; and

(3) Five year projected utilization rate for the proposed expanded facility or service.

d. The need for the project based upon the population requirements of the affected service area with specific attention given to the following:

(1) The population required to support the project, examined by demographic categories such as age, sex and occupational status;

(2) Incidence and prevalence rates of diagnoses or conditions within the population related to the services proposed by the project;

(3) The contribution of the project in meeting the health needs of people who have traditionally experienced difficulties in obtaining equal access to health care, in particular low income persons, racial and ethnic minorities, women, handicapped persons and other groups identified as priorities in the HSP. If the project involves a reduction, elimination or relocation of a health service and the project is otherwise reviewable under the act, consideration shall be given to the extent which the project will affect the ability of affected members of these above priority groups to obtain needed health care.

(4) The past performance of the applicant in meeting its obligations, if any, under the applicable federal regulations or state rules requiring provisions of uncompensated care, community service or access by minorities and handicapped persons to programs receiving federal financial assistance, including the existence of any substantiated civil rights access complaints against the applicant.

(5) The extent to which Medicare, Medicaid, and medically indigent patients are served by the applicant.

(6) The extent to which the applicant offers a range of methods by which a person may have access to its services, such as, outpatient services, admission by house physicians or admission by personal physicians in the community.

2. Alternative approaches and systemwide effects.

a. The availability and adequacy of other less costly or more effective health care facilities and services which may serve as alternatives or substitutes for the whole or any part of the project.

b. The relationship of the project to the existing health care system in the area, including the possible economies and improvements which may be derived from operation of joint, cooperative or shared health care resources. Specific consideration shall be given the following:

(1) The effect of the project on use, capacity, and supply of existing health care facilities and services.

(2) The possibility of increasing referrals to other health care providers to achieve higher utilization of existing resources.

(3) The degree to which the project facilitates the development of an integrated system of services among health care providers.

(4) The possibility of consolidating services with other health care providers.

(5) The existence of formal arrangements established

between the applicant and other health care providers to provide similar or supporting services to that being proposed.

c. Preferred alternative uses of resources included in the application, including such resources as health care providers, management personnel and funds for both capital and operational needs, for the provision of other health services by the applicant, as identified by the applicable HSP, AIP and State Health Plan.

d. The effect of the project on the clinical needs of health professional training programs in the area, including access of such programs to the project.

e. The needs for and availability of services and facilities for osteopathic physicians and patients.

3. Price competition among similar services. Improvements or innovations in the financing and delivery of the proposed health services which foster price competition in a way that promotes quality assurance and cost effectiveness. Such consideration shall include:

a. The degree of participation by the applicant in consumer choice health plans, such as health maintenance organizations and preferred medical provider programs, and other methods for offering health services based upon giving the purchaser choices in services and knowledge about the price and quality of such health services; and

b. The existence of procedures by which public information regarding price and quality of health services will be provided to potential consumers and payors.

4. Applicant and project attributes.

a. The availability of resources, including health manpower, management personnel, physical facilities and funds for capital and operating needs for the project.

b. The immediate and long-term financial feasibility of the project with specific analysis of the following:

(1) The comparison of the anticipated revenues with the anticipated expenses including an analysis of whether or not the estimated revenues and expenses appear accurate; and

(2) The impact of the project upon the immediate and long-term financial solvency of the facility.

c. The impact of the project on operational costs and patient charges with specific analysis of the following:

(1) The reasonableness of the proposed cost of the project compared to similar projects; and

(2) The reasonableness of proposed operating costs and impact on patient costs and charges compared with similar services in similar health care facilities.

d. The organizational and other relationship of the project to ancillary or support services including an analysis of the following:

(1) The availability of necessary ancillary or support services and arrangements made by the applicant for provision of those services;

(2) The development of multi-institutional arrangements for sharing support services.

e. The costs and methods of providing energy for the operation of the project including consideration of methods for conserving energy.

f. The quality of care as reflected in the most recent survey reports from the Minnesota Department of Health and other quality assurance programs recognized in federal or state laws, such as the accreditation program of the Joint Commission on Accreditation of Hospitals.

5. Special needs and circumstances.

a. The special needs and circumstances of medical teaching, research facilities and referral facilities which provide a substantial portion of their services or resources, or both, to individuals outside of the health service area. Consideration shall also be given as to whether:

(1) The instruction, studies or consultation provided by the applicant is coordinated with other medical teaching, research facilities and referral facilities in the multi-health service area served by the applicant; and

(2) The project contributes to meeting the health service needs of the residents of the health service area.

b. The special needs and circumstances of biomedical and behavioral research projects which are designed to meet a national need for which local conditions offer special advantages.

c. The special needs of hospitals to convert excess beds to long-term care or other alternative functions, but only where the termination of all acute care services is proposed and only if a need for the number of proposed long-term care beds can be shown to be consistent with the HSP.

F. Revisions.

1. A project may be revised by the applicant, the HSA or the commissioner at any time during the review process if:

a. The revision is acceptable to the HSA and the applicant; and

b. The revision is within the scope of the project as initially proposed.

2. For purposes of the act and these rules, a revision shall be considered to be within the scope of the project as initially proposed if the revision is clearly and closely related to the proposed construction or modification and does not directly involve health services, physical plant, equipment or other services unrelated to the project as initially proposed.

G. Content of record. After making its recommendation, the HSA shall submit to the commissioner three copies of the complete record, absent the application which is part of the record and previously submitted to the commissioner. It shall include at least the items listed in this rule and when forwarded to the commissioner shall be in the following order:

1. A cover letter which includes:

a. Pertinent dates relating to the review including, but not limited to, dates of submission of application, determination of completeness, meetings of project review committee, holding of the public hearing and recommended action by the HSA;

b. Description of the project;

(1) If the project voted upon by the HSA is the same as proposed in the application, a summary only shall be provided; or

(2) If prior to the vote of the HSA the project has been revised upon agreement of the HSA and applicant, a detailed description as revised shall be provided.

c. Estimated capital cost of the project; and

d. The recommendation of the HSA limited solely to a statement whether or not a certificate of need should be issued, denied or issued with revisions. Any revision shall be stated.

2. Proof of publication of the notice of the public hearing;

3. A summary of evidence presented at the public hearing;

4. The recommendation of the HSA which shall contain the following parts:

a. Findings of fact which shall be based upon each applicable review criterion in 7 MCAR S 1.663 E.; provided, however, that for each project recommended for approval, written findings shall take into account the current accessibility of

the facility as a whole and shall be based upon the criteria listed in 7 MCAR S 1.663 E.1.d.(1),(3),(4),(5) and (6);

b. Conclusions which shall be based on the findings of fact;

c. A recommendation which shall be based on conclusions; and

d. A record of the vote of each member of the HSA on all motions made with regard to the project.

5. Copies of all written evidence considered by the HSA as follows:

a. HSA staff reports and attachments;

b. Committee reports and attachments;

c. Any relevant correspondence between the HSA and the applicant;

d. All additional evidence submitted by the applicant, if not inserted into specific sections of the application; and

e. Any relevant evidence submitted by other affected persons including comments from contiguous HSAs.

H. Determination by commissioner.

1. The role of the commissioner in deciding whether or not a certificate of need should be issued is that of a final, independent decision maker. While the commissioner must base his review on the record presented by the HSA, his review is not merely in an appellate capacity and thus he is not required to adopt the HSA recommendation merely because it is supported by evidence in the record.

2. The commissioner shall review the application and the record presented by the HSA. The review shall include a determination as to whether the procedural requirements of the act and these rules have been substantially met. The review by the commissioner may include other information not in the HSA record but only in order to assess the necessity of a remand to the HSA for further consideration.

3. Within 30 days of receipt of the recommendation of the HSA, the commissioner shall make one of the following decisions based upon the record as considered in light of the review factors in 7 MCAR S 1.663 E.

a. Issue a certificate of need. If the commissioner's decision is consistent with the HSA recommendation, the commissioner may adopt the findings and conclusions of the HSA by reference.

b. Issue a certificate of need based upon a revised application.

(1) The commissioner may issue a decision approving a certificate of need based upon a revised application. Rationale shall be set forth for each revision proposed by the commissioner.

(2) If the commissioner proposes a revision of the project, notice shall be mailed to the applicant and the HSA so informing them. Within 30 days after receipt, the applicant and the HSA shall inform the commissioner in writing as to whether or not they accept the revision.

(3) Upon the request of the HSA and the applicant, during the 30 days, the commissioner may amend his decision by modifying the revisions as proposed.

(4) The 30 day period in which reconsideration can be requested pursuant to Minnesota Statutes, section 145.838, subdivision 2, or judicial review pursuant to Minnesota Statutes, sections 15.0424 and 145.838, subdivision 3, shall commence to run after receipt by the commissioner of the written notice specifying whether or not the HSA and applicant accept the revisions, or if no notice is received, at the end of the 30 day period provided for in 7 MCAR S 1.663 H.3.b.(2).

(5) If the HSA and applicant accept the revision, the commissioner shall issue a certificate of need and notify the HSA and Department of Energy, Planning and Development.

(6) If the applicant or the HSA rejects the revision, the project shall be considered by the commissioner solely based upon the merits of the application and the record as proposed prior to the rejected revision, without prejudice due to rejection of the revision.

c. Deny a certificate of need. If a project is denied, the commissioner shall set forth in writing rationale for the action and notify the applicant, the HSA and the Department of Energy, Planning and Development. If the commissioner's decision is consistent with the HSA recommendation, the commissioner may adopt the findings and conclusions of the HSA by reference.

d. Remand the application to the HSA.

(1) A remand may occur if, during the review of the HSA record, the commissioner finds that one or more of the following conditions exist and determines that a remand will materially aid in the decision making process.

(a) Findings of fact were not supported by the record;

(b) Findings of fact were based on inaccurate

information in the record;

(c) Significant issues relating to review criteria and other provisions of rules were not addressed by the HSA;

(d) Significant evidence within the record was not addressed by the HSA;

(e) Conclusions were not supported by findings of fact;

(f) Conclusions were based on inaccurate findings of fact;

(g) Significant conclusions were not drawn from findings of fact;

(h) The recommendation was not supported by the conclusions; or

(i) The existence of circumstances which arose under 7 MCAR SS 1.661 E.2. and 1.663 H.2.

(2) The commissioner shall provide the HSA and the applicant with written rationale for the remand action and instructions for further HSA review.

(3) Within 60 days of receipt of the remand, the HSA shall comply with the commissioner's instructions, hold another public hearing to review the project and forward a recommendation to the commissioner and the Department of Energy, Planning and Development.

I. Determination by the commissioner: life support transportation service projects. For projects subject to review under the act and also subject to review under the process described in Minnesota Statutes, section 144.802 for the licensure of life support transportation services, the commissioner shall make a certificate of need decision as provided in 7 MCAR S 1.663H.3. If the HSA submits a certificate of need recommendation and indicates that the life support transportation service licensure recommendation will be submitted separately, the decision of the commissioner to issue a certificate of need in such a case shall not constitute a decision by the commissioner to issue a life support transportation service license.

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7 MCAR S 1.664 Post determination actions.

A. Post determination appeals.

1. If the decision of the commissioner is consistent with the recommendation of the HSA, any person aggrieved by the decision may seek judicial review pursuant to Minnesota

Statutes, section 145.838, subdivision 3.

2. If the decision of the commissioner is contrary to the recommendation of the HSA, any person may, pursuant to Minnesota Statutes, section 145.838, subdivisions 2 and 3, either request the commissioner to reconsider his decision or seek judicial review.

a. A reconsideration request shall be submitted to the commissioner in writing within 30 days after receipt of the decision by either the HSA or the applicant. The request shall address the applicable condition specified in Minnesota Statutes, section 145.838, subdivisions 2(a) to (d). Within 30 days after receiving the reconsideration request, the commissioner shall determine whether to reconsider his decision.

b. If the commissioner determines his decision should be reconsidered, the matter shall be remanded to the HSA. The HSA shall conduct a new public hearing. The record of the second hearing shall include the record of each previous hearing on the application. The HSA shall issue a new recommendation within 60 days of receipt of the remand from the commissioner.

c. If the commissioner determines that his decision should not be reconsidered, the HSA or the applicant may within 30 days request an administrative hearing pursuant to Minnesota Statutes, section 145.838, subdivision 2.

3. Any aggrieved person may seek judicial review of the commissioner's decision rendered pursuant to Minnesota Statutes, section 145.838, subdivision 1 or of the hearing examiner's decision rendered pursuant to Minnesota Statutes, section 145.838, subdivision 2 by instituting an action pursuant to Minnesota Statutes, section 15.0424.

B. Amendment of certificate.

1. After a certificate of need has been issued and before completion of the project, an applicant may find it desirable or necessary to modify the approved project. The types of changes in or modifications to a project are described in 7 MCAR S 1.664 B.2., B.3., and B.4. When a proposed change or modification falls into more than one of the types prescribed below ("immaterial," "minor," "significant"), the change shall be reviewed according to the category which is most stringent. The effect of those changes on the issued certificate of need are as follows:

a. Changes and modifications which are immaterial in nature or result (see 7 MCAR S 1.664 B.2.) shall not require any additional certificate of need review.

b. Changes and modifications which are minor in nature or result (see 7 MCAR S 1.664 B.3.) shall not be made unless the commissioner, after review and recommendation by the HSA, issues an amended certificate of need. The review conducted by the HSA

and commissioner shall be limited to determining whether or not the changes or modifications are minor as defined in 7 MCAR S 1.664 B.3., that the changes or modifications fall within the scope of the project as initially approved for a certificate of need, and that the evidence supporting the certificate of need as initially issued supports the changes or modifications.

c. Changes and modifications which are significant in nature or results (see 7 MCAR S 1.664 B.4.) require the submission of a new application and require a full certificate of need review.

2. The following are immaterial changes:

a. Changes in spatial allocation or design;

b. Change in architectural plans to correct a facility's structural deficiencies or to comply with governmental rules or regulations;

c. An increase of less than ten percent in the capital expenditure of the project, excluding inflation costs not projected at the time of application for a certificate of need; or

d. Other changes in project detail which will nevertheless result in the implementation of the project as approved.

3. The following are minor changes:

a. An increase of at least ten percent but less than twenty percent of the capital expenditure of the project, excluding inflation costs not projected at the time of application for a certificate of need;

b. Deletions of portions of the originally approved project;

c. Change in financing mechanism which increases the cost of financing;

d. Change in the selection of health services equipment, if not technologically different from that approved in the certificate; or

e. Change in bed capacity of a facility in a manner which increases the total number of beds, or distributes beds among various categories, by fewer than ten beds or ten percent of the licensed bed capacity, whichever is less.

4. The following are significant changes:

a. An increase equal to or in excess of 20% of the capital expenditure of the project, excluding inflation costs not projected at the time of application for a certificate of

need;

b. Change in the type or scope of health service which was originally approved in the certificate;

c. Change in the selection of health services equipment, if technologically different from that approved in the certificate;

d. Change in the geographical location, if such change is relevant to the commissioner's reasons for approval of the certificate of need project; or

e. Change in bed capacity of a facility by more than ten beds or ten percent of the licensed bed capacity; or

f. Changes in the project which raise new material issues not previously considered by the HSA or commissioner related to:

(1) Guidelines, criteria or goals of comprehensive health planning in the applicable HSP, AIP or the State Health Plan;

(2) The quality of care as reflected in survey reports from the Department of Health and in other quality assurance programs recognized in federal and state laws;

(3) The proposed operating cost compared with similar services in similar health care facilities; or

(4) Unnecessary duplication of health care facilities and health services as reflected in governmentally issued or sponsored planning documents, studies or guidelines.

5. The applicant, prior to implementing any minor change in the project, shall submit a written request for an amended certificate to the HSA.

a. The request shall contain a narrative comparison of the approved project and the proposed changes, a description of the cost implications and rationale for the proposed changes.

b. Within 30 days, the HSA shall review the request and forward all information submitted, a recommendation and rationale to the commissioner.

c. Within 30 days of receipt of the HSA recommendation, the commissioner shall review the applicant's request and the recommendation of the HSA and notify the applicant and the HSA in writing of the decision and reasons therefor.

6. The issuance of an amended certificate of need shall not result in the extension of the 18 month period which the applicant has to commence the project under the original

certificate of need.

7. If a proposed amendment is not approved, the applicant shall either proceed under the certificate of need as initially issued or shall proceed through a full certificate of need review as a new applicant.

C. Expiration of certificate.

1. Notification of termination date. Pursuant to Minnesota Statutes, section 145.839, each certificate of need or waiver shall specify the termination date.

2. Renewal of certificate or waiver.

a. If a project which had been granted a certificate of need or waiver has not commenced within 18 months, the applicant may submit information to the HSA and commissioner which updates the application and may request renewal of the certificate or waiver for a period up to 18 months.

b. Within 30 days of receipt of the request for renewal of the certificate of need or waiver, the HSA shall submit a recommendation to the commissioner as to whether the project or the reasons for approving the project have materially changed or been materially affected since the issuance of the certificate or waiver. If neither the project nor the reasons for approving the project have changed, renewal of the certificate or waiver shall be recommended.

c. Within 30 days of receipt of the HSA recommendation regarding renewal, the commissioner shall determine whether renewal shall be granted based upon the HSA recommendation regarding renewal. Renewal may be granted for a period up to 18 months.

3. In the case of a construction project, the commissioner shall use all of the following criteria in determining whether the project has commenced:

a. Whether final working drawings and specifications have been approved by the Minnesota Department of Health;

b. Whether construction contracts have been let;

c. Whether a timely construction schedule has been developed stipulating dates for the beginning, various stages and completion of construction;

d. Whether all zoning and building permits have been secured;

e. Whether significant physical alteration of the site has been made and is continuing in accordance with the construction schedule; and

f. Whether other factors related to the above conditions exist.

4. In the case of a project solely involving the acquisition of equipment, the commissioner shall consider the following factors in determining whether the project has commenced:

a. Whether a final purchase order or lease arrangement for all component parts of the equipment has been executed; and

b. Whether the equipment has been delivered and installed or a firm delivery date has been set and a specific schedule has been established for commencing procedures.

5. In the case of offering of a service which does not require facility construction or equipment acquisition, the commissioner shall consider the following factors in determining whether the project has commenced:

a. Whether the new service has been introduced within the facility; and

b. Whether appropriate personnel, as set forth in the application, have been identified and an employment arrangement has been executed for commencing services on a specific schedule.

D. Transfer of certificate or waiver.

1. A certificate of need or waiver shall not be transferred independently of the project with which it is associated. A certificate of need or waiver and the associated project shall not be transferred without the prior approval of the commissioner. A transfer shall be approved by the commissioner if the information submitted pursuant to this section indicates that there will be no material changes in the project as originally approved in the certificate of need or waiver that has been issued.

2. An entity proposing to purchase or otherwise acquire the project and associated certificate of need or waiver shall apply for a transfer by submitting the following information to the HSA and the commissioner:

a. A statement that it agrees to be bound by all the terms and conditions of the certificate of need or waiver originally granted for the project;

b. The financial aspects portion of a certificate of need application or waiver request; and

c. A list of any changes or modifications it proposes to make in the project.

3. Within 30 days after receipt of this information, the HSA shall review the transfer request and shall submit its

recommendation to the commissioner. Within 30 days after receipt of the recommendation, the commissioner shall inform the entity requesting the transfer, the HSA and the Department of Energy, Planning and Development as to whether or not the transfer has been approved and the reasons for the decision.

E. Periodic report.

1. Within 60 days after completion of a project for which a certificate of need was issued or a waiver granted, the applicant shall submit actual capital expenditure information related to the project to the commissioner and the HSA. The information submitted shall compare the estimated costs as outlined in the application with actual costs. A breakdown of costs, as specified in 7 MCAR S 1.663 A.4.b.(1)(a), shall be submitted.

2. If a discrepancy of more than five percent exists between estimated and actual costs in any of the reported line items or the total project cost, the applicant shall explain why the discrepancy occurred and indicate the additional impact on operating costs and patient charges resulting from the additional capital expenditures related to the project.

3. Completion of a project shall mean the earlier of the following:

a. The last payment for construction costs and other fees related to the project is made, not including debt service related to the project; or

b. The involved service is used for its intended purpose.

4. If the involved service is used for its intended purpose before the last related payment is made, an interim report shall be submitted utilizing actual and projected expenditures. In this case, the final report shall be submitted within 60 days after the last payment is made. Additional periodic reports may be required in connection with a revision to a project according to 7 MCAR S 1.663 F.

5. The requirements of this section shall apply to certificates of need and waivers issued or granted since August 1, 1979. If the project was completed prior to the effective date of these rules, the report shall be submitted within 60 days after the effective date of these rules.

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7 MCAR S 1.665 Applications from health maintenance organizations.

A. An HMO shall be subject to certificate of need review, unless exempt under 7 MCAR S 1.665 C., if it proposes, or undertakes on behalf of an inpatient health care facility, a project involving:

1. Any erection, building, alteration, reconstruction, modernization, improvement, extension, lease, equipment purchase or other acquisition related to inpatient institutional health services which requires, or would require if purchased, a total capital expenditure in excess of $150,000, and which, under generally accepted accounting principles, is not properly chargeable as an expense of operation and maintenance;

2. The obligation of any capital expenditure related to a change in the bed capacity of a health care facility by more than ten beds or more than ten percent of the facility's total licensed bed capacity, whichever is less, over a two year period following the most recent bed capacity change, in a way which:

a. Increases or decreases the total number of beds;

b. Redistributes beds among various categories; or

c. Relocates beds from one physical facility or site to another.

3. The obligation of any capital expenditure which is associated with:

a. The addition of an institutional health service which was not offered within the previous twelve months; or

b. The termination of an institutional health service.

4. The addition of an institutional health service which was not offered during the twelve month period before the month in which the service would be offered, and which entails annual operating costs of at least $75,000; or

5. Acquisition of an existing health care facility if the institutional health services or bed capacity, according to 7 MCAR S 1.665 A.2., will be changed as a result of the acquisition.

B. The following entities may qualify for exemption from certificate of need review if the conditions of 7 MCAR S 1.665 C. are met.

1. An HMO;

2. A combination of HMOs;

3. A health care facility which primarily serves inpatients if it is:

a. Owned, or proposed to be owned, by an HMO; or

b. Governed by a controlling body which is composed of over fifty percent principal officers or board members of the HMO; or

4. A health care facility, or a portion of a health care facility, leased by an HMO for a term of at least 15 years.

C. The conditions which must be met to qualify for exemption are:

1. The applicant shall be "qualified" under Title XIII of the Public Health Services Act, 42 United States Code, Section 300e or the applicant shall satisfactorily document to the commissioner that the HMO has substantially fulfilled the requirements of Title XIII of the Public Health Services Act, 42 United States Code, Section 300e.

2. At least 50,000 persons shall be enrolled in the pertinent HMO and shall have reasonable access to the proposed project; and

3. At least 75 percent of the potential patients shall be enrolled in the pertinent HMO.

D. The following procedures shall be followed in applying for exemption of an HMO project from certificate of need review.

1. An application for exemption shall be submitted to the commissioner, HSA and Department of Energy, Planning and Development. The application shall describe the project for which an exemption is sought and shall contain information demonstrating that the HMO meets the conditions for exemption specified in 7 MCAR S 1.665 C.

2. The HSA or the commissioner, in order to make a recommendation or to make the final determination, may request additional clarifying information about the project. Any information requested shall be pertinent to the provisions of 7 MCAR S 1.665 B. and C. Failure to supply the information in a timely manner shall constitute sufficient grounds for determining that the entity is not eligible for exemption.

3. Within 30 days after the receipt of the request, the HSA shall forward its recommendation and all evidence to the commissioner. Within 30 days of the receipt of the HSA recommendation, the commissioner shall notify the HMO and the HSA of the decision to grant or deny the exemption and the reason therefor. The commissioner shall approve an application for exemption if the applicable requirements of 7 MCAR S 1.665 B. and C. have been met or will be met on the date the proposed activity will be undertaken.

E. The project granted exempt status may not be sold or leased, a controlling interest in a project may not be acquired or a health care facility described in 7 MCAR S 1.665 B.3. and 4. may not be used in a manner other than proposed in the project, unless:

1. The commissioner issues a certificate of need approving the sale, lease, acquisition, or use; or

2. Upon request, the commissioner grants exempt status to such entity.

F. 7 MCAR SS 1.661-1.664 shall apply to the review of a certificate of need application submitted by an entity listed in 7 MCAR S 1.665 B. for a non-exempt project. Notwithstanding the general review criteria in 7 MCAR S 1.663 E., if an entity listed in 7 MCAR S 1.665 B. applies for a certificate of need, the commissioner shall approve the project if he finds that:

1. Approval of the project is required to meet the needs of the members of the HMO and of the reasonably anticipated new members of the HMO; and

2. The HMO is unable to provide, through services or facilities which can reasonably be expected to be available to the HMO, its health services in a reasonable and cost-effective manner which is consistent with the basic method of operation of the HMO and which makes these services available through physicians and other health professionals associated with it. In assessing the availability of these services from other providers, the HSA and commissioner shall consider only whether the services from these providers:

a. Would be available under a contract of at least five years duration;

b. Would be available and conveniently accessible through physicians and other health professionals associated with the HMO;

c. Would cost no more to the HMO than if the services were provided by the HMO; and

d. Would be available in a manner which is administratively feasible to the HMO applicant.

G. Any party aggrieved by a decision of the commissioner pursuant to 7 MCAR S 1.665 D. may seek judicial review of the commissioner's decision by instituting action pursuant to Minnesota Statutes, section 15.0424.

See aR0364ST

101 7 MCAR S 1.701 Licensure fees for hospitals, nursing homes, boarding care homes, supervised living facilities and outpatient surgical centers. In accordance with Department of Health rules 7 MCAR SS 1.044 V., 1.076 B.6., 1.392 B.5., and 1.413 M., each application for an initial or a renewal license to operate a hospital, nursing home, boarding care home, supervised living facility, or an outpatient surgical center shall be accompanied by a fee based upon the formula in 7 MCAR S 1.701, Exhibit I.

Each separate licensure classification requires a separate base fee. For example, a hospital with boarding care home beds must submit a $450 base fee for the hospital and a $50 base fee for the boarding care home plus the appropriate per bed fee for each licensure classification.

The fee schedule applies to all licenses issued on or after January 1, 1982.

7 MCAR S 1.701, Exhibit I
Licensure Fees for Hospitals, Nursing Homes, Boarding Care Homes, Supervised Living Facilities, and Outpatient Surgical Centers

Licensure Classification	Base Fee	Per Bed Fee
Joint Commission on Accreditation of Hospitals		
accredited hospital	$450	$ 0
nonaccredited hospital	450	25 (including bassinets)
nursing home	50	12
boarding care home	50	12
supervised living facility	50	12
outpatient surgical center	450	0