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Judicial Notice Shall Be Taken of Material Published in the *State Register*

The *State Register* is the official publication of the State of Minnesota, containing executive and commissioners' orders, proposed and adopted rules, official and revenue notices, professional-technical-consulting contracts, non-state bids and public contracts and grants.

Printing Schedule and Submission Deadlines

Vol. 23 Issue Number	PUBLISH DATE	Deadline for both Adopted and Proposed RULES	Deadline for: Emergency Rules, Executive and Commissioner's Orders, Revenue and Official Notices, State Grants, Professional-Technical-Consulting Contracts, Non-State Bids and Public Contracts
#14	Monday 5 October	Noon Wednesday 23 September	Noon Tuesday 29 September
#15	Monday 12 October	Noon Wednesday 30 September	Noon Tuesday 6 October
#16	Monday 19 October	Noon Wednesday 7 October	Noon Tuesday 13 October
#17	Monday 26 October	Noon Wednesday 14 October	Noon Tuesday 20 October

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PUBLISHING NOTICES IN THE *State Register*: Submit TWO COPIES of your notice, typed double-spaced. State agency submissions must include a "State Register Printing Order" form, and a "Certification/Internal Contract Negotiation" form with contracts for professional, technical and consulting services. Non-State Agencies should submit TWO COPIES, with a letter on your letterhead stationery requesting publication and date to be published. FAXED submissions to 651-297-8260 are received to meet deadline requirements, but must be followed by originals and applicable forms or letters to be accepted. The charge is $115.00 per page, billed in tenths of a page (columns are seven inches wide). About 2-1/2 pages typed double-spaced on 8-1/2"x11" paper equal one typeset page in the ***State Register.*** Contact the editor if you have questions.

An **"Affidavit of Publication"** can be obtained at a cost of $10.00 for notices published in the ***State Register***. This service includes a notarized "Affidavit of Publication" and a copy of the issue of the ***State Register*** in which the notice appeared.

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- ***State Register*** (published every Monday, or Tuesday if Monday is a holiday) One year, hard copy, paper subscription: $160.00.
- ***Contracts Supplement*** (published every Tuesday, Wednesday, Friday) One year subscription: $135.00 via first class mail, $150.00 via fax or through our website. Users agree not to redistribute without authorization.
- **13-week trial subscription** which includes both the ***State Register*** and ***Contracts Supplement***. $65.00
- **Single issues** are available for a limited time: ***State Register*** $5.00, ***Contracts Supplement*** $1.00. Shipping is $3.00 per order.

FOR LEGISLATIVE NEWS

Publications containing news and information from the Minnesota Senate and House of Representatives are available free to concerned citizens and the news media. To be placed on the mailing list, write or call the offices listed below:

Contact: Senate Public Information Office (651) 296-0504
Room 231 State Capitol, St. Paul, MN 55155

Contact: House Information Office (651) 296-2146
Room 175 State Office Building, St. Paul, MN 55155

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Commodity, Service, and Construction contracts are published in a bulletin, the ***State Register Contracts Supplement,*** published Tuesday, Wednesday and Friday. Award results are available from the Materials Management Helpline (651) 296-2600.

Individual copies and subscriptions are available through Minnesota's Bookstore, (651) 297-3000, or 1-800-657-3757.

Minnesota Rules: Amendments and Additions

NOTICE: How to Follow State Agency Rulemaking in the State Register

The *State Register* is the official source, and only complete listing, for all state agency rulemaking in its various stages. State agencies are required to publish notice of their rulemaking action in the *State Register*. Published every Monday, the *State Register* makes it easy to follow and participate in the important rulemaking process. Approximately 80 state agencies have the authority to issue rules. Each agency is assigned specific **Minnesota Rule** chapter numbers. Every odd-numbered year the **Minnesota Rules** are published. The current 1997 set is a 13-volume bound collection of all adopted rules in effect at the time. Supplements are published to update this set of rules. Generally speaking, proposed and adopted exempt rules do not appear in this set because of their short-term nature, but are published in the *State Register*.

An agency must first solicit **Comments on Planned Rules** or **Comments on Planned Rule Amendments** from the public on the subject matter of a possible rulemaking proposal under active consideration within the agency (*Minnesota Statutes* §§ 14.101). It does this by publishing a notice in the *State Register* at least 60 days before publication of a notice to adopt or a notice of hearing, or within 60 days of the effective date of any new statutory grant of required rulemaking.

When rules are first drafted, state agencies publish them as **Proposed Rules,** along with a notice of hearing, or a notice of intent to adopt rules without a hearing in the case of noncontroversial rules. This notice asks for comment on the rules as proposed. Proposed emergency rules and withdrawn proposed rules are also published in the *State Register*. After proposed rules have gone through the comment period, and have been rewritten into their final form, they again appear in the *State Register* as **Adopted Rules.** These final adopted rules are not printed in their entirety in the *State Register*, only the changes made since their publication as Proposed Rules. To see the full rule, as adopted and in effect, a person simply needs two issues of the *State Register*, the issue the rule appeared in as proposed, and later as adopted. For a more detailed description of the rulemaking process, see the most current edition of the *Minnesota Guidebook to State Agency Services.*

The *State Register* features partial and cumulative listings of rules in this section on the following schedule: isues #1-13 inclusive; issues #14-25 inclusive; issue #26 cumulative for issues #1-26; issues #27-38 inclusive; issue #39, cumulative for issues #1-39; issues #40-51 inclusive; and issues #1-52 (or 53 in some years), cumulative for issues #1-52 (or 53). An annual subject matter index for rules was separately printed usually in August, but starting with Volume 19 now appears in the final issue of each volume. For copies or subscriptions to the *State Register*, contact Minnesota's Bookstore, 117 University Avenue, St. Paul, MN 55155 (651) 297-3000, or toll-free 1-800-657-3757.

Volume 23, Issue #14

(issues #1-13 cummulative in issue #13)

Proposed Rules

Comments on Planned Rules or Rule Amendments

An agency must first solicit **Comments on Planned Rules** or **Comments on Planned Rule Amendments** from the public on the subject matter of a possible rulemaking proposal under active consideration within the agency (*Minnesota Statutes* §§ 14.101). It does this by publishing a notice in the *State Register* at least 60 days before publication of a notice to adopt or a notice of hearing, and within 60 days of the effective date of any new statutory grant of required rulemaking.

Rules to be Adopted After a Hearing

After receiving comments and deciding to hold a public hearing on the rule, an agency drafts its rule. It then publishes its rules with a notice of hearing. All persons wishing to make a statement must register at the hearing. Anyone who wishes to submit written comments may do so at the hearing, or within five working days of the close of the hearing. Administrative law judges may, during the hearing, extend the period for receiving comments up to 20 calendar days. For five business days after the submission period the agency and interested persons may respond to any new information submitted during the written submission period and the record then is closed. The administrative law judge prepares a report within 30 days, stating findings of fact, conclusions and recommendations. After receiving the report, the agency decides whether to adopt, withdraw or modify the proposed rule based on consideration of the comments made during the rule hearing procedure and the report of the administrative law judge. The agency must wait five days after receiving the report before taking any action.

Rules to be Adopted Without a Hearing

Pursuant to *Minnesota Statutes* § 14.22, an agency may propose to adopt, amend, suspend or repeal rules without first holding a public hearing. An agency must first solicit **Comments on Planned Rules** or **Comments on Planned Rule Amendments** from the public. The agency then publishes a notice of intent to adopt rules without a public hearing, together with the proposed rules, in the *State Register*. If, during the 30-day comment period, 25 or more persons submit to the agency a written request for a hearing of the proposed rules, the agency must proceed under the provisions of §§ 14.14-14.20, which state that if an agency decides to hold a public hearing, it must publish a notice of intent in the *State Register*.

State Board of Education

Proposed Permanent Rules Relating to Code of Ethics for School Administrators

DUAL NOTICE: Notice of Intent to Adopt Rules Without a Public Hearing Unless 25 or More Persons Request a Hearing, and Notice of Hearing If 25 or More Requests for Hearing Are Received

Proposed Rules Relating to Code of Ethics for School Administrators, *Minnesota Rules*; chapter 3512.5200.

Introduction. The State Board of Education intends to adopt rules without a public hearing following the procedures set forth in the Administrative Procedure Act, *Minnesota Statutes*, sections 14.22 to 14.28, and rules of the Office of Administrative Hearings, *Minnesota Rules*, parts 1400.2300 to 1400.2310. If, however, 25 or more persons submit a written request for a hearing on the rules within 30 days or by 4:30 p.m. on November 5, 1998, a public hearing will be held in Little Canada, Minnesota at Capitol View Center, 70 W. County Road B2 starting at 9:00 a.m. on November 17, 1998. To find out whether the rules will be adopted without a hearing or if the hearing will be held, you should contact the agency contact person after November 5, 1998, and before November 17, 1998.

Agency Contact Person. Comments or questions on the rules and written requests for a public hearing on the rules must be submitted to the agency contact person. The agency contact person is: Donald Krukow, Jr., Department of Children, Families & Learning, Room 610, Capitol Square Building, 550 Cedar Street, St. Paul, MN 55101, (651) 296-2046, FAX (651) 282-2403. TTY users may call the Department of Children, Families & Learning at (651) 297-2094.

Subject of Rules and Statutory Authority. The proposed rules are about establishing standards of ethical practice for school administrators. The statutory authority to adopt the rules is *Minnesota Statute*, 125.05, subdivision 1 c. A copy of the proposed rules are published in the *State Register* and attached to this notice as mailed for those individuals on the agencies registered mailing list. For all others, a copy of the proposed rule may be obtained from the agency contact person indicated above.

Comments. You have until 4:30 p.m. on Thursday, November 5, 1998, to submit written comment in support of or in opposition to the proposed rules or any part or subpart of the rules. Your comment must be in writing and received by the agency contact person by the due date. Comment is encouraged. Your comments should identify the portion of the proposed rules addressed, the reason for the comment, and any change proposed. You are encouraged to propose any change desired. Any comments that you would like to make on the legality of the proposed rules must also be made during this comment period.

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." **ADOPTED RULES SECTION** — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

Request for a Hearing. In addition to submitting comments, you may also request that a hearing be held on the rules. Your request for a public hearing must be in writing and must be received by the agency contact person by 4:30 p.m. on November 5, 1998. Your written request for a public hearing must include your name and address. You must identify the portion of the proposed rules to which you object or state that you oppose the entire set of rules. Any request that does not comply with these requirements is not valid and cannot be counted by the agency for determining whether a public hearing must be held. You are also encouraged to state the reason for the request and any changes you want made to the proposed rules.

Withdrawal of Requests. If 25 or more persons submit a written request for a hearing, a public hearing will be held unless a sufficient number withdraw their requests in writing. If enough requests for hearing are withdrawn to reduce the number below 25, the agency must give written notice of this to all persons who requested a hearing, explain the actions the agency took to effect the withdrawal, and ask for written comments on this action. If a public hearing is required, the agency will follow the procedures in *Minnesota Statutes*, sections 14.131 to 14.20.

Alternative Format/Accommodation. Upon request, this Notice can be made available in an alternative format, such as large print, Braille, or cassette tape. To make such a request or if you need an accommodation to make this hearing accessible, please contact the agency contact person at the address or telephone number listed above.

Modifications. The proposed rules may be modified, either as a result of public comment or as a result of the rule hearing process. Modifications must be supported by data and views submitted to the agency or presented at the hearing and the adopted rules may not be substantially different than these proposed rules. If the proposed rules affect you in any way, you are encouraged to participate in the rulemaking process.

Cancellation of Hearing. The hearing scheduled for November 17, 1998, will be canceled if the agency does not receive requests from 25 or more persons that a hearing be held on the rules. If you requested a public hearing, the agency will notify you before the scheduled hearing whether or not the hearing will be held. You may also call the agency contact person at (651) 296-2046 after November 5, 1998, to find out whether the hearing will be held.

Notice of Hearing. If 25 or more persons submit written requests for a public hearing on the rules, a hearing will be held following the procedures in *Minnesota Statutes*, sections 14.131 to 14.20. The hearing will be held on the date and at the time and place listed above. The hearing will continue until all interested persons have been heard. Administrative Law Judge George A. Beck is assigned to conduct the hearing. Judge Beck can be reached at the Office of Administrative Hearings, 100 Washington Square, Suite 1700, Minneapolis, Minnesota 55401-2138, telephone (612) 341-7601 and FAX (612) 349-2665.

Hearing Procedure. If a hearing is held, you and all interested or affected persons, including representatives of associations or other interested groups, will have an opportunity to participate. You may present your views either orally at the hearing or in writing at any time before the close of the hearing record. All evidence presented should relate to the proposed rules. You may also submit written material to the Administrative Law Judge to be recorded in the hearing record for five working days after the public hearing ends. This five-day comment period may be extended for a longer period not to exceed 20 calendar days if ordered by the Administrative Law Judge at the hearing. Following the comment period, there is a five-working-day response period during which the agency and any interested person may respond in writing to any new information submitted. No additional evidence may be submitted during the five-day response period. All comments and responses submitted to the Administrative Law Judge must be received at the Office of Administrative Hearings no later than 4:30 p.m. on the due date. All comments or responses received will be available for review at the Office of Administrative Hearings. This rule hearing procedure is governed by *Minnesota Rules*, parts 1400.2000 to 1400.2240, and *Minnesota Statutes*, sections 14.131 to 14.20. Questions about procedure may be directed to the Administrative Law Judge.

The agency requests that any person submitting written views or data to the Administrative Law Judge prior to the hearing or during the comment or response period also submit a copy of the written views or data to the agency contact person at the address stated above.

Statement of Need and Reasonableness. A statement of need and reasonableness is now available from the agency contact person. This statement contains a summary of the justification for the proposed rules, including a description of who will be affected by the proposed rules and an estimate of the probable cost of the proposed rules. The statement may also be reviewed and copies obtained at the cost of reproduction from either the agency or the Office of Administrative Hearings.

Lobbyist Registration. *Minnesota Statutes*, chapter 10A, requires each lobbyist to register with the State Campaign Finance and Public Disclosure Board. Questions regarding this requirement may be directed to the State Campaign Finance and Public Disclosure Board at: First Floor South, Centennial Building, 658 Cedar Street, St. Paul, Minnesota 55155, telephone (612) 296-5148 or 1-800-657-3889.

Adoption Procedure if No Hearing. If no hearing is required, the agency may adopt the rules after the end of the comment period. The rules and supporting documents will then be submitted to the Office of Administrative Hearings for review for legality. You may ask to be notified of the date the rules are submitted to the office. If you want to be so notified, or want to receive a copy of the adopted rules, or want to register with the agency to receive notice of future rule proceedings, submit your request to the agency contact person listed above.

Adoption Procedure After a Hearing. If a hearing is held, after the close of the hearing record, the Administrative Law Judge will issue a report on the proposed rules. You may ask to be notified of the date when the Administrative Law Judge's report will become available, and can make this request at the hearing or in writing to the Administrative Law Judge. You may also ask to be notified of the date on which the agency adopts the rules and files them with the Secretary of State, and can make this request at the hearing or in writing to the agency contact person stated above.

Order. I order that the rulemaking hearing be held at the date, time, and location listed above.

Dated: 17 September 1998

Jeanne Kling, President
Board of Education

3512.5200 CODE OF ETHICS FOR SCHOOL ADMINISTRATORS.

Subpart 1. **Scope.** This part applies to all persons licensed as school administrators as defined in part 3512.0100, subparts 5 to 7.

Subp. 2. **Standards of professional conduct.** The standards of professional conduct for school administrators are listed in items A to M.

A. A school administrator shall provide professional educational services in a nondiscriminatory manner.

B. A school administrator shall protect students and staff from conditions harmful to health and safety.

C. A school administrator shall provide an atmosphere conducive to learning.

D. A school administrator shall not misuse professional relationships with students, parents and caregivers, staff, or colleagues.

E. A school administrator shall disclose confidential information about individuals only when a compelling professional purpose is served in accordance with state and federal laws, and school district policies.

F. A school administrator shall not knowingly falsify or misrepresent records or facts relating to the administrator's qualifications, or to the qualifications of other staff or personnel.

G. A school administrator shall not knowingly make false or malicious statements about students, students' families, staff, or colleagues.

H. A school administrator shall not accept gratuities, gifts, or favors that impair professional judgment, nor offer any favor, service, or item of value to obtain special advantage.

I. A school administrator shall only accept a contract for a position when licensed for the position or when a school district is granted a variance by the State Board of Education under *Minnesota Statutes*, section 121.11, subdivision 7b.

J. A school administrator, in filling positions requiring licensure, shall employ, recommend for employment, and assign only appropriately licensed personnel, or persons for whom the school district has been granted a variance by the appropriate state board or agency.

K. A school administrator shall comply with all state and federal laws, State Board of Education policies, and school district policies.

L. A school administrator shall manage, authorize the use of, and account for public funds and property for the purposes for which they are legally intended.

M. A school administrator shall not engage in conduct involving dishonesty, fraud, or misrepresentation in the performance of professional duties.

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Subp. 3. **Statutory enforcement of code, complaints, investigation, and hearing.** This part shall be enforced in accordance with *Minnesota Statutes*, section 214.10, subdivisions 1, 2, and 3.

Subp. 4. **Complaints handled by State Board of Education.** When oral complaints alleging violations of the code of ethics for school administrators are received, the executive director of the State Board of Education shall request the complaining party to submit a written complaint. Upon receipt of a written complaint, the administrator named in the complaint shall be notified in writing within ten days of the receipt of the complaint. The administrator shall be entitled to be represented by the administrator's own counsel or representative at each stage of the investigation and hearing.

Subp. 5. **Enforcement procedures.** The State Board of Education may impose one or more of the following penalties when it has found a violation of a standard under subpart 2. These actions shall be taken only after previous efforts at remediation have been exhausted.

A. The State Board of Education may enter into agreements with administrators accused of violating the code of ethics that would suspend or terminate proceedings against the administrator on conditions agreeable to both parties.

B. A letter of censure from the State Board of Education may be sent to the person determined to be in violation of the standards of the code of ethics. A copy of the letter shall be filed with the State Board of Education. The letter shall be kept on file for a period of time not to exceed one calendar year.

C. An administrator who has been found to have violated the code of ethics may be placed on probationary licensure status for a period of time to be determined by the State Board of Education. The board may impose conditions on the administrator during the probationary period which are to be directed toward improving the administrator's performance in the area of the violation. During this period, the administrator's performance or conduct shall be subject to review by the State Board of Education or its designee. The review shall be directed toward monitoring the administrator's activities or performance with regard to whatever conditions may be placed on the administrator during the probationary period. Before the end of the probationary period, the State Board of Education shall decide to extend or terminate the probationary licensure status or to take further disciplinary actions as consistent with this rule.

D. The license to practice of the person determined to be in violation of the standards of the code of ethics may be suspended for a period of time determined by the State Board of Education.

E. The license to practice of the person determined to be in violation of the standards of the code of ethics may be revoked by the State Board of Education.

Department of Health

Proposed Permanent Rules Relating to Ionizing Radiation

Notice of Intent to Adopt Rules Without a Public Hearing

Planned Amendment to Rules Governing Radiation, *Minnesota Rules*, Chapter 4730.

Introduction. The Department of Health intends to adopt rules without a public hearing following the procedures set forth in the Administrative Procedure Act, *Minnesota Statutes*, sections 14.22 to 14.28, and rules of the Office of Administrative Hearings, *Minnesota Rules*, parts 1400.2300 to 1400.2310. You have 30 days to submit written comments on the proposed rules and may also submit a written request that a hearing be held on the rules.

Agency Contact Person. Comments or questions on the rules and written requests for a public hearing on the rules must be submitted to the agency contact person. The agency contact person is:

June Hawkinson
Division of Environmental Health
Department of Health
121 East Seventh Place, Suite 220
P.O. Box 64975
St. Paul, Minnesota 55164-0975
Tel.: (612) 215-0938
FAX: (612) 215-0976
e-mail: *june.hawkinson@health.state.mn.us*
TTY: (612) 215-0707

Subject of Rules and Statutory Authority. The proposed rules are about the use of radiation in all settings with the exception of nuclear power plants which are under federal jurisdiction. Regulated uses of radiation include diagnostic and therapeutic uses of x-ray including dental x-rays, chiropractic x-rays, medical x-rays, podiatric x-rays, diagnostic veterinary x-rays, therapeutic x-ray treatments, and industrial applications of radiation such as sealed source radiography in analytical ionizing radiation producing machines.

The purpose of state regulation of sources of radiation is to reduce unnecessary radiation exposure whenever possible. Ionizing radiation exposure has a cumulative effect on the human body; therefore, it is critical that steps be taken to limit the exposure of the human body to unnecessary ionizing radiation. The body does repair some of the injury done by ionizing radiation received, but does not always return the body to its original condition. Excessive ionizing radiation may shorten life; and cause cancer, genetic defect, cataracts or other health problems in humans. Some health problems may develop quickly if the radiation dose is massive. With lower radiation doses, effects may not be seen for years or generations. The development of cancer in the human body may take 20 years or more. Genetic effects may even be delayed a generation and continue into succeeding generations. To protect against unnecessary exposure to ionizing radiation sources, procedures must be in place to protect workers operating x-ray equipment, patients receiving controlled doses of ionizing radiation for either diagnostic or therapeutic purposes, and any other persons in areas where ionizing radiation is used.

The Minnesota Radiation Rule, Chapter 4730, provides safety requirements to ensure that humans are not exposed to unnecessary radiation. The existing rule parts related to x-ray and radium were first promulgated in 1971. The Radiation Rule was amended in 1978, 1986, 1988, 1990, 1991 and 1993. Since the original adoption in 1971 and the subsequent amendments, uses of radiation have greatly increased, radiation producing equipment has become very complex, sophisticated and powerful, and more technologies using radiation have been developed. As an example, there are new procedures which utilize radiation (fluoroscopy) to guide instruments. New procedures and technologies require updating the Radiation Rule.

Although the federal government does not require states to adopt equipment standards into rule, each state must follow the Radiation Control and Health and Safety Act of 1968 (Public Law 90-602), which details the codes and performance standards for radiation emitting equipment. The *Code of Federal Regulations*, Chapter 21 (21 CFR), sections 1020.30, 1020.31, 1020.32 and 1020.33 have been amended almost annually. Because the state must be consistent with 21 CFR, the rule must be updated.

The statutory authority to adopt the rules is set forth in *Minnesota Statutes*, sections 144.05, subdivision 1, paragraph (c); 144.12, subdivision 1, item (15); and 144.121. A copy of the proposed rules is published in the *State Register*. A free copy of the rules is available upon request from the agency contact person listed above.

Comments. You have until 4:30 p.m. on Wednesday, November 4, 1998, to submit written comment in support of or in opposition to the proposed rules and any part or subpart of the rules. Your comment must be in writing and received by the agency contact person by the due date. Comment is encouraged. Your comment should identify the portion of the proposed rules addressed and the reason for the comment. You are encouraged to propose any change desired. Any comments that you would like to make on the legality of the proposed rules must also be made during this comment period.

Request for a Hearing. In addition to submitting comments, you may also request that a hearing be held on the rules. Your request for a public hearing must be in writing and must be received by the agency contact person by 4:30 p.m. on November 4, 1998. Your written request for a public hearing must include your name and address. You must identify the portion of the proposed rules to which you object or state that you oppose the entire set of rules. Any request that does not comply with these requirements is not valid and cannot be counted by the agency for determining whether a public hearing must be held. You are also encouraged to state the reason for the request and any changes you want made to the proposed rules.

Withdrawal of Requests. If 25 or more persons submit a written request for a hearing, a public hearing will be held unless a sufficient number withdraw their requests in writing. If enough requests for hearing are withdrawn to reduce the number below 25, the agency must give written notice of this to all persons who requested a hearing, explain the actions the agency took to effect the withdrawal, and ask for written comments on this action. If a public hearing is required, the agency will follow the procedures in *Minnesota Statutes*, sections 14.131 to 14.20.

Alternative Format. Upon request, this Notice can be made available in an alternative format, such as large print, Braille, or cassette tape. To make such a request, please contact the agency contact person at the address or telephone number listed above.

Modifications. The proposed rules may be modified as a result of public comment. The modifications must be supported by comments and information submitted to the agency, and the adopted rules may not be substantially different than these proposed rules. If the proposed rules affect you in any way, you are encouraged to participate in the rulemaking process.

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike~~ ~~outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." **ADOPTED RULES SECTION** — Underlining indicates additions to proposed rule language. ~~Strike~~ ~~outs~~ indicate deletions from proposed rule language.

Statement of Need and Reasonableness. A statement of need and reasonableness is now available from the agency contact person. This statement contains a summary of the justification for the proposed rules, including a description of who will be affected by the proposed rules and an estimate of the probable cost of the proposed rules. Copies of the statement may be obtained at the cost of reproduction from the agency.

Adoption and Review of Rules. If no hearing is required, the agency may adopt the rules after the end of the comment period. The rules and supporting documents will then be submitted to the Office of Administrative Hearings for review for legality. You may ask to be notified of the date the rules are submitted to the office. If you want to be so notified, or want to receive a copy of the adopted rules, or want to register with the agency to receive notice of future rule proceedings, submit your request to the agency contact person listed above.

Anne M. Barry
Commissioner of Health

4730.0100 DEFINITIONS.

[For text of subps 1 to 25, see M.R.]

Subp. 26. **Calibration.** "Calibration" means the determination of:

A. the response or reading of an instrument relative to a series of known radiation values over the range of the instrument;

B. the strength of a source of radiation relative to a standard; or

C. the radiation dose or exposure rate at a designated distance from a radiation source under specified conditions of measurement.

[For text of subps 27a to 33, see M.R.]

Subp. 34. **Clinical range.** "Clinical range" means the range of control console technique settings that a facility would use in its routine x-ray projections. ~~Quality control~~ Equipment performance tests are performed over clinical ranges.

[For text of subps 35 to 56, see M.R.]

Subp. 57. **Dose.** "Dose" means absorbed dose ~~or,~~ dose equivalent ~~as appropriate~~, effective dose equivalent, committed dose equivalent, committed effective dose equivalent, or total effective dose equivalent.

[For text of subps 58 to 67, see M.R.]

Subp. 68. **Exposure.** "Exposure" means being exposed to ionizing radiation or to radioactive material. An individual receives a dose of radiation but the individual is exposed to the radiation that delivered the dose.

For purposes of part 4730.2150, ~~"~~exposure~~"~~ means the quotient of dQ by dm where dQ is the absolute value of the total charge of the ions of one sign produced in air when all the electrons (negatrons and positrons) liberated by photons in a volume element of air having mass (dm) are completely stopped in air. The unit of exposure is the Roentgen (R).

[For text of subps 69 to 80, see M.R.]

Subp. 81. **Healing arts.** "Healing arts" means health professions for diagnostic ~~and/or~~ or healing treatment of human and animal maladies ~~including but not limited to the following which are duly licensed by the state of Minnesota~~ that are regulated under *Minnesota Statutes*, chapter 147, 153, or 156; or section 148.01, 148.106, or 150A.05, subdivision 1, clause (4), for the lawful practice of~~:~~ medicine, dentistry, veterinary medicine, osteopathy, chiropractic, and podiatry.

[For text of subps 82 to 102, see M.R.]

Subp. 103. **Licensed practitioner of the healing arts.** "Licensed practitioner of the healing arts" means health professionals for diagnostic or healing treatment of human and animal maladies ~~including but not limited to the following~~, which are licensed ~~by the state of~~ under *Minnesota Statutes*, chapter 147, 153, or 156; or section 148.01, 148.106, or 150A.05, subdivision 1, clause (4), for the lawful practice of medicine, dentistry, veterinary medicine, osteopathy, chiropractic, and podiatry.

[For text of subps 104 to 119a, see M.R.]

Subp. 120. **Occupational dose.** "Occupational dose" means ~~exposure of~~ an ~~individual to~~ individual's dose of radiation (1) in a restricted area; or (2) in the course of employment in which the individual's duties involve exposure to radiation; provided that occupational dose does not include ~~exposure of an individual to~~ radiation received for the purpose of diagnosis or therapy of the individual.

[For text of subps 120a to 125a, see M.R.]

Subp. 126. **Personnel monitoring ~~equipment~~ dosimeter.** "Personnel monitoring ~~equipment~~ dosimeter" means ~~devices~~ a device such as a film ~~badges~~ badge, pocket ~~dosimeters~~ dosimeter, ~~and~~ or thermoluminescent ~~dosimeters~~ dosimeter designed to be worn or carried by an individual for the purpose of estimating the dose received by ~~the~~ that individual.

[For text of subps 127 and 128, see M.R.]

Subp. 128a. **Physician assistant or registered physician assistant.** "Physician assistant" or "registered physician assistant" means a person registered according to *Minnesota Statutes*, chapter 147A, who is qualified by academic or practical training or both to provide patient services as specified in *Minnesota Statutes*, chapter 147A, under the supervision of a supervising physician.

[For text of subps 129 to 137, see M.R.]

Subp. 137a. **Pulsed mode.** "Pulsed mode" means operation of an x-ray system so that the x-ray tube current is pulsed by the x-ray control to produce one or more exposure intervals of less than one-half second duration.

[For text of subps 138 to 148, see M.R.]

Subp. 149. **Radiation safety officer.** "Radiation safety officer" means an individual who has the knowledge and ~~responsibility~~ training to apply appropriate radiation protection regulations, and who has been designated by the facility in compliance with part 4730.0400, item B.

[For text of subps 150 to 158, see M.R.]

Subp. 159. **Registrant.** "Registrant" means a person having possession of any source of ~~ionizing~~ radiation except those specifically exempted under part 4730.0400 or 4730.0700, who has complied with part 4730.0400, item B.

[For text of subps 160 to 181a, see M.R.]

Subp. 182. **Spot check.** "Spot check" means a procedure that is performed to ~~assure~~ ensure that a previous calibration continues to be valid.

[For text of subps 183 to 206, see M.R.]

Subp. 207. **Units of radiation dose.** "Units of radiation dose" means the rad (unit of absorbed dose) and the rem (radiation to body tissues in terms of its estimated biological effect relative to ~~an exposure~~ a dose of one ~~roentgen~~ rad of x-ray). Under the SI measurement system the equivalent is the gray and the sievert.

[For text of subps 208 to 213b, see M.R.]

Subp. 214. **X-ray control.** "X-ray control" means a device that controls input power to the x-ray high-voltage generator and/or the x-ray tube. It includes components such as timers, phototimers or automatic exposure controls, automatic brightness stabilizers, and similar devices that control the technique factors of an x-ray exposure.

[For text of subps 215 to 221, see M.R.]

4730.0300 PRECAUTIONARY PROCEDURES.

[For text of subps 1 to 7, see M.R.]

Subp. 8. **Alarming ratemeters.** To ensure correct response to radiation, each alarming ratemeter must:

A. be tested before use at the start of each shift to ensure that the alarm sounds;

B. be set to sound at a pre-set ~~dose~~ exposure rate of 500 mR/hr (~~5 mSv/hr~~ 1.29 x 10^{-4} C/kg/hr);

C. require special means to change the pre-set alarm function;

D. be calibrated at periods not to exceed one year;

E. alarm, vibrate, activate a light, or otherwise signal within plus or minus 20 percent of the true radiation ~~dose~~ exposure rate; and

F. have records of the tests and calibrations maintained according to part 4730.1520.

4730.0310 PERMISSIBLE DOSES, LEVELS, AND CONCENTRATIONS.

Subpart 1. **Applicability.** This part applies to all registrants.

Subp. 2. **Radiation dose standards for individual workers in restricted areas.** To determine the doses specified in item A, a dose from x-rays or gamma rays up to ten million electron volts (MeV) may be assumed to be equivalent to the exposure measured by a properly calibrated appropriate instrument in air at or near the body surface in the region of the highest dose rate.

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A. According to part 4730.0340, and except as provided in ~~item C~~ subpart 3, no registrant shall possess, use, receive, or transfer sources of radiation in such a manner as to cause any individual in a restricted area to receive in any period of one calendar quarter from all sources of radiation, excluding natural background radiation and radiation received for diagnosis and medical treatment, a total occupational dose in excess of the standards specified in the following table:

Radiation limits per calendar quarter:

(1) Effective dose equivalent ~~limit~~ (stochastic effects)... 1.25 rem (12.5 mSv);

(2) Dose equivalent ~~limits~~ for tissues and organs (nonstochastic effects):

(a) Lens of eyes... 3.75 rem (37.5 mSv);

(b) All others (red bone marrow, breast, lungs, gonads, skin, thyroid, and extremities)... 12.5 rem (125 mSv).

(3) Cumulative ~~exposure~~ effective dose equivalent... one rem X age in years (ten mSv X age in years).

B. A registrant may permit an individual worker in a restricted area to receive a planned special occupational exposure to the whole body, including gonads, red bone marrow, breast, lungs, head and trunk, or lens of eye, provided:

(1) the individual worker receives an effective dose equivalent ~~(sum of external and internal effective dose equivalent, if both exist)~~ of no more than ~~ten~~ five rems (~~100~~ 50 mSv) in a single planned event and five rems (50 mSv) from a normal occupational dose in a year;

(2) the effective dose equivalent received in all special planned exposures does not exceed 25 rems (250 mSv) over the individual's working lifetime;

(3) the registrant has determined the individual worker's accumulated occupational dose to the whole body and has otherwise complied with the requirements of this subpart;

(4) all planned special exposures are authorized in writing by the registrant ~~or~~ and the radiation safety officer before exposure;

(5) individual workers who are without procreative potential and have low lifetime effective dose equivalents are selected whenever possible; and

(6) ~~exposures~~ doses resulting from planned special exposures are included in the lifetime record of ~~exposure~~ dose for each individual worker but are separately identified.

~~C. No registrant shall possess, use, receive, or transfer sources of radiation in such a manner as to cause any woman working in a restricted area to receive a total dose equivalent limit, excluding medical exposure, of 0.5 rem (five mSv) to the woman's embryo and fetus. Once a pregnancy becomes known, exposure of the embryo and fetus shall be no greater than 0.05 rem (0.5 mSv) in any month, excluding medical exposure. Special attention is required to ensure that, if occupational exposures are received, they are distributed uniformly with time so the embryo and fetus does not receive more than its limit before pregnancy is known.~~

Subp. 3. **Pregnant workers.**

A. When a woman declares her pregnancy in writing and if her embryo or fetus has a potential of receiving greater than 0.125 rem (1.25 mSv) during her entire pregnancy, the registrant must:

(1) provide a dosimeter to be worn at the level of the abdomen and under any lead shielding worn; and

(2) ensure that:

(a) a reasonable effort is made to limit the dose to the embryo or fetus to 0.05 rem (0.5 mSv) in any one month of pregnancy, excluding medical exposure; and

(b) the total effective dose equivalent for a full-term pregnancy does not exceed 0.5 rem (five mSv).

B. If the dose to the embryo or fetus is found to have exceeded 0.5 rem (five mSv) or is within 0.05 rem (0.5 mSv) of this dose by the time the woman declares her pregnancy, the registrant is exempt from item A, subitem (2), unit (b), but must ensure that additional occupational dose to the embryo or fetus does not exceed 0.05 (0.5 mSv) during the remainder of the pregnancy.

4730.0340 DETERMINATION OF ACCUMULATED OCCUPATIONAL DOSE.

Subpart 1. **Disclosure before first entry into registrant's restricted area.** ~~Before~~ Within the first calendar quarter of an individual ~~starts~~ starting work in the registrant's restricted area where the individual will receive or is likely to receive in one calendar quarter an occupational dose in excess of 25 percent of the applicable standards specified in part 4730.0310, subpart 2, item A, subitem (1), the registrant must require that the individual disclose in a written, signed statement, either:

A. that the individual had no prior occupational dose ~~during the current calendar quarter~~; or

B. the nature and amount of any occupational dose which the individual may have received ~~during the specifically identified current calendar quarter,~~ from sources of radiation possessed or controlled by another person.

The registrant must maintain records of the statements for the lifetime of the individual worker or a minimum of ~~20~~ 30 years after termination of employment with the facility, whichever is less.

Subp. 2. [See repealer.]

Subp. 3. **Preparation of accumulated dose records.** In preparing accumulated dose records, the registrant must make a reasonable effort to obtain reports of the individual's previously accumulated occupational dose. For each period for which the registrant obtains such reports, the dose shown in the report must be used. In any case where a registrant is unable to obtain reports of the individual's occupational dose ~~for a previous complete calendar quarter~~, it must be assumed that the individual worker has received the occupational dose specified in whichever of the following columns that applies:

	Column 1	Column 2
Part of Body	Assumed dose in rems (mSv) for calendar quarters before January 1, 1961	Assumed dose in rems (mSv) for calendar quarters beginning on or after January 1, 1961
Whole body, gonads active blood-forming organs, head and trunk, lens of eye	~~3 3/4 (37.5 mSv)~~ 3.75 rem (37.5 mSv)	~~1 1/4 (12.5 mSv)~~ 1.25 rem (12.5 mSv)

The registrant must retain and preserve records used in preparing the accumulated dose record for the lifetime of the individual worker or a minimum of ~~20~~ 30 years after the individual's termination of employment with the facility, whichever is less. If calculation of the individual worker's accumulated occupational dose for all periods before January 1, 1961, yields a result higher than the applicable accumulated dose value for the individual as of that date, as specified in part 4730.0310, subpart 2, item B, the excess may be disregarded.

4730.0360 EXPOSURE OF MINORS.

No registrant shall possess, use, or transfer sources of radiation in such a manner as to cause any individual within a restricted area who is under 18 years of age to receive any occupational radiation dose ~~except for training purposes~~ greater than 0.1 rem (1.0 mSv) per year. ~~Notwithstanding the limits in parts 4730.0310 and 4730.0380, the occupational dose equivalent for training purposes for a minor shall be no more than 0.1 rem (1.0 mSv) per year.~~

4730.0380 PUBLIC PERMISSIBLE LEVELS OF RADIATION FROM EXTERNAL SOURCES IN UNRESTRICTED AREAS.

No registrant shall possess, use, or transfer sources of radiation in a manner that creates in any unrestricted area ~~from the sources of radiation in the registrant's possession:~~ radiation levels that could result in an individual receiving an annual effective dose equivalent in excess of 0.1 rem (1.0 mSv).

~~A. radiation levels which, if an individual were continuously present in the area, could result in the individual receiving an annual effective dose equivalent in excess of 0.1 rem (1.0 mSv) [sum of external and internal exposures];~~ and

~~B. radiation levels which, if an individual were present in the area, could result in the individual receiving an annual effective dose for the lens of the eye, skin, and extremities in excess of 5.0 rem (50 mSv) [sum of external and internal exposures].~~

4730.0400 REGISTRATION REQUIREMENTS.

The owner or person having possession of any source of ionizing radiation except those specifically exempted under this part or under part 4730.0800 ~~or in the case of nuclear facilities which are registered according to the special procedures required by part 4730.3000,~~ shall:

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A. Register ~~such~~ all sources with the commissioner of health within 30 days of its acquisition or its proposed temporary use in Minnesota, except demonstration units in place for 15 days or less, upon forms prescribed and provided for that purpose.

B. Designate an individual who will be responsible for radiation protection from the source. The individual who is the radiation safety officer, shall:

(1) be qualified by training and ~~experience~~ knowledge concerning all hazards and precautions involved in operating or in using the source for which the radiation safety officer is responsible;

(2) establish a detailed program of radiation safety for effective compliance with the applicable requirements of this chapter;

(3) give instructions concerning hazards and safety practices to individuals under the radiation safety officer's supervision who may be exposed to radiation from the source; ~~and~~

(4) make, or arrange to have performed, radiation safety surveys and carry out other procedures as required by this chapter; and

(5) ensure that there is documentation of all formal instruction, test results, calibrations, safety surveys, equipment performance tests, and maintenance on x-ray equipment and radiographic processors.

When, in the opinion of the commissioner of health, the individual designated to be responsible for radiation safety does not have qualifications sufficient to ensure safe operation or use of the source, the commissioner of health may require the registrant to designate another individual who meets the requirements of this item.

C. Every ~~hospital~~ facility in which radioisotopes are used shall have a committee which coordinates the use of radioisotopes within the ~~hospital~~ facility and ~~assures~~ ensures the radiation safety of the patients and ~~personnel~~ persons involved during the use of these isotopes.

[For text of items D to F, see M.R.]

G. The registration requirements specified in parts 4730.0400 to 4730.0700 shall not apply ~~to facilities subject to part 4730.3000, nor~~ to sources or conditions exempted under part 4730.0800, nor to by-product materials, source materials, or special nuclear materials licensed by the United States Nuclear Regulatory Commission not in excess of the kind and quantity specified in part 4730.3500 and *Code of Federal Regulations*, title 10, part 20, Appendix B, January 1, 1997, and as subsequently amended.

H. The registrant must notify the commissioner in writing 30 days prior to any temporary use of radiation sources in Minnesota, except demonstration units in place for 15 days or less. The notification must include locations at which the source is to be used, the estimated time period of use in the state, and the estimated date of completion.

4730.0600 REGISTRATION FEES.

Subpart 1. **Fee for initial or renewal registration.**

A. The initial or renewal biennial registration of every source of ionizing radiation required to be registered by parts 4730.0400 to 4730.0800 must be accompanied by fees as prescribed in this part and *Minnesota Statutes*, section 144.121, subdivision 1a. ~~Fees shall be based on a facility base fee for each facility and the number of X-ray tubes and radium specified in items A to D registered by each person, company, hospital, group, practice, or other organization or association as follows:~~

~~Base fee per facility $ 80~~

~~Tube Type or Source~~

~~A. Dental X-ray, $40;~~

~~B. Medical[4],industrial, or educational[5] X-ray, $64;~~

~~C. Linear accelerator[6], $80; and~~

~~D. Radium per facility, $120.~~

~~[4] "Medical" means radiographic and fluoroscopic X-ray equipment used by any licensed practitioner of the healing arts and facilities with which they are associated, but does not include dental X-ray equipment.~~

~~[5] "Industrial" or "educational" means industrial or educational X-ray equipment used in an industrial or educational facility.~~

~~[6] "Linear accelerator" means a medical particle accelerator or an industrial particle accelerator.~~

B. A facility with x-ray machines or other sources of ionizing radiation must biennially pay a registration fee consisting of a base facility fee of $132 and an additional fee for each x-ray machine or other source of ionizing radiation as follows:

(1) medical or veterinary equipment, $106;

(2) dental x-ray equipment, $66;

(3) accelerator, $132;

(4) radiation therapy equipment, $132;

(5) x-ray equipment not used on humans or animals, $106;

(6) devices with sources of ionizing radiation not used on humans or animals, $106; and

(7) sources of radium, $198.

Subp. 2. **Penalty fee for late registrations.** Applications for initial or renewal registrations submitted to the commissioner of health after the time specified by parts 4730.0400, item A; 4730.0500; and this part shall be accompanied by a penalty fee of ~~$15~~ $20 in accordance with *Minnesota Statutes*, section 144.121, subdivision 1a, in addition to the fee prescribed in subpart 1.

Subp. 3. **Fee for sources requiring registration during last ~~three~~ 12 months of a biennial registration period.** In accordance with *Minnesota Statutes*, section 144.121, subdivision 1a, the initial registration fee ~~for any source of ionizing~~ of x-ray machines or other sources of radiation required to be registered during the last ~~three~~ 12 months of a biennial registration period shall be ~~$10 per X-ray tube up to a maximum of 16 tubes and $20 for each facility using radium. The inspection surcharge for any X-ray or accelerator facility shall be $10. The penalty fees as specified in subpart 2 shall apply to this subpart. This provision shall not apply to any application for registration which should have been submitted to the commissioner of health in a timely manner prior to the last three months of a registration period~~ 50 percent of the applicable registration fee prescribed in subpart 1.

4730.0700 PERIODIC TESTING REQUIREMENTS.

Subp. 3. **Periodic testing requirements.** 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~~ ensure radiation safety including, but not limited to, tests of:

A. sources of radiation;

B. facilities where sources of radiation are used or stored; and

C. radiation detectors, monitoring instruments, and other equipment and devices used in connection with use or storage of sources of radiation.

Results of such tests shall be available for submission to the commissioner of health when requested.

4730.0900 VENDOR RESPONSIBILITY.

Subpart 1. **Generally.** No person shall make, sell, lease, transfer, lend, or install x-ray or fluoroscopic imaging assembly equipment or the supplies used in connection with such equipment unless the supplies and equipment, when properly placed in operation and properly used, meet the requirements of this chapter. This includes, but is not restricted to, responsibility for the delivery of cones or collimators, filters, ~~adequate~~ accurate timers, and fluoroscopic shutters (where applicable).

[For text of subp 2, see M.R.]

Subp. 3. **Calibration reports at time of installation.** A vendor must perform calibrations on the radiation producing machine according to parts 4730.1691 to 4730.2475, when applicable, at the time of installation, and provide the facility with written numerical results of the calibration. If the result of the test is not a numerical answer, a pass or fail or yes or no answer is acceptable.

Subp. 4. **Personnel dosimeters.** A vendor must provide its employees with individual personnel radiation monitoring dosimeters and reports for recording occupational exposure according to parts 4730.0310, 4730.1140, and 4730.1520.

Subp. 5. **Phantom use.** For maintenance, demonstrations, and training, a vendor must use phantoms instead of humans.

4730.1120 REPORTS OF INCIDENTS INVOLVING RADIATION SOURCES.

Subpart 1. [See repealer.]

Subp. 2. **Notification within 24 hours.** A registrant possessing any source of radiation must notify the commissioner ~~by telephone or facsimile~~ within 24 hours of discovering any incident involving that source which may have caused or threatens to cause an unintended or unprescribed:

A. dose to the whole body of any individual of five rems (50 mSv) or more of radiation;

B. dose to the skin ~~of the whole body~~ or the extremities of any individual of ~~30~~ 50 rems (~~300~~ 500 mSv) or more of radiation; or

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C. ~~dose to the feet, ankles, hands, or forearms of any individual of 75 rems (750 mSv) or more of radiation;~~

~~D.~~ release of radioactive material in concentrations which, if averaged over a period of 24 hours, would exceed ~~500 times~~ the annual occupational limits specified for the material in *Code of Federal Regulations*, title 10, part 20, Appendix B, January 1, 1997, and as subsequently amended~~;~~.

~~E. loss of one day or more of the operation of any facility affected; or~~

~~F. damage to property in excess of $2,000.~~

Subp. 3. **Report to individual worker exposed beyond occupational levels.** A registrant must report to an individual worker who was exposed beyond the worker's normally expected occupational level the radiation dose data for that individual. The information reported must include the dose data and results obtained under this chapter, as shown in records maintained by the registrant pursuant to part 4730.1520, subpart 4. Each notification and report must:

A. be in writing;

B. include appropriate identifying data, including the name of the registrant, the name of the exposed individual worker, and the date of the dose; and

C. include the results of any measurements, analyses, or calculations of radioactive material deposited or retained in the body of the individual worker.

4730.1130 MANDATORY REPORTS OF OVEREXPOSURES AND EXCESSIVE LEVELS AND CONCENTRATIONS.

Subpart 1. **Additional reports.** In addition to any notification required by part 4730.1120, a registrant must submit a written report within 30 days to the commissioner of:

A. each ~~exposure of~~ dose to an individual ~~to~~ of radiation in excess of the applicable standards in part 4730.0310, subpart 2, or 4730.0360;

B. any incident for which notification is required by part 4730.1120; ~~and~~

C. levels of radiation or concentrations of radioactive material, whether or not any individual is excessively exposed, if in an unrestricted area and the exposure is in excess of ten times any applicable limit specified by part 4730.0380 or *Code of Federal Regulations*, title 10, part 20, Appendix B, January 1, 1997, and as subsequently amended; and

D. corrective actions taken or planned to ensure against a recurrence.

Subp. 2. **Reports on individuals.** In the report required under subpart 1 the registrant must describe the extent of ~~exposure~~ the dose of radiation to any individual ~~to radiation or to radioactive material~~, including:

A. the name and birth date of each individual;

B. estimates of each individual's ~~exposure as required by subpart 3~~ dose;

~~B.~~ C. the levels of radiation and concentrations of radioactive material involved;

~~C.~~ D. the cause of the ~~exposure~~ dose, levels, or concentrations; and

~~D.~~ E. corrective steps taken or planned to ~~assure~~ ensure against a recurrence.

Subp. 3. [See repealer.]

4730.1140 NOTIFICATIONS AND REPORTS TO INDIVIDUAL WORKERS.

Subpart 1. [See repealer.]

Subp. 2. **Quarterly ~~exposure~~ dosimetry report.** A registrant must advise each worker at least quarterly of the worker's ~~exposure to~~ dose of radiation ~~or radioactive material~~ as shown in records maintained by the registrant under part 4730.1520, subpart 4.

Subp. 3. **Report at end of employment.** A registrant must furnish to a worker who is terminating employment, or to a worker who, while employed by another person, is terminating a work assignment involving radiation dose in the registrant's facility within a calendar quarter, a report of the worker's ~~exposure to~~ dose of radiation ~~or radioactive material~~. The report must be furnished within ~~30~~ 90 days from the time of termination of employment ~~or within 30 days after the exposure of the worker has been determined by the registrant, whichever is later~~. The report must cover each calendar quarter in which the worker's activities involved exposure to radiation sources and must include the dates and locations of work under the registrant in which the worker participated.

Subp. 4. **Report to worker of ~~exposure~~ dose.** When a registrant is required under ~~part~~ parts 4730.1120 and 4730.1130 to report to the commissioner any ~~exposure~~ radiation dose of an individual ~~to radiation~~, the registrant must also provide the worker with a report of the worker's ~~exposure~~ dose data. The reports must be transmitted at a time no later than the transmittal to the commissioner.

4730.1210 PROHIBITED USES OF RADIATION.

Subpart 1. **General provision.** No individual shall be exposed to the useful beam except for healing arts purposes and only if the exposure has been authorized by a licensed practitioner of the healing arts. Any exposure of an individual for the following other purposes is prohibited:

A. exposure for ~~nonhealing arts~~ training, instruction, ~~or~~ demonstration, or ~~other purposes~~ research except when the research has been approved by an institutional review board and is conducted under federal regulations for the protection of human subjects in research, *Code of Federal Regulations*, title 21, part 56, or title 45, part 46. Any other exposure of a human subject for the purpose of research may be made only with an approved variance as described in parts 4717.7000 to 4717.7050. Documentation of the research approval process must be on site and available to the commissioner upon request; and

B. exposure for the purpose of healing arts screening except as authorized by part 4730.1310~~;~~.

~~C. exposure for healing arts training except as specified in part 4730.0360; and~~

~~D. occupational or training exposure except as specified in part 4730.0310.~~

Subp. 1a. **Other prohibited radiation dose levels.** No worker shall be subjected to a radiation dose occupationally or for training that would exceed the doses specified in parts 4730.0310 and 4730.0360.

Subp. 2. **Prohibited radiation producing equipment and procedures.** The equipment specified in this subpart shall not be used nor the specified procedures performed:

A. fluoroscopic devices for fitting shoes;

B. photofluorographic equipment;

C. dental fluoroscopic imaging assemblies;

D. hand-held radiographic or fluoroscopic imaging devices, or hand-held therapy units;

E. the use of fluoroscopy by x-ray machine operators for positioning a patient for ~~general~~ radiographic imaging, except when done by a licensed practitioner of the healing arts, or except for radiation therapy simulators;

F. except during therapy simulations and maintenance activities, the use of fluoroscopy ~~and c-arm fluoroscopes~~ by a person other than a licensed practitioner of the healing arts when the licensed practitioner of the healing arts is not physically present in the room;

G. the use of direct exposure x-ray film (without intensifying screens) for all ~~procedures~~ radiological imaging other than intraoral dental radiography, therapeutic portal imaging, ~~and~~ industrial radiography, and radiographic absorptiometry using readipack film especially designed for radiographic absorptiometry;

H. nonimage intensified fluoroscopic x-ray equipment;

I. dental intraoral radiography ~~with kilovoltages less than~~ units operating at 50 kVp or less;

J. the use of ~~x-ray equipment~~ mammographic imaging systems not specifically designed by the manufacturer for imaging of the breast; ~~and~~

K. fishpole radiography; and

L. demonstrations or training without the use of phantoms, when necessary, and without proper shielding for observers and x-ray machine operators as specified in subpart 1, item A, and part 4730.1510, subpart 6.

Subp. 3. **Unauthorized exposure of personnel monitoring ~~equipment~~ dosimeters.** Exposure of personnel monitoring ~~equipment~~ dosimeters to deceptively indicate a dose delivered to an individual is prohibited.

[For text of subp 4, see M.R.]

4730.1310 HEALING ARTS SCREENING.

[For text of subpart 1, see M.R.]

Subp. 2. **Content of application.** In the application for screening the registrant must:

[For text of items A to I, see M.R.]

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J. Describe the population to be examined in the screening program, including age, sex, and physical condition. For mammography, the selection of the screening population must meet the criteria specified by the ~~Conference of Radiation Control Program Directors, Inc. in "Mammography Screening Guide," publication 87-4, February 1987, published in conjunction with the Food and Drug Administration's Center for Devices and Radiological Health. This publication is incorporated by reference, is not subject to frequent change, and is available at the Minnesota Department of Health library, Minneapolis, or through the Minitex interlibrary loan system~~ Mammography Quality Standards, *Code of Federal Regulations*, title 21, parts 16 and 900.

[For text of items K to M, see M.R.]

[For text of subps 3 to 8, see M.R.]

Subp. 9. **Commissioner-approved healing arts screening.** The commissioner may inspect the healing arts screening program while in progress to ensure that it is carried out as described in the registrant's application and in compliance with this chapter.

Subp. 10. **Withdrawal of approval for conditions allowing overexposure.** Approval may be withdrawn immediately if, after an inspection, the commissioner finds the existence of conditions that would result in serious overexposure. All screening procedures shall be terminated immediately upon receipt of the written notice of existence of such overexposure. The applicant may request a contested case hearing within five days after receipt of the notice. 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.

Subp. 11. **Withdrawal of approval for noncompliance with application.** Approval for healing arts screening may be withdrawn if, after an inspection, the commissioner finds discrepancies between the screening program as implemented and as described in the application in this part or for violation of this chapter. 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.

4730.1510 REGISTRANT'S SAFETY REQUIREMENTS.

[For text of subps 1 and 2, see M.R.]

Subp. 3. **Individuals who may apply radiation.** Only those individuals who are licensed practitioners of the healing arts, veterinary workers, industrial radiographers, industrial radiographer's assistants, or individuals who have successfully passed an examination specified in parts 4730.5000 to 4730.5500 ~~and who are under the direct supervision of a licensed practitioner of the healing arts~~, may intentionally apply radiation ~~to an individual~~.

[For text of subp 4, see M.R.]

Subp. 5. **Radiographic technique chart.** A radiographic technique chart shall be provided in the vicinity of the ~~diagnostic~~ x-ray system's control panel which specifies, for all examinations performed with that system, the following information:

A. the patient's anatomical size and corresponding technique factors to be used;

B. the type of the screen-film combination, or direct exposure x-ray film for dental intraoral radiography, to be used;

C. the ~~type and focal distance of the~~ grid focal distance and the grid ratio to be used, if any;

D. the source-to-image distance to be used; and

E. ~~the size, type, and proper placement of gonad shielding, if it can be used~~ for automatic exposure control (AEC) or phototimed units, the percent differences between the AEC increments.

For computed tomography systems, a current technique chart for each routine examination, and the computed tomography conditions of operation must be provided.

Subp. 6. **Exposure of individuals other than the patient.** All ~~diagnostic~~ radiographic procedures and therapeutic x-ray procedures must meet the requirements of this subpart.

A. Except for the patient, only the staff and ancillary personnel required for the medical, dental, and veterinary medicine procedure or training shall be in the room during the radiographic exposure.

B. All staff and ancillary personnel required for assistance with the ~~diagnostic~~ radiographic procedures shall be positioned so no part of the body, including the hands, will be struck by the useful beam unless protected by 0.5 millimeter lead equivalent material.

C. All staff and ancillary personnel who must remain in the room to assist during ~~diagnostic~~ radiographic ~~and~~, fluoroscopic, portable, or computed tomography procedures must be protected from scattered radiation by protective aprons or whole body protective barriers of not less than 0.5 millimeter lead equivalence.

D. Patients and individuals who are not involved in diagnostic radiographic procedures or demonstrations using either stationary or portable x-ray equipment, who cannot leave the room and who cannot be protected by adequate distance for the exam being performed must be protected from scattered radiation by protective lead aprons or whole body protective barriers of at least 0.25 millimeters lead equivalence.

E. During any radiographic or fluoroscopic exposure, any door which is part of the protective barrier must be closed.

F. No individual other than the patient shall be in a therapy treatment room during exposures from a therapeutic x-ray system operating above 50 kVp.

G. Thyroid and eyes must be protected if the potential exposure to the worker would exceed 25 percent of the dose limits listed in part 4730.0310, subpart 2, item A, subitem (2).

Subp. 7. **Gonad protection.** Except for cases in which it would interfere with the diagnostic procedure, during radiographic procedures in which the gonads are in or within two inches (5cm) of the useful beam, gonad shielding of not less than 0.5 millimeter lead equivalence must be used for patients who have procreative potential. All x-ray machine operators must be instructed as to the proper placement, size, and type of gonad shielding to be used. Documentation of the instruction must be retained for review by the commissioner.

[For text of subps 8 and 9, see M.R.]

Subp. 10. **Radiological practice standards.** Procedures and auxiliary equipment designed to minimize patient and personnel exposure commensurate with the needed diagnostic information shall be used.

[For text of items A to E, see M.R.]

F. The darkroom for film development must be tested for film fog at least every ~~three~~ six months; any time fog is suspected; whenever there is a change in film speed or a change of safelight bulb or filters; or any time the integrity of any seal around the processor, other equipment, or the darkroom may have been compromised.

(1) The darkroom fog test and sensitometry must, at a minimum, be performed on the film most sensitive to light and processor changes.

(2) The amount of fog (increase in optical density) for a two-minute fog test must not exceed ~~0.04~~ 0.05 for facilities doing mammographic film development and 0.08 for all other radiographic film development.

G. Film processing must meet the following requirements:

(1) all film must be processed to achieve optimal sensitometric performance~~.~~;

(2) the film manufacturer's published recommendations for processing time and temperature must be followed~~.~~;

(3) chemicals must be mixed according to the chemical manufacturer's recommendations~~.~~;

(4) the daily sensitometry must be charted, reviewed, and corrective action taken, if necessary, before patients' films are processed; and

(5) all radiographs must be free of artifacts that could cause a misinterpretation.

~~G.~~ H. Portable x-ray equipment shall be used only for examinations where it is impractical to transfer the patient to a stationary x-ray system.

~~H.~~ ~~Diagnostic~~ I. Radiographic systems subject to part 4730.1850, other than fluoroscopic, dental intraoral, and dental panoramic~~, and computed tomography~~ systems must not be used in procedures where the source-to-skin distance is less than 30 centimeters (11.8 inches), except as described in part 4730.2150, subpart 9, item D.

~~I.~~ J. Protective aprons and gloves shall be monitored annually for lead protection integrity. A record of the monitoring shall be maintained until the next inspection by the commissioner.

K. Viewboxes must be kept clean and be of uniform intensity. Bulbs must be of the same color. Luminance of the viewboxes located where films are checked for quality must be similar to those located where radiographs are interpreted.

Subp. 11. **Personnel monitoring.** Each registrant must supply the personnel specified in items A to ~~C~~ D with individual personnel monitoring ~~equipment~~ dosimeters and require the personnel to ~~use~~ wear the ~~equipment~~ dosimeter.

[For text of items A and B, see M.R.]

C. Each individual monitoring the controls for class A, B, and E industrial ionizing radiation producing equipment or nonmedical accelerators.

[For text of subitems (1) to (8), see M.R.]

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(9) If a film badge or thermoluminescent dosimeter is lost or damaged, the worker must cease work immediately until a replacement film badge or thermoluminescent dosimeter is provided and the ~~exposure~~ dose is calculated for the time period from issuance to loss or damage of the film badge or thermoluminescent dosimeter.

D. All veterinarians and their staff who are being occupationally exposed during a radiation procedure must be provided a personal monitoring dosimeter according to *Minnesota Statutes*, section 144.121, subdivision 4.

Subp. 12. **Placement of personnel monitoring ~~equipment~~ dosimeter.** When protective clothing is worn ~~on portions of the body~~ and personnel monitoring ~~equipment is~~ dosimeters are required, at least one such ~~piece of personnel monitoring equipment~~ dosimeter shall be ~~used~~ worn, according to items A ~~to C~~ and B.

A. When a protective apron is worn, the personnel monitoring ~~equipment~~ dosimeter shall be worn at the collar outside of the protective apron.

B. When more than one ~~piece of~~ personnel monitoring ~~equipment~~ dosimeter is used ~~and a record is made of the data~~, the record must identify the location of the monitor on the body and must state whether it was worn outside or under the protective clothing. The effective dose equivalent ~~to the whole body based on the maximum dose attributed to the most critical organ~~ shall be recorded in the reports required by part 4730.1520, subpart 4.

~~C.~~ Subp. 12a. **Control dosimeters.** The control ~~devices~~ dosimeter which ~~accompany~~ accompanies personnel monitoring ~~equipment~~ dosimeters during shipment must be obtained and kept in ~~a nonradiation~~ an area of natural background radiation at the facility between shipments.

Subp. 13. **Facility design requirements.** The registrant must ensure that the applicable structural shielding requirements specified in parts ~~4730.1610~~ 4730.1600 to 4730.1640 are met. If an analysis of operating conditions indicates the possibility of an individual receiving a dose over the limits in part 4730.0310, the commissioner may require that structural shielding modifications be made.

4730.1520 RECORDS TO BE MAINTAINED BY ~~THE~~ REGISTRANT.

Subpart 1. **Individual x-ray systems.** The registrant must maintain on the premises the following information for each x-ray system and accelerator for inspection by the commissioner.

[For text of items A to C, see M.R.]

D. For diagnostic and therapeutic x-ray systems, records of site-specific radiation safety surveys, radiation leakage measurements, calibrations, ~~quality control~~ equipment performance measurements, maintenance, and equipment modifications performed on the x-ray system with the names of individuals who performed the services.

E. For industrial ionizing radiation producing equipment and nonmedical accelerators, records as specified in subpart 5.

Subp. 2. **Mammographic image retention.** All ~~original baseline mammographic~~ mammography images must be ~~maintained for seven years. If no additional mammographic images of the patient are taken during this period, the original baseline images may be discarded~~ retained as required by the Mammography Quality Standards, *Code of Federal Regulations*, title 21, parts 16 and 200.

Subp. 3. **Recordkeeping.** The registrant must ~~maintain, for~~ have available at the time of inspection by the commissioner, records of personnel monitoring, radiation safety surveys for all types of x-ray equipment and accelerators, and ~~quality control~~ equipment performance measurements for ~~diagnostic~~ x-ray equipment.

A. Current copies of delegation agreements from physician assistants, registered physician's assistants, certified nurse practitioners, and certified nurse midwives must be available at the time of inspection by the commissioner. Each delegation agreement must be signed by all supervising physicians.

B. Each registrant must maintain records, in the radiation measurement units used in this chapter, of:

(1) the personnel monitoring required by subpart 4; and

(2) the information required by parts 4730.1655 to 4730.1695, 4730.2510, and 4730.2710 for diagnostic and therapeutic x-ray equipment.

~~B.~~ C. Each registrant must maintain records in any of the following forms: the original, a computer file, a reproduced copy, or microfilm. A reproduced copy or microfilm must be duly authenticated by the registrant and must be clear and legible.

~~C.~~ D. At all times, the registrant is responsible for record retention required by this chapter. If the registrant ceases operation for any reason, provision must be made for record retention required by this chapter.

E. Each facility doing radiographic and fluoroscopic imaging procedures, except dental procedures, must keep a patient log of the following information:

(1) patient name or identification number;

(2) age, if under age 18;

(3) imaging procedures performed; and

(4) name or initials of person performing the imaging procedure.

Subp. 4. **Personnel monitoring records.** Each registrant must maintain records showing the radiation ~~exposures~~ doses of all individuals for whom personnel monitoring is required under part 4730.1510, subpart 11. The records must be clear and legible. The doses entered on the records must be for periods of time not exceeding one calendar quarter or the period covered in the personnel monitoring reports.

A. Records of individual ~~exposure to radioactive material~~ doses of radiation as specified in part 4730.0340, subpart 1, and the personnel monitoring records in this subpart shall be preserved for the lifetime of the individual worker or a minimum of ~~20~~ 30 years after termination of employment with the facility, whichever is less.

[For text of item B, see M.R.]

C. A registrant must advise each worker at least quarterly of the worker's ~~exposure to~~ dose of radiation ~~or radioactive material~~ as shown in records maintained by the registrant pursuant to this subpart.

[For text of item D, see M.R.]

[For text of subps 5 and 6, see M.R.]

Subp. 7. **Recording of fluoroscopic on-time.** All fluoroscopic on-time for each fluoroscopic procedure in excess of five minutes must be recorded and dictated on the patient's radiology report or procedure report.

4730.1530 ORDERING OF RADIOGRAPHIC EXAMINATIONS.

The registrant shall be responsible for ~~assuring~~ ensuring that the following requirements on ordering radiographic examinations are met except when the radiographic examination is part of a healing arts screening program approved by the commissioner.

A. The ~~request~~ order for a radiographic examination ~~must be in writing and signed by a practitioner of the healing arts.~~ can be made only by a physician, dentist, veterinarian, chiropractor, podiatrist, or osteopath. A certified nurse midwife, certified nurse practitioner, physician assistant, or registered physician assistant must show eligibility to order radiographic procedures through a written delegation agreement.

B. The radiographic provider must not carry out a radiographic procedure ordered by a nurse or physician assistant unless the nurse or physician assistant has provided a copy of a written delegation agreement.

C. The ~~written request~~ order for a radiographic ~~examination~~ procedure must include clearly stated clinical indications for the examination and be available to procedure personnel at the time of the examination.

4730.1600 REQUIREMENTS FOR SHIELDING ~~IN INSTALLATIONS~~ AGAINST IONIZING RADIATION.

Shielding:

A. Each installation where radiation is used shall be provided with such primary barriers ~~and/or~~ or secondary barriers as are necessary to ~~assure~~ ensure 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 rules~~ this chapter. Primary ~~and/or~~ or secondary barrier requirements shall be deemed to be met if the thicknesses of such barriers are equivalent to those ~~as computed~~ calculated in accordance with ~~Appendix C,~~ NCRP Report No. ~~34, "Medical X-Ray and Gamma-Ray Protection for~~ 49, "Structural Shielding Design and Evaluation for Medical Use of X-rays and Gamma Rays of Energies Up to 10 MeV," National Council on Radiation Protection and ~~Measurement, March 2, 1970~~ Measurements, September 15, 1976, and where applicable, ~~National Bureau of Standards Handbook 93, "Safety Standard for Nonmedical X-Ray and Sealed Gamma-Ray Sources," issued January 3, 1964~~ ANSI N43.3-1993, "American National Standard for General Radiation Safety: Installations Using Nonmedical X-Ray and Sealed Gamma-Ray Sources, Energies up to 10 MeV," American National Standards Institute, January 28, 1993. The NCRP report and the ANSI Standard are incorporated by reference, are not subject to frequent change, and are available through the Minitex interlibrary loan system. An alternative to NCRP Report No. 49 is that the thickness of primary or secondary barriers be sufficient to limit the radiation exposure levels to below 1/10 of those stated in part 4730.0310, subpart 2, item A, subitem (1), or 4730.0380, item A, whichever is applicable.

[For text of items B to E, see M.R.]

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F. All records of shielding designs or results of safety surveys must be permanently kept at the facility and as described in parts 4730.1520, subpart 1, items A to E, and 4730.1670, subparts 1 to 3.

G. All portable or mobile x-ray units, CT scanners, and therapy units must comply with the shielding requirements of this chapter.

4730.1610 GENERAL SHIELDING REQUIREMENTS FOR MEDICAL, CHIROPRACTIC, PODIATRIC, OSTEOPATHIC, AND VETERINARY MEDICINE FACILITIES.

[For text of subps 1 to 4, see M.R.]

Subp. 5. **Space requirements for an operator's booth in a diagnostic radiographic facility.** The requirements in items A to D are required for an operator's booth in a diagnostic radiographic facility.

[For text of items A to C, see M.R.]

D. The booth must be located and constructed so the unattenuated direct scattered radiation originating on the examination or treatment table, or at the upright cassette position does not reach the operator's station in the booth and does not exceed the ~~exposure~~ dose limits specified in part 4730.0310.

[For text of subps 6 to 8, see M.R.]

4730.1630 GENERAL REQUIREMENTS FOR THERAPEUTIC X-RAY FACILITIES.

[For text of subpart 1, see M.R.]

Subp. 2. **Shielding requirements for therapeutic x-ray systems and medical particle accelerators.** Each therapeutic x-ray system and medical particle accelerator system installed in a facility must be provided with primary and secondary barriers to ~~assure~~ ensure compliance with parts 4730.0310, 4730.0340, 4730.0360, and 4730.0380.

[For text of subps 3 and 4, see M.R.]

Subp. 5. **Additional requirements for medical particle accelerators.** In addition to the requirements specified in subparts 3 and 4, facilities with a medical particle accelerator must meet the standards in items A to D.

[For text of item A, see M.R.]

B. Two-way audio communication between the patient and the operator must be provided at the control panel. However, where excessive noise levels or treatment requirements make audio communication impractical, other methods of communication must be used.

[For text of item C, see M.R.]

D. Interlocks or safety devices must be ~~provided~~ in place so all ~~entrance doors close~~ access into the room is blocked before treatment is initiated or continued. If the useful radiation beam is interrupted by any door opening or tripping of a safety device, it must not be possible to restore the system to operation without closing the door or resetting the safety device and reinitiating irradiation by manual action at the control panel.

4730.1655 REQUIRED EQUIPMENT PERFORMANCE TESTS FOR QUALITY ASSURANCE PROGRAM ~~PROCEDURES~~.

Subpart 1. **General.** Within three months after September 10, 1991, each registrant must implement a quality assurance program which includes:

A. the ~~quality control measurements~~ equipment performance tests specified in parts 4730.1655 and 4730.1665;

B. radiation safety surveys as specified in ~~part~~ parts 4730.1520, subpart 1, item D, and 4730.1670, subpart 1;

C. calibrations as required in part 4730.1675;

D. in-service education for employees as specified in parts 4730.1510, subpart 4, and 4730.1688; and

E. the records required in part 4730.1690.

In addition to items A to E, each registrant with therapeutic x-ray equipment must also make spot checks as specified in part 4730.1680. Medical particle accelerators must have separate ~~quality control~~ equipment performance procedures as specified in part 4730.1685.

Subp. 2. **General quality assurance program procedures.** Each registrant conducting ~~diagnostic~~ radiographic procedures or therapeutic x-ray procedures must implement a quality assurance program. The program must include:

A. a site-specific quality assurance manual that contains written policies and procedures for radiation protection and describes the quality assurance program;

B. the ~~performance~~ numeric results of ~~quality control~~ equipment performance tests and the correction of any deficiencies as specified in the quality assurance manual; and

C. the calibration record of any electronic equipment used in the ~~quality control~~ equipment performance tests within the preceding two years. The calibration of any electronic equipment must be traceable to its calibration standard at the National Institute of Standards and Technology (NIST). Until such time that there is a NIST standard for noninvasive kVp meters, the meters must be returned to the manufacturer for calibration or to an accredited calibration laboratory.

Subp. 3. **~~Quality control~~ Equipment performance measurements for all ~~diagnostic~~ x-ray facilities.** Each registrant operating a ~~diagnostic~~ radiographic facility must implement the quality assurance measures specified in items A to C.

A. The quality assurance manual described in subpart 2 must include the required tests and the minimum performance criteria specified in ~~part~~ parts 4730.1691 to 4730.1695 for the registrant's ~~diagnostic~~ radiographic or therapeutic equipment and processing equipment. The registrant is not limited to the ~~quality control~~ equipment performance tests required in ~~part~~ parts 4730.1691 to 4730.1695 but may also include tests from item C. The registrant is required to meet the minimum performance criteria specified in parts 4730.1691 to 4730.1695, when applicable. The facility must retain records showing the correction of any deficiencies until the next inspection by the commissioner.

B. The manual must specify the minimum frequency of ~~performance for the quality control~~ equipment performance tests. In addition, the tests must be done after any change in the facility or equipment which might cause an increase in radiation hazard or a change in equipment that results in the minimum performance criteria not being met.

[For text of item C, see M.R.]

4730.1665 COMPUTED TOMOGRAPHY ~~QUALITY CONTROL~~ EQUIPMENT PERFORMANCE MEASUREMENTS.

[For text of subpart 1, see M.R.]

Subp. 2. **General ~~quality control~~ equipment performance measurements.** The registrant must ensure that the ~~quality control~~ equipment performance measurements and calibration procedures specified in this part are performed. The ~~quality control~~ equipment performance measurements and calibration procedures must be in writing and include:

A. Those measurements and calibration procedures specified in part 4730.1691 for CT scanners at the frequency specified and those aspects of processing at the frequency specified. In addition, the ~~quality control~~ equipment performance measurements and calibration procedures must be done after any change in the facility or equipment which might cause an increase in radiation hazard or a change in equipment that results in the minimum performance criteria not being met.

[For text of items B to D, see M.R.]

Subp. 3. **Additional operator ~~quality control~~ equipment performance measurements.** In addition to the ~~quality control~~ equipment performance measurements described in subpart 2, the ~~quality control~~ equipment performance measurements specified in items A and B must be performed by an operator.

A. The operator's computed tomography ~~quality control~~ equipment performance procedures must be those with the monthly or daily frequencies in part 4730.1691, and include all processing procedures noted in part 4730.1691.

B. The registrant or radiation safety officer must review and initial all of the operator's ~~quality control~~ equipment performance measurements at least quarterly. An operator's ~~quality control~~ equipment performance measurements must include acquisition of images obtained with the CT dosimetry phantoms using the same processing mode and CT conditions of operation as are used to perform the ~~quality control~~ equipment performance measurements required by subpart 2.

4730.1670 RADIATION SAFETY SURVEYS.

Subpart 1. **Applicability.** Each registrant conducting diagnostic or therapeutic x-ray procedures must ensure that the radiation safety surveys specified in this part are ~~performed. Each registrant must make or have made the radiation safety surveys necessary for establishing~~ site-specific and in compliance with this chapter. A survey must be performed at the time of initial installation and after any change in the facility or equipment which might cause a change in radiation hazard. A report of each survey must be prepared, maintained at the facility according to the record requirements in part 4730.1520, and made available to the commissioner on request. The safety survey must include the following:

A. radiation leakage measurements;

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B. calibrations;

C. equipment performance measurements;

D. maintenance and equipment modifications; and

E. shielding plans or results from radiation shielding evaluations.

[For text of subps 2 and 3, see M.R.]

Subp. 4. **Corrective actions.** If radiation safety survey results are not in compliance with this chapter, corrective action must be taken.

4730.1675 CALIBRATIONS.

[For text of subpart 1, see M.R.]

Subp. 2. **Therapeutic x-ray system calibrations for systems of less than ~~one~~ 1.0 MeV.** Each registrant operating a therapeutic x-ray system of less than ~~one~~ 1.0 MeV must ensure that the calibrations specified in this subpart are performed.

[For text of item A, see M.R.]

B. The calibration and beam characteristics of the therapeutic x-ray system must include, but not be limited to:

[For text of subitems (1) to (3), see M.R.]

(4) verification of the applicability of the inverse square law ~~if needed for timer set calculations~~;

(5) verification of the accuracy of any source-to-skin distance (SSD) indicators;

(6) ~~value~~ evaluation of timer or end effects; and

(7) verification of half value layer (HVL).

C. A copy of the current therapeutic x-ray system's dosimetry data must be available ~~in the area of the control panel~~.

Subp. 3. **Calibrations for therapeutic x-ray systems greater than ~~one~~ 1.0 MV.** Each registrant operating a therapeutic x-ray system of greater than ~~one~~ 1.0 MV must ensure that the calibrations specified in this subpart are performed.

A. The calibration of systems subject to part 4730.2450 must be performed according to ~~the protocol~~ protocols TG-21 and TG-25 endorsed by the American Association of Physicists in Medicine. The protocol known as TG-21 is titled "A Protocol for the Determination of Absorbed Dose from High Energy Photon and Electron Beams" and ~~is~~ TG-25 is titled "Clinical Electron-Beam Dosimetry: Report of AAPM Radiation Therapy Committee Task Group No. 25." The protocols are published in American Association of Physicists in Medicine, Medical Physics, volume 10, number 6, pages 741 to 771~~,~~ (1983) and volume 18, number 1, pages 73 to 102 (1991). The TG-21 protocol ~~is~~ and the TG-25 protocol are incorporated by reference and ~~is~~ are available at the Biomedical Library of the University of Minnesota, Minneapolis, Minnesota, or through the Minitex interlibrary loan system. ~~This publication is~~ The protocols are not subject to frequent change. ~~This~~ The calibration protocol must be performed:

[For text of subitems (1) to (3), see M.R.]

[For text of item B, see M.R.]

C. The documentation of each therapy beam must include, but not be limited to, the following determinations:

[For text of subitems (1) to (4), see M.R.]

(5) verification of transmission for all accessories such as wedges, ~~shadow~~ block trays, and compensators.

D. A copy of the most recent beam data must be available ~~in the area of the control panel~~.

4730.1680 THERAPEUTIC X-RAY SYSTEM SPOT CHECKS OF CALIBRATION.

Subpart 1. **Spot checks of calibration for therapeutic x-ray systems of less than ~~one~~ 1.0 MV.** The registrant must ensure that spot checks of calibration are performed on therapeutic x-ray systems. Spot checks must be performed at a minimum frequency of every six months and meet the requirements specified in this subpart.

[For text of items A to D, see M.R.]

Subp. 2. **Spot checks of calibration for therapeutic x-ray systems greater than ~~one~~ 1.0 MV.** The registrant must ensure that spot checks of calibration are performed on systems subject to part 4730.2450 during calibrations and at intervals not to exceed one month. Spot checks must meet the requirements specified in items A to G:

[For text of items A to G, see M.R.]

4730.1690 QUALITY ASSURANCE RECORDS.

Subpart 1. **~~Diagnostic~~ Radiographic facility records.** The registrant must ensure that ~~diagnostic~~ radiographic equipment and processing records are maintained for each ~~diagnostic imaging~~ system~~, including test results, requests for repairs and service, records of diagnostic radiographic equipment repairs and service, and other information specified in part 4730.1520~~ until the next inspection by the commissioner, including:

A. all test results;

B. records for repairs and service of equipment and processors; and

C. other information specified in part 4730.1520.

[For text of subps 2 to 4, see M.R.]

4730.1691 DIAGNOSTIC ~~QUALITY CONTROL~~ EQUIPMENT PERFORMANCE TESTS FOR A QUALITY ASSURANCE PROGRAM.

Subpart 1. **~~Image receptors~~ Frequency of tests.** The tests in subparts 1a to 12 are to be made at the time of installation and at the specified intervals thereafter.

Subp. 1a. **Image receptors.**

TEST TYPE		MINIMUM TEST INTERVAL	MINIMUM PERFORMANCE CRITERIA
A.	Screen-film contact	Annually	No significant areas of poor contact as measured by 8 wires/inch copper mesh, or 7 holes/inch for regular film and 40 wires/inch copper mesh for mammography
B.	Screen-film-cassette speed match	Annually	Densities within ± 0.10 O.D. for all cassettes used for each diagnostic task

Subp. 2. **Automatic processing.**

TEST TYPE		MINIMUM TEST INTERVAL	MINIMUM PERFORMANCE CRITERIA
A.	Darkroom fog	~~Quarterly~~ Semi-annually	≤ 0.08 O.D. increase in density (measured at approximately 1.00 O.D.) after 2 minutes using film exposed on-site at the time of test. For mammography the O.D. increase must be ≤ ~~0.04~~ 0.05

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B.	Sensitometry and densitometry	Before processing first film of the day	Density ± 0.15 O.D. using film exposed on-site at time of test. As of July 1, 1993, veterinary facilities are not required to perform this test
C.	Temperature check	At the time of sensitometry	Follow manufacturer's recommendations

Subp. 3. **Manual processing.**

TEST TYPE		MINIMUM TEST INTERVAL	MINIMUM PERFORMANCE CRITERIA
A.	Darkroom fog	~~Quarterly~~ Semi-annually	≤ 0.08 O.D. increase in density (measured at approximately 1.00 O.D.) after 2 minutes using film exposed on-site at time of test
B.	Sensitometry and densitometry	Before processing first film of the day	Density ± 0.15 O.D. using film exposed on-site at time of test. As of July 1, 1993, veterinary facilities are not required to perform this test
C.	Temperature check	Before processing each batch of film	Follow manufacturer's time and temperature chart

Subp. 4. **All diagnostic radiographic tubes; required when applicable.**

TEST TYPE		MINIMUM TEST INTERVAL	MINIMUM PERFORMANCE CRITERIA
A.	SID accuracy	Biennially	± 2% of measured value
B.	X-ray and light field alignment	Biennially	± 2% of SID any one direction, ± 3% of SID, both directions (total)
C.	X-ray and ~~bucky~~ image receptor alignment	Biennially	± 2% of SID
D.	Collimator dial accuracy	Biennially	± 2% of SID

E.	Reproducibility	Biennially	Coefficient of variation ≤ 5%
F.	mR/mAs	Biennially	± 10% of baseline ~~(Baseline should be as low as reasonably achievable without degrading image quality)~~
G.	Linearity	Biennially	± 10% over clinical range
H.	Linearity-for mAs only units manufactured after May 3, 1994	Biennially	Average ratios of exposure to the indicated mAs obtained in any two consecutive mAs settings shall not differ by more than 0.10 times their sum, or at two settings differing by no more than a factor of two where the mAs selector provides continuous selection.
I.	Timer accuracy	Biennially	Single Phase ~~-~~: use Table 4730.1692 or ± 10% of setting. Three phase~~-~~, high frequency, and constant potential: use ± 5% of setting or one millisecond, whichever is shortest.
~~I.~~ J.	Half-value layer	Biennially	Use part 4730.1750, subpart 6, item A
~~J.~~ K.	kVp accuracy	Biennially	± 5% of indicated kVp for noncertified equipment. For certified equipment follow manufacturer's specified limits
~~K.~~ L.	Phototimer reproducibility, if present	Biennially	± 5% of average exposure
M.	AEC (phototimer) increments	Biennially	± 10% of manufacturer's stated increments

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N.	Illuminance of certified collimator	Biennially	≥ 15 footcandles
O.	Film density vs. thickness change on AEC	Biennially	± 0.30 O.D. of the averaged exposures over the range specified by the manufacturer
P.	Film density vs. kVp change on AEC	Biennially	± 0.30 O.D. of the averaged exposures when measured at ≥ 1.2 O.D. and over the range as specified by the manufacturer
Q.	Spot film reproducibility (fluoro units with manual mode)	Annually	± 5% of average exposure
R.	Phototimer back-up timer cut off	At time of installation	terminates exposure at ≤ 600 mAs
S.	AEC density at normal or "0"	Biennially	≥ 1.0 O.D.

Subp. 5. **For facilities with fluoroscopes and C-arm fluoroscopes, except radiation therapy simulators, manufactured before May 19, 1995.**

TEST TYPE		MINIMUM TEST INTERVAL	MINIMUM PERFORMANCE CRITERIA
A.	Maximum output at tabletop or equivalent minimum SSD	Annually and every tube change	≤ 5 R (1.3 mC kg^{-1}) per minute for manual; ≤ 10 R (2.6 mC kg^{-1}) per minute for Automatic ~~brightness~~ Exposure Rate Control systems
B.	High level control maximum output at tabletop or equivalent minimum SSD	Annually and every tube change	≤ 20 R (5.0 mC kg^{-1}) per minute
C.	Fluoroscopic image size	Annually and every tube change	Error between fluorographic beam size and observed image size must be no more than ± 3% of SID for all modes and at any tower height
D.	Actual spot-film size vs indicated	Annually	Error between actual fluorographic beam size at image receptor and indicated image size must

			be no more than ± 3% of SID for all modes and at any tower height
E.	Spot-film reproducibility	Annually	± 5% of average exposure
F.	Phototimer reproducibility, if present	Annually	± 5% of average exposure
G.	Fluoroscopic high contrast resolution and distortion	Annually	15 centimeter (six inch) intensifier: center ~~40~~ 30 and edge ~~35~~ 24 (wires per inch) copper mesh; 23 centimeter (nine inch) intensifier: center ~~35~~ 24 and edge ~~30~~ 20 (wires per inch) copper mesh
H.	Half-value layer	Annually and after every tube change	Use part 4730.1750, subpart 6, item A
I.	kVp accuracy	Annually and after every tube change	± 5% for noncertified equipment. For certified equipment follow manufacturer's specified limits.

Subp. 5a. **For facilities with fluoroscopes and C-arm fluoroscopes, except radiation therapy simulators, manufactured on or after May 19, 1995.**

TEST TYPE		MINIMUM TEST INTERVAL	MINIMUM PERFORMANCE CRITERIA
A.	Maximum output at tabletop or equivalent minimum SSD	Annually and at every tube change	≥ 5 R/min must have Automatic Exposure Rate Control; ≥ 10 R/min must have high level control; if no high level control maximum is ≤ 10 R/min.
B.	High level control maximum output at tabletop or equivalent minimum SSD	Annually and at every tube change	≤ 20 R/min

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C. All other tests as indicated in subpart 5

Subp. 6. **For facilities with mammography systems.** All tests on mammographic units must follow *Code of Federal Regulations*, title 21, Parts 16 and 900, Mammography Quality Standards Act.

~~TEST TYPE~~		~~MINIMUM TEST INTERVAL~~	~~MINIMUM PERFORMANCE CRITERIA~~
~~A.~~	~~Same test types and minimum performance criteria as Diagnostic Radiographic Tubes as specified in subpart 4, unless listed below~~		
~~B.~~	~~kVp accuracy~~	~~Annually~~	~~± 1 kVp of indicated kVp~~
~~C.~~	~~Glandular dose (50% glandular and 50% adipose tissue composition)~~	~~Annually~~	~~A. ≤ 400 millirads for a single view screen film 4.5 cm compressed breast; cranial caudal view; or~~ ~~B. ≤ 100 millirads for a single screened film without grid~~
~~D.~~	~~Mammographic low and high contrast resolution (phantom image quality). The phantom image must meet the technical specifications for a breast phantom of the American College of Radiology as described in "ACR Mammography Accreditation Program," July 7, 1992. This specification is incorporated by reference, is not subject to frequent change, and is available from the Minnesota Department of Health, Barr Library, or the Minitex interlibrary loan system~~	~~Quarterly~~	~~Using the ACR phantom or equivalent that evaluates image quality in the 1.0 to 1.6 optical density range, the system must be capable of producing images of the phantom in which the following are visualized: (1) the three largest masses with thicknesses of 2.0 millimeters, 1.0 millimeters, and 0.75 millimeters; (2) the three largest speck groups with diameters of 0.54 millimeters, 0.40 millimeters, and 0.32 millimeters; and (3) the four largest fibers with thicknesses of 1.56 millimeters, 1.12 millimeters, 0.89 millimeters, and 0.75 millimeters~~

~~E.~~	~~Phototimer reproducibility~~	~~Annually~~	~~± 5% of average exposure~~

Subp. 7. **For facilities with tomography systems other than computed tomography.**

TEST TYPE		MINIMUM TEST INTERVAL	MINIMUM PERFORMANCE CRITERIA
A.	Section level	Annually	± 5 mm
B.	Level incrementation	Annually	± 2 mm
C.	Section thickness	Annually	Follow manufacturer's specifications
D.	All tests in part 4730.1691, subpart 4, if applicable		
E.	Spatial plane resolution	Annually	40 mesh screen or better

Subp. 8. **For facilities with computed tomography scanners.**

TEST TYPE		MINIMUM TEST INTERVAL	MINIMUM PERFORMANCE CRITERIA
A.	Accuracy of scout localization view	Annually	± 1 mm
B.	Accuracy of distance measurements	Annually	± 1 mm
C.	~~Patient dosimetry~~ CT dose index	Annually	± 20% from manufacturer's recommendations
D.	CT number dependence on slice thickness	~~Semi-~~ Annually	Mean ± 3 CT numbers averaged over 100 pixels
E.	CT number calibration and noise	~~Monthly~~ Daily	~~Air: 1,000 ± 30 CT numbers;~~ Water: 0 ± 5 CT numbers; Noise: ± 3 standard deviations from baseline
F.	~~Low contrast resolution~~	~~Monthly~~	~~0.5 cm holes~~

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~~G.~~	CT number uniformity	Monthly for mobile units. Annually for fixed base units	Variation ± 5 CT numbers among a mean of 100 pixels
~~H.~~ G.	Hard copy output and visual display	Daily	Luminance and contrast not significantly different

Subp. 9. **For facilities with cinefluorographic and special procedure systems.**

TEST TYPE		MINIMUM TEST INTERVAL	MINIMUM PERFORMANCE CRITERIA
A.	Cinefluorographic exposure rates	~~Semi-~~ Annually	Approximately 10 to 20 ~~uR~~ µR (2.6 to 5.0 nC/kg) per frame at intensifier for nine inch (23 cm) mode; approximately 20 to 30 ~~uR~~ µR (5 to 8 nC/kg) per frame at intensifier for six inch (15 cm) mode
B.	~~Cinefluorographic film exposure~~ All tests in subparts 4, 5, and 5a, if applicable	~~Semi-annually~~	~~Approximately 15 uR (4 nC kg^{+}) per frame at intensifier for nine inch (23 cm) mode; approximately 27 uR (7 nC kg^{+}) per frame at intensifier for six inch (15 cm) mode~~
~~C.~~ C.	~~Cinefluorographic image size and beam limitation~~ Film changer screen-film contact	~~Semi-annually~~ Annually	~~Within ± 3% of SID for all modes and at any tower height~~ No significant areas of poor contact as measured by 8 wires/inch copper mesh or 7 holes/inch
D.	High contrast resolution for cinefluorographic and digital systems	Annually	No significant difference between static and dynamic conditions
E.	Optical density of films over duration of filming run	Annually	< ± 0.2 O.D. difference

Subp. 10. [See repealer.]

Subp. 11. **For facilities with dental intraoral systems.**

TEST TYPE		MINIMUM TEST INTERVAL	MINIMUM PERFORMANCE CRITERIA
A.	Film processing	Before the first film of the day	Between 0.75 and 1.05 O.D. on the test tool or follow test tool manufacturer's recommendations
B.	Filtration (HVL)	Biennially	Use part 4730.1750, subpart 6, item A
C.	Radiation exposure at end of cone	Biennially	Use part 4730.1950, subpart 4, item ~~D~~ C
D.	Timer reproducibility and accuracy	Biennially	±10% of indicated timer setting
E.	kVp accuracy	Biennially	±5% of indicated kVp for noncertified equipment. For certified equipment follow manufacturer's specified limits
F.	Reproducibility	Biennially	Coefficient of variation ≤ 5%
G.	Fog test	~~Quarterly~~ Semi-annually	Use criteria in subpart 2, item A for automatic processing; subpart 3, item A for manual processing
H.	Dental mA linearity	Biennially	± 10 over the clinical range

Subp. 12. **For facilities with dental extraoral systems including panoramic systems.**

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TEST TYPE		MINIMUM TEST INTERVAL	MINIMUM PERFORMANCE CRITERIA
A.	Film processing		Use automatic and manual processing as specified in subparts 2 and 3. A step wedge ~~or dose normalizing and monitoring device~~ may be used in place of the sensitometry and densitometry test in subparts 2, item B, and 3, item B
B.	Same test types and minimum performance criteria as Diagnostic Radiographic Tubes in subpart 4		
C.	Fog test	~~Quarterly~~ Semi-annually	Use criteria in subpart 2, item A for automatic processing; subpart 3, item A for manual processing

Source: Derived from NCRP 99, Tables A.1 to A.10.

4730.1693 THERAPY ~~QUALITY CONTROL~~ EQUIPMENT PERFORMANCE TESTS AND LIMITS FOR MEASUREMENT EQUIPMENT.

Subpart 1. **Local standard (Loc. Std.).**

TEST	MINIMUM TEST INTERVAL~~*~~	TOLERANCE~~**~~
~~(1)~~ A. AAPM - accredited Dosimetry calibration Laboratory calibration	Every two years	D
~~(2)~~ B. Linearity	Every four years	0.5 percent
~~(3)~~ C. Venting	Every four years	D
~~(4)~~ D. Extracameral signal	Initial use	0.5 percent
~~(5)~~ E. Leakage	Each use	~~0.5~~ 0.1 percent
~~(6)~~ F. Recombination	Initial use	~~0.5 percent~~ Documented
~~(7)~~ G. Collecting potential	Each use	D

Subp. 2. **Other field instruments.**

TEST	MINIMUM TEST INTERVAL*	TOLERANCE**
~~(1)~~ A. Local standard comparison	~~Every year~~ Every 2 years	~~2~~ one percent
~~(2)~~ B. Linearity	Every ~~four~~ two years	D
~~(3)~~ C. Venting	Every ~~four~~ two years	D
~~(4)~~ D. Extracameral signal	Every ~~four~~ two years	D
~~(5)~~ E. Leakage	Each use	~~0.5~~ 0.1 percent
~~(6)~~ F. Recombination	Initial use	~~0.5 percent~~ Documented
~~(7)~~ G. Collecting potential	Each use	D

Subp. 3. **Relative dosimetric equipment.**

TEST	MINIMUM TEST INTERVAL*	TOLERANCE**
~~(1)~~ A. Thermoluminescent Dosimeter		
~~(a)~~ (1) Calibration	Each batch or box	D
~~(b)~~ (2) Linearity	Initial use	D
~~(c) Electronic sensitivity~~	~~Each use~~	~~3 percent~~
~~(2)~~ B. Film		
~~(a)~~ (1) Dose and response	Each batch or box	D
~~(b)~~ (2) Densitometer linearity	Every year	D
~~(c) Position sensitivity~~	~~Initial Use~~	~~D~~
~~(3)~~ C. Air Ionization Chamber system		
~~(a)~~ (1) Linearity	Every year	D
~~(b)~~ (2) Extracameral signal	Initial use	1 percent
~~(4)~~ D. Diode System		
~~(a)~~ (1) Energy dependence	Initial use	D
~~(b)~~ (2) Extracameral signal	Initial use	D
~~(c)~~ (3) Linearity	Initial use	D

Subp. 4. **Survey instruments.**

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TEST	MINIMUM TEST INTERVAL*	TOLERANCE**
~~(1)~~ A. Calibration	Every year	D
~~(2)~~ B. Linearity	Every year	D
~~(3)~~ C. Constancy	Each use	5 percent
~~(4)~~ D. Battery voltage	Each use	D

Subp. 5. **Positioning equipment.**

TEST	MINIMUM TEST INTERVAL*	TOLERANCE**
~~(1)~~ A. Accuracy	Each use	2 mm
~~(2)~~ B. Hysteresis	Each use	2 mm

Subp. 6. **Phantoms and attenuators.**

TEST	MINIMUM TEST INTERVAL*	TOLERANCE**
~~(1)~~ A. Thickness	Initial use	D
~~(2)~~ B. Density	Initial use	D
~~(3)~~ C. Phantom stacked density	Initial use	D
~~(4) Integrity~~	~~Each use~~	~~No suggestion~~
~~(5)~~ D. Detector fit	Initial use	D

Subp. 7. **Accessory equipment.**

TEST	MINIMUM TEST INTERVAL*	TOLERANCE**
~~(1)~~ A. Thermometer		
~~(a)~~ (1) Calibration	Initial use	~~0.5 percent~~ 0.1 degree/C
~~(2)~~ B. Barometer (mercury)		
~~(a)~~ (1) Calibration Hg	Initial use	1 mm Hg
~~(3)~~ C. Barometer (aneroid)		
~~(a)~~ (1) Calibration Hg	Initial use	1 mm Hg
~~(b)~~ (2) Intercomparison	Annually	1 mm Hg

~~*~~ ~~Initial use = Initial use for each mode of use or following malfunction and repairs.~~

~~Each use = Each use (measurement sequence) or ongoing evaluation.~~

~~Each batch or box = Each batch or box at appropriate energy (dosimeter element precision also should be considered).~~

~~y or mo = number preceding y = year or mo = month indicates frequency between tests, example: 4 y means once every four years.~~

~~**~~ D = Documented and correction applied or noted in report of measurement, when appropriate.

Source: Derived from American Association of Physicists in Medicine, Report No. 13, Table I, pp. 21-22, 1984 and TG-40, Medical Physics, volume 21, number 4, Tables I, II, and IV, pages 581 to 618 (1994).

4730.1695 ~~QUALITY CONTROL~~ EQUIPMENT PERFORMANCE TESTS FOR EXTERNAL BEAM TELETHERAPY AND SIMULATION SYSTEMS.

Subpart 1. **Dosimetry.**

	MINIMUM TEST INTERVAL	TOLERANCE
A. General axis dose calibration	Annually	2 percent
B. Constancy checks-photons		
(1) Dose per monitor unit along central axis	Weekly	3 percent
(2) Depth dose	Monthly	2 percent
(3) Beam uniformity	Monthly	3 percent
(4) ~~Dose~~ Monitor	Annually	~~No suggestion~~
chamber linearity		1 percent
(5) Timer ~~constancy~~	Annually	~~No suggestion~~
linearity and error		1 percent

Subp. 2. **Geometry.**

	MINIMUM TEST INTERVAL	TOLERANCE
A. Field positioning aids		
(1) Light field and radiation field agreement	~~Weekly~~ Monthly	~~3~~ 2 mm
(2) Mechanical distance pins, lasers, and SSD lights	Monthly	2 mm
(3) Scale readouts	Monthly	~~No suggestion~~ 2 mm/1 degree angle

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B. Machine alignment		
(1) Jaw symmetry	Annually	2 mm
(2) Coincidence of collimator (jaw) and gantry axes with isocenter	Annually	2 mm
(3) Stability of gantry arm and bearing under rotation	Annually	2 mm
(4) Couch motion and tabletop sag	Annually	~~No suggestion~~ 2 mm

Subp. 3. ~~**Electron beam equipment**~~ **Constancy checks-electrons.**

	MINIMUM TEST INTERVAL	TOLERANCE
~~A. Dose calibration~~	~~Annually~~	~~3 percent~~
~~B.~~A. Beam uniformity	~~Weekly~~ Monthly	5 percent
~~C.~~B. Depth dose	Monthly	~~3 mm at 80%~~ 2 mm at therapeutic depth
~~D. X-ray contamination~~	~~Annually~~	~~No suggestion~~
~~E. Dosimetry reproducibility and linearity~~	~~Annually~~	~~No suggestion~~
~~F.~~C. Dose per monitor unit constancy check	Weekly	3 percent

Subp. 4. **Treatment accessories.** *

	MINIMUM TEST INTERVAL	TOLERANCE
A. ~~Wedges and standard compensation~~ Wedge transmission factor	Annually	~~No suggestion~~ 2 percent
B. ~~Field shaping blocks~~ Transmission factor constancy for all treatment accessories	Annually	~~No suggestion~~ 2 percent

Subp. 5. **Simulators.**

	FREQUENCY	TOLERANCE
A. ~~Geometry, follow subpart 2~~ Localizing lasers	~~——~~ Daily	~~——~~ 2 mm
B. ~~Accessories~~ Distance indicator	~~Annually~~ Daily	~~No suggestion~~ 2 mm
C. Field size indicator	Monthly	2 mm
D. Gantry/collimator angle indicators	Monthly	1 degree
E. Cross-hair centering	Monthly	2 mm diameter
F. Focal spot-axis indicator	Monthly	2 mm
G. Fluoroscopic image quality	Monthly	Established baseline
H. Collision avoidance	Monthly	Functional
I. Light/radiation field coincidence	Monthly	2 mm or 1 percent
J. Collimator rotation isocenter	Annual	2 mm diameter
K. Gantry rotation isocenter	Annual	2 mm diameter
L. Couch rotation isocenter	Annual	2 mm diameter
M. Coincidence of collimator, gantry, couch axes, and isocenter	Annual	2 mm diameter
N. Table top sag	Annual	2 mm
O. Vertical travel of couch	Annual	2 mm
P. Exposure rate	Annual	Established baseline
Q. Table top exposure with fluoroscopy	Annual	Established baseline
R. Kvp and mAs calibration	Annual	Established baseline
S. High and low contrast resolution	Annual	Established baseline

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Subp. 6. [See repealer.]

* Attenuation in blocks, wedge factors, and compensator data must be checked annually. A visual inspection of the mechanical integrity of these accessories must be done monthly.

Source: Derived from American Association of Physicists in Medicine, Report No. 13, Table II, page 29~~,~~ (1984) and TG-40, Medical Physics, volume 21, number 4, Tables I, II, III, and IV, pages 581 to 618 (1994).

4730.1750 GENERAL EQUIPMENT REQUIREMENTS FOR ALL DIAGNOSTIC RADIOGRAPHIC SYSTEMS.

[For text of subps 1 to 12, see M.R.]

Subp. 13. **X-ray control.** The x-ray control must meet the requirements in this subpart.

[For text of items A to C, see M.R.]

D. All x-ray control console panel indicator lights must be operational.

[For text of subp 14, see M.R.]

Subp. 15. **Additional requirements applicable only to certified x-ray ~~systems~~ components.** Only diagnostic radiographic systems incorporating one or more certified components must comply with the requirements in this subpart which relate to those certified components.

[For text of items A to E, see M.R.]

4730.1850 DIAGNOSTIC RADIOGRAPHIC SYSTEMS OTHER THAN FLUOROSCOPIC, DENTAL INTRAORAL, VETERINARY MEDICINE, OR COMPUTED TOMOGRAPHY SYSTEMS.

[For text of subps 1 and 2, see M.R.]

Subp. 3. **General purpose stationary x-ray systems.** General purpose stationary x-ray systems must meet the standards in items A to E.

[For text of items A and B, see M.R.]

C. Except when spot-film devices or special attachments for mammography are in service, a method must be provided to:

[For text of subitems (1) to (3), see M.R.]

[For text of items D and E, see M.R.]

[For text of subp 4, see M.R.]

Subp. 5. **~~Diagnostic~~ Radiographic systems designed ~~only~~ for or provided with special attachments for mammography.** ~~Diagnostic~~ Radiographic systems designed only for mammography and general purpose radiographic systems when special attachments for mammmography are in service must be provided with means to limit the useful beam so the x-ray field at the plane of the image receptor does not extend beyond any edge of the image receptor at any designated SID. For the edge of an image receptor designed to be adjacent to the chest wall, the x-ray field must not extend beyond this edge by more than two percent of the SID. This requirement can be met with a system which performs according to subpart 6, item C. When the beam-limiting device and image receptor support device are designed to be used to compress the breast during a mammographic procedure and the SID may vary, the SID indication specified in subpart 6, item C, must be the maximum SID for which the beam-limiting device or aperture is designed. In addition, each image receptor support intended for installation on a system designed only for mammography must have clear and permanent markings to indicate the image receptor size for which it is designed.

~~Facilities providing mammography must comply with the standards in items A to C.~~

~~A. Radiographic equipment used for either screen-film or xeroradiographic imaging of the breast must be designed specifically for mammographic imaging.~~

~~B. The X-ray tube target material must be molybdenum or tungsten-molybdenum alloy for screen-film systems, or tungsten for xeroradiographic systems.~~

~~C. The half-value layer must be a minimum of 0.3 mm of aluminum at 30 kVp for screen-film systems. The half-value layer must be a minimum of 1.5 mm of aluminum at 45 kVp for xeroradiographic systems.~~

~~D. The kilovoltage must be less than 34 kVp for screen-film systems and between 40 to 55 kVp for xeroradiographic systems for a 4.5 cm thick compressed breast, comprised of 50 percent glandular, 50 percent adipose tissue.~~

~~E. A screen-film system designed for mammographic purposes must be used for screen-film imaging. Direct X-ray exposed film or any other film exposed directly to x-rays must not be used.~~

~~F. The mean glandular dose for a two view screen-film mammography with grid or for a two view xeroradiography for a patient with 4.5 cm thick compressed breast must be no more than 0.8 rad.~~

~~G. The mean glandular dose for a two view screen-film mammography without grid, for the patient with 4.5 cm thick compressed breast must be no more than 0.2 rad.~~

[For text of subps 6 and 7, see M.R.]

Subp. 8. **Radiation exposure, automatic exposure controls.** When an automatic exposure control is provided:

A. indication must be made on the control panel when this mode of operation is selected;

B. the minimum exposure time for all radiographic systems, other than that specified in item E, must be equal to or less than 1/60 second or a time interval required to deliver five ~~milliamperes-second~~ milliampere-seconds, whichever is greater;

[For text of items C to E, see M.R.]

[For text of subps 9 and 10, see M.R.]

Subp. 11. **Additional requirements for certified systems only.** The standards in items A to ~~D~~ E are applicable to certified x-ray systems only.

[For text of items A and B, see M.R.]

C. This item applies to those general purpose x-ray systems which contain a tube housing assembly, an x-ray control, and a table (if so equipped). The system must be certified according to *Code of Federal Regulations*, title 21, section 1020.30(c). The system must meet the standards in subitems (1) to (6).

(1) When positive beam limitation ~~must be~~ is provided ~~according to,~~ it must meet the criteria in units (a) to (f).

[For text of units (a) to (d), see M.R.]

(e) Neither tomographic nor stereoscopic radiography ~~shall be~~ is being performed.

[For text of unit (f), see M.R.]

[For text of subitems (2) to (6), see M.R.]

[For text of item D, see M.R.]

E. If the facility chooses, automatic or semiautomatic collimators (PBL) may be permanently changed to a manual mode. This requires the automatic system to be permanently disabled. The collimator must be relabeled with a durable material "manual operation required" so that it is clearly observable to the operator.

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4730.1950 INTRAORAL DENTAL RADIOGRAPHIC SYSTEMS.

[For text of subps 1 to 3, see M.R.]

Subp. 4. **Safety controls.** The registrant must ensure that the safety controls in this subpart are followed.

A. Intraoral film holders and bite blocks must be used except when endodontic procedures do not permit. Film must not be routinely held by hand.

[For text of item B, see M.R.]

C. The exposure at the end of the cone must not exceed the values listed in Table 4730.1950:

TABLE 4730.1950

kVp	"D" Speed Film ESE (milliroentgens)	"E" Speed Film[2] ESE (milliroentgens)	"D/E or E+" Speed Film ESE (milliroentgens)
50	425 - 575	220 - 320	220 - 320
55	350 - 500	190 - 270	190 - 270
60	310 - 440	165 - 230	165 - 230
65	270 - 400	140 - 200	140 - 200
70	240 - 350	120 - 170	120 - 170
75	170 - 260	100 - 140	100 - 140
80	150 - 230	90 - 120	90 - 120
85	130 - 200	80 - 105	80 - 105
90	120 - 180	70 - 90	70 - 90
95	110 - 160	60 - 80	60 - 80
100	100 - 140	50 - 70	50 - 70

Notes:

(1) Exposures are specified as free-in-air exposures without backscatter.

(2) The indicated kVp is often significantly different from the actual kVp. The kVp must be tested at the time the output per film is measured to determine the correct exposure range to be applied.

4730.2150 FLUOROSCOPIC X-RAY SYSTEMS EXCEPT RADIATION THERAPY SIMULATORS.

[For text of subps 1 and 2, see M.R.]

Subp. 3. **Limitation of useful beam, x-ray field.** All fluoroscopes must be provided with image intensification equipment to view the fluoroscopic images.

A. For image-intensified fluoroscopic equipment, neither the length nor the width of the x-ray field in the plane of the image ~~receptor must~~ intensifier may exceed that of the visible area of the image ~~receptor~~ intensifier by more than three percent of the SID. The sum of the excess length and the excess width must be no greater than four percent of the SID. In addition, means must be provided to permit further limitations of the field:

[For text of subitems (1) and (2), see M.R.]

(3) For fluoroscopic X-ray systems ~~installed~~ manufactured after February 25, 1978, when the angle between the image receptor and beam axis is variable, means must be provided to indicate when the axis of the X-ray beam is perpendicular to the plane of the image receptor.

[For text of subitem (4), see M.R.]

[For text of items B and C, see M.R.]

[For text of subp 4, see M.R.]

Subp. 4a. **Entrance exposure rate allowable limits on fluoroscopic systems manufactured before May 19, 1995.** The registrant must ensure that the entrance exposure rate allowable limits in this subpart are met.

A. Equipment with automatic exposure rate control (AERC). Fluoroscopic equipment that is provided with AERC shall not be operable at any combination of tube potential and current that results in an exposure rate in excess of ten roentgens per minute (10 R/min) or 2.58 x 10^{-3} coulomb per kilogram (C/kg) per minute at the point where the center of the useful beam enters the patient, except:

(1) during recording of fluoroscopic images; or

(2) when an optional high-level control is provided. When so provided, the equipment shall not be operable at any combination of tube potential and current that results in an exposure rate in excess of 5 R/min (1.29 x 10^{-3} C/kg per minute) at the point where the center of the useful beam enters the patient, unless the high-level control is activated. Special means of activation of high-level controls is required. The high-level control shall be operable only when continuous manual activation is provided by the operator. A continuous signal audible to the fluoroscopist shall indicate that the high-level control is being employed.

B. Equipment without AERC (manual mode). Fluoroscopic equipment that is not provided with AERC shall not be operable at any combination of tube potential and current that results in an exposure rate in excess of 5 R/min (1.29 x 10^{-3} C/kg per minute) at the point where the center of the useful beam enters the patient, except:

(1) during the recording of fluoroscopic images; or

(2) when an optional high-level control is activated. Special means of activation of high-level controls is required. The high-level control shall be operable only when continuous manual activation is provided by the operator. A continuous signal audible to the fluoroscopist shall indicate that the high-level control is being employed.

C. Equipment with both an AERC mode and a manual mode.Fluoroscopic equipment that is provided with both an AERC mode and a manual mode shall not be operable at any combination of tube potential and current that results in an exposure rate in excess of 10 R/minute (2.58 x 10^{-3} C/kg per minute) in either mode at the point where the center of the useful beam enters the patient, except:

(1) during the recording of fluoroscopic images; or

(2) when the mode or modes have an optional high-level control, in which case that mode or modes shall not be operable at any combination of tube potential and current that results in an exposure rate in excess of 5 R/minute (1.29 x 10^{-3} C/kg per minute) at the point where the center of the useful beam enters the patient, unless the high-level control is activated. Special means of activation of high-level controls is required. The high-level control shall be operable only when continuous manual activation is provided by the operator. A continuous signal audible to the fluoroscopist shall indicate that the high-level is being employed.

D. Compliance with this subpart shall be determined as follows:

(1) movable grids and compression devices shall be removed from the useful beam during the measurement;

(2) if the source is below the x-ray table, the exposure rate shall be measured at one centimeter above the tabletop or cradle;

(3) if the source is above the x-ray table, the exposure rate shall be measured at 30 centimeters above the tabletop with the end of the beam-limiting device or spacer positioned as closely as possible to the point of measurement;

(4) in a C-arm type of fluoroscope, the exposure rate shall be measured at 30 centimeters from the input surface of the fluoroscopic imaging assembly, with the source positioned at any available SID, provided that the end of the beam-limiting device or spacer is no closer than 30 centimeters from the input surface of the fluoroscopic imaging assembly; and

(5) in a lateral type of fluoroscope, the exposure rate shall be measured at a point 15 centimeters from the center line of the x-ray table and in the direction of the x-ray source with the end of the beam-limiting device or spacer positioned as closely as possible to the point of measurement. If the tabletop is movable, it shall be positioned as closely as possible to the lateral x-ray source, with the end of the beam-limiting device or spacer no closer than 15 centimeters to the center line of the x-ray table.

Subp. 5. **Entrance exposure rate allowable limits on fluoroscopic systems manufactured after May 19, 1995.** The registrant must ensure that the entrance exposure rate allowable limits in this subpart are ~~applied to a fluoroscopic X-ray system~~ met.

~~A. The exposure rate measured at the point where the center of the useful beam enters the patient must not exceed ten roentgens (2.6 mC/kg) per minute, except during recording of fluoroscopic images or when provided with optional high level control. Under optional high level control, except during recording of fluoroscopic images, the maximum entrance exposure rate must not exceed 20 roentgens (5.2 mC/kg) per minute.~~

~~B. In addition to the other requirements of this part, certified systems which do not incorporate an automatic exposure rate control must not be operable at any combination of kVp and milliamperage, which will result in an exposure rate in excess of five roentgens (1.3 mC/kg) per minute at the point where the center of the useful beam enters the patient. This requirement must not apply during recording of fluoroscopic images, or when an optional high level control is activated.~~

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~~C. When provided with optional high level control, the fluoroscopic X-ray system must not be operable at any combination of kVp and milliamperage which results in an exposure rate in excess of five roentgens (1.3 mC/kg) per minute at the point where the center of the useful beam enters the patient unless the high level control is activated.~~

~~(1) Special means of activation of high level controls must be required. The high level control must only be operable when continuous manual activation is provided by the fluoroscopist.~~

~~(2) A continuous signal, audible to the fluoroscopist, must indicate that the high level control is being employed.~~

~~D. Compliance with the requirements of subpart 5 must be determined as specified in this item:~~

~~(1) A one-eighth inch (3 mm) thick sheet of lead that covers the entire cross section of the primary beam must be placed in the beam at a minimum distance of 15 centimeters (5.9 inches) from the point of measurement on the image receptor side of the patient.~~

~~(2) If the source is below the tabletop or cradle, the exposure rate must be measured one centimeter (0.4 inch) above the tabletop or cradle.~~

~~(3) If the source is above the tabletop or cradle, the exposure rate must be measured at 30 centimeters (11.8 inches) above the tabletop or cradle with the end of the beam-limiting device or spacer positioned as close as possible to the point of measurement.~~

~~(4) All C-arm fluoroscopes, both stationary and portable, must meet the entrance exposure rate limits in subpart 5, items A and B, at a point 30 centimeters (11.8 inches) from the input surface of the fluoroscopic imaging assembly, with the source positioned at any available SID provided so that the end of the spacer assembly or beam-limiting device is not closer than 30 centimeters (11.8 inches) from the input surface of the fluoroscopic imaging assembly.~~

A. Fluoroscopic equipment operable at any combination of tube potential and current that results in an exposure rate greater than 5 R/minute (1.29 x 10^{-3} C/kg per minute) at the point where the center of the useful beam enters the patient shall be equipped with automatic exposure rate control (AERC). Provision for manual selection of technique factors may be provided.

B. Fluoroscopic equipment shall not be operable at any combination of tube potential and current that results in an exposure rate in excess of 10 R/minute (2.58 x 10^{-3} C/kg per minute) at the point where the center of the useful beam enters the patient, except:

(1) during the recording of images from an x-ray image-intensifier tube using photographic film or a video camera when the x-ray source is operated in a pulsed mode; or

(2) when an optional high-level control is activated. When the high-level control is activated, the equipment shall not be operable at any combination of tube potential and current that results in an exposure rate in excess of 20 R/minute (5.16 x 10^{-3} C/kg per minute) at the point where the center of the useful beam enters the patient. Special means of activation of high-level control is required. The high-level control shall only be operable when continuous manual activation is provided by the operator. A continuous signal audible to the fluoroscopist shall indicate that the high-level control is being employed.

C. Compliance with item B, subitem (2), shall be determined as follows:

(1) movable grids and compression devices shall be removed from the useful beam during the measurement;

(2) if the source is below the x-ray table, the exposure rate shall be measured at one centimeter above the tabletop or cradle;

(3) if the source is above the x-ray table, the exposure rate shall be measured at 30 centimeters above the tabletop with the end of the beam-limiting device or spacer positioned as closely as possible to the point of measurement;

(4) in a C-arm type of fluoroscope, the exposure rate shall be measured at 30 centimeters from the input surface of the fluoroscopic imaging assembly, with the source positioned at any available SID, provided that the end of the beam-limiting device or spacer is no closer than 30 centimeters from the input surface of the fluoroscopic imaging assembly; and

(5) in a lateral type of fluoroscope, the exposure rate shall be measured at a point 15 centimeters from the center line of the x-ray table and in the direction of the x-ray source with the end of the beam-limiting device or spacer positioned as closely as possible to the point of measurement. If the tabletop is movable, it shall be positioned as closely as possible to the lateral x-ray source, with the end of the beam-limiting device or spacer no closer than 15 centimeters to the center line of the x-ray table. Variable SID units shall not exceed 10 R/minute at any SID.

D. During fluoroscopy and cinefluorography, x-ray tube potential and current must be continuously indicated. Deviation of x-ray tube potential and current from the indicated values must not exceed the maximum deviation as stated by the manufacturer according to *Code of Federal Regulations*, title 21, section 1020.30, paragraph (h), item (3).

E. Periodic measurement of the maximum ~~and clinical~~ exposure rate must be performed ~~as specified in this item:~~ in the manual mode, automatic exposure rate control, and high-level control mode, if applicable.

(1) The measurements must be made annually ~~or~~ and after any maintenance of the system which might affect the exposure rate.

(2) The results of these measurements must be ~~posted where any fluoroscopist may have ready access to them while using the fluoroscope and~~ in the record required in part 4730.1520, subpart 1, item D. The measurement results must be stated in Roentgens per minute or mC/kg per minute and must include the technique factors used in determining such results. The name of the individual performing the measurements and the date the measurements were performed must be included in the results.

(3) ~~The conditions for the periodic measurement of the clinical entrance exposure rate are as follows:~~

~~(a) the measurement must be made under the conditions that satisfy the requirements of item D, subitems (2), (3), and (4);~~

~~(b) the kVp must be the kVp typical of clinical use of the X-ray system;~~

~~(c) the X-ray system that incorporates the automatic exposure rate control must have sufficient material placed in the useful beam to produce a kilovoltage and milliamperage typical of the use of the X-ray system; and~~

~~(d) the X-ray system that does not incorporate an automatic exposure rate control must use a kilovoltage and milliamperage typical of the clinical use of the X-ray system.~~

Materials must be placed in the useful beam when conducting these periodic measurements to protect the imaging system.

[For text of subitem (4), see M.R.]

Subp. 6. **Barrier transmitted radiation rate limits.** The exposure rate due to transmission through the primary protective barrier with the attenuation block in the useful beam, combined with radiation from the image intensifier, must not exceed ~~two milliroentgens (0.5 uC/kg) per hour~~ 3.34 x 10^{-3} percent of the entrance exposure rate at ten centimeters (3.9 inches) from any accessible surface of the fluoroscopic imaging assembly beyond the plane of the image receptor for each roentgen per minute ~~or millicoulomb per kilogram per minute~~ (0.25 mC/kg) of entrance exposure rate.

[For text of subps 7 to 10, see M.R.]

Subp. 11. **Control of scattered radiation.** The procedures in this subpart must be used to control scattered radiation from all fluoroscopes.

A. When a fluoroscopic table with an undertable x-ray tube is used, the bucky opening must be shielded to attenuate the scattered radiation by at least 70 percent. Lead drapes must be attached to the intensifier tower to attenuate scattered radiation by at least 70 percent.

B. For other undertable configurations, provisions must be made through equipment design or radiation protection measures to ~~assure~~ ensure that individuals do not receive a dose in excess of the allowable dose limits listed in part 4730.0310.

(1) Any individual who must be in the room during a fluoroscopic procedure must wear a protective apron of not less than 0.5 millimeter lead equivalence.

(2) All fluoroscopic x-ray ~~systems~~ equipment must be provided with a bucky-slot cover panel, if applicable, and either lead drapes attached to the intensifying tower or self-supporting ~~curtains~~ shields of not less than 0.5 millimeter lead equivalent material.

C. For single-tube above table combination radiographic and fluoroscopic x-ray systems used in the fluoroscopic mode, protective aprons of not less than 0.5 millimeter lead equivalence must be used to ~~assure~~ ensure that any individual who must be in the room during a fluoroscopic procedure does not receive a dose greater than the allowable dose limits listed in part 4730.0310. In addition, portable lead shields, barriers, or aprons of not less than 0.5 millimeter lead equivalence must be used.

D. For portable C-arm fluoroscopes, provision must be made through the use of protective aprons of not less than 0.5 millimeter lead equivalence to ~~assure~~ ensure that any individual other than the patient who may be exposed during a fluoroscopic procedure does not receive a dose in excess of the allowable dose limits listed in part 4730.0310.

[For text of subp 12, see M.R.]

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4730.2250 COMPUTED TOMOGRAPHY SYSTEMS.

[For text of subps 1 to 11, see M.R.]

Subp. 12. **Operating procedure information.** Information about the operation, radiation safety surveys, and ~~quality control~~ equipment performance measurements of the system must be available at the control console. This information must contain:

A. the dates of the last radiation safety survey and ~~quality control~~ equipment performance measurements;

B. written results of the most recent radiation safety survey and ~~quality control~~ equipment performance measurements including:

[For text of subitems (1) to (3), see M.R.]

C. instructions on the use of the computed tomography phantoms, including a schedule of ~~quality control~~ equipment performance checks appropriate for the system, allowable variations for the indicated measurements, and the results of the last two years' ~~quality control~~ equipment performance measurements in addition to the original ~~quality control~~ equipment performance and acceptance test measurements, images, and digital data; and

[For text of item D, see M.R.]

Subp. 13. **Corrective action.** If the ~~quality control~~ equipment performance measurements required by part 4730.1665, subparts 2 and 3, of the computed tomography systems identify that a measurement has exceeded a tolerance specified in part 4730.1691, the registrant must correct the measurement to within the tolerances specified in part 4730.1691. Correction of the problem must take place within five working days and must be verified by performing the ~~quality control~~ equipment performance measurements specified in part 4730.1665, subparts 2 and 3.

4730.2350 THERAPEUTIC X-RAY SYSTEMS OF LESS THAN ~~ONE~~ 1.0 MV.

Subpart 1. **Applicability.** In addition to the requirements in parts 4730.0100 to 4730.1695, this part applies to all therapeutic x-ray systems of less than ~~one~~ 1.0 MV.

Subp. 2. **Leakage radiation.** When the tube is operated at its leakage technique factors, the instantaneous exposure rate leakage radiation must not exceed the value specified at the distance specified in this subpart for the classification of that x-ray system.

[For text of item A, see M.R.]

B. Zero to 150 kVp systems installed prior to September 10, 1991, must have a leakage radiation which does not exceed ~~one~~ 1.0 roentgen (0.258 mC/kg) in one hour at one meter (39.4 inches) from the source.

[For text of items C and D, see M.R.]

[For text of subps 3 to 15, see M.R.]

Subp. 16. **Entrance interlocks.** For therapeutic x-ray systems capable of operation above 150 kVp, interlocks or safety devices must be provided so all ~~entrance doors~~ access to the radiation therapy ~~room~~ rooms are ~~closed~~ blocked before treatment can be initiated or continued. If the radiation beam is interrupted by any door opening or tripping of a safety device, it must not be possible to restore the system to operation without ~~closing the door~~ reactivating the safety device and reinitiating irradiation by manual action at the control panel. When any entrance door is opened while the x-ray tube is activated, the exposure at a distance of one meter (39.4 inches) from the source must be reduced to less than 100 milliroentgens (0.001 sieverts or one millisievert) per hour.

Subp. 17. **Operating procedures.** The tube housing assembly or contact therapeutic equipment must not be held by hand during operation unless the system is designed to require such holding and the kVp of the system does not exceed 50 kVp. In such cases, the holder must wear protective gloves and apron of not less than 0.5 millimeter lead equivalence at 100 kVp.

[For text of subp 18, see M.R.]

4730.2450 X-RAY AND ELECTRON THERAPY SYSTEMS WITH ENERGIES OF ~~ONE~~ 1.0 MV/1.0 MEV AND ABOVE.

Subpart 1. **Applicability.** In addition to the requirements in parts 4730.0100 to 4730.1695, the requirements in this part shall apply to the use of therapeutic x-ray systems with energies of ~~one~~ 1.0 MV and above.

[For text of subps 2 to 5, see M.R.]

Subp. 6. **Electron beam quality.** ~~The registrant must determine, or obtain from the manufacturer, data sufficient to assure that the electron beam quality requirements specified in this subpart are met.~~

~~A. The absorbed dose resulting from x-rays in a useful electron beam at a point on the central axis of the beam ten centimeters (3.94 inches) greater than the practical range of the electrons must not exceed the values stated in Table 4730.2450. Linear interpolation must be used for values not stated.~~

TABLE 4730.2450

Maximum Energy of Electron Beam in MeV	X-Ray Absorbed Dose as a Fraction of Maximum Absorbed Dose
1	0.03
15	0.05
35	0.10
50	0.20

B. Compliance with item A must be determined using:

(1) a measurement within a phantom with the incident surface of the phantom at the nominal treatment distance and normal to the central axis of the beam;

(2) the largest field size available which does not exceed 15 by 15 centimeters (5.9 by 5.9 inches);

(3) all clinically relevant collimation systems; and

(4) a phantom whose cross-sectional dimensions exceed the measurement radiation field by at least five centimeters (1.97 inches) and whose depth is sufficient to perform the required measurement.

C. The registrant must determine, or obtain from the manufacturer, the maximum percentage absorbed dose in the useful beam due to neutrons, excluding stray neutron radiation, for specified operating conditions. The registrant must determine, or obtain from the manufacturer, the maximum percentage absorbed dose in the useful beam due to neutrons, excluding stray neutron radiation, when electrons and photons are being generated.

[For text of subps 7 to 15, see M.R.]

Subp. 16. **Selection of stationary beam therapy or moving rotational beam therapy.** Systems capable of both stationary beam therapy and moving rotational beam therapy must allow for the selection of stationary beam therapy or moving rotational beam therapy according to the requirements in this subpart.

A. Irradiation must not be possible until a selection of stationary beam therapy or moving rotational beam therapy has been made at the treatment control panel.

[For text of items B to D, see M.R.]

E. For systems installed after September 10, 1991, an interlock system must be provided to terminate irradiation if:

(1) movement of the gantry occurs during stationary beam therapy; or

(2) movement of the gantry stops during moving rotational beam therapy unless such stoppage is a preplanned function.

F. Moving Rotational beam therapy must be controlled to provide accurate total dose and arc angle.

[For text of subitem (1), see M.R.]

(2) For systems installed after September 10, 1991, where the dose monitoring system terminates the irradiation, the maximum difference between the observed and expected angle of rotation of the gantry shall not exceed plus or minus three degrees. The expected angle of rotation is calculated by dividing the set value of monitor units by the set value of MU/degree. The agreement of elapsed MU to MU set must be three percent, or one 1.0 MU, whichever is greater. This requirement applies for all arcs of 45 degrees or more at all MU/degree values indicated as "clinically usable" by the manufacturer.

[For text of subp 17, see M.R.]

Subp. 18. [See repealer.]

[For text of subps 19 and 20, see M.R.]

4730.2475 RADIATION SAFETY REQUIREMENTS FOR THE USE OF MEDICAL PARTICLE ACCELERATORS.

[For text of subps 1 and 2, see M.R.]

Subp. 3. **Controls and interlock systems.** All medical particle accelerators used in the treatment of humans must meet the requirements for controls and interlock systems or safety devices in this subpart.

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[For text of item A, see M.R.]

B. Each entrance into a treatment room or other high radiation area must be provided with a safety device or interlock that shuts down the system under conditions of barrier penetration.

C. Each safety device or interlock must be on a circuit which allows it to operate independently of all other safety interlocks.

D. All safety devices or interlocks must be designed so any defect or component failure in the safety interlock system prevents operation of the medical particle accelerator.

E. When a safety device or interlock system has been triggered, it must be possible to resume operation of the medical particle accelerator only by manually resetting controls at the position where the safety interlock has been tripped and, lastly, at the main control console.

[For text of item F, see M.R.]

[For text of subp 4, see M.R.]

Subp. 5. **Operating procedures.** All medical particle accelerators used in the treatment of humans must be operated according to the procedures in this subpart.

[For text of items A and B, see M.R.]

C. Electrical circuit diagrams of the medical particle accelerator and the associated safety device or interlock systems must be kept current and maintained ~~for inspection by the commissioner and the operator~~ at each medical particle accelerator facility.

D. If, for any reason, it is necessary to intentionally bypass a safety device or interlock ~~or interlocks~~ when treating a patient, such action must require:

[For text of subitems (1) to (3), see M.R.]

[For text of item E, see M.R.]

4730.2510 INDUSTRIAL USES OF IONIZING RADIATION PRODUCING EQUIPMENT AND NONMEDICAL ACCELERATORS.

[For text of subps 1 and 2, see M.R.]

Subp. 3. **Operating and emergency procedures.** A copy of a registrant's written operating and emergency procedures must be supplied to the registrant's employees and must include:

[For text of items A to D, see M.R.]

E. methods and conditions for personnel monitoring and using personnel monitoring ~~equipment~~ dosimeters under part 4730.1510, subpart 11, item C;

[For text of items F to L, see M.R.]

Subp. 4. **Instruction and training.** The registrant must provide a worker who operates or maintains industrial ionizing radiation producing equipment or nonmedical accelerator equipment with a copy of and instruction in the operating and emergency procedures for the industrial ionizing radiation producing equipment or nonmedical accelerator equipment used. The registrant must ensure that the worker receives and maintains training in the following areas:

[For text of items A to D, see M.R.]

E. the procedures for reporting an actual or suspected ~~overexposure~~ overdose.

[For text of subps 5 to 11, see M.R.]

Subp. 12. **Records.** The registrant must ensure that the records in this subpart are maintained for each piece of industrial ionizing radiation producing equipment and nonmedical accelerator, except electron microscopes. A copy of the records must be kept with the operating and emergency procedures for the equipment.

[For text of item A, see M.R.]

B. If the results of a radiation safety survey under item A, subitem (2), are used to determine an individual's ~~exposure to radioactive material~~ dose of radiation, the record of the radiation safety survey must be maintained according to part 4730.1520, subpart 4, item B.

[For text of item C, see M.R.]

Subp. 13. **Personnel monitoring and radiation survey requirements; Class A, Class B, and Class E.** The registrant must ensure that at a permanent or temporary jobsite, the personnel monitoring and radiation survey requirements specified in this subpart are met for Class A, Class B, and Class E industrial radiographic equipment.

[For text of item A, see M.R.]

B. For each operator, there must be a calibrated direct reading pocket dosimeter with a range of at least 0 to 200 milliroentgens (5.16 x 10^{-5} C/kg), and an alarming ratemeter that will alarm at an exposure of up to 500 mR/hr (~~5 mSv/hr~~ 1.29 x 10^{-4} C/kg/hr) or an alarming ratemeter that also integrates the total ~~dose~~ exposure up to 5,000 milliroentgens (~~50 mSv~~ 1.29 x 10^{-3} C/kg). A hand-held portable radiation survey meter with an audible and visible readout of exposure rate or a fixed area radiation exposure rate monitor with a visible or audible alarming indicator may be substituted for the alarming ratemeter.

[For text of items C and D, see M.R.]

4730.2520 CLASS A INDUSTRIAL EQUIPMENT.

[For text of subpart 1, see M.R.]

Subp. 2. **Permanent enclosure.** An x-ray source and the objects exposed must be contained in a permanent enclosure. Except as provided in subpart 6, the enclosure must attenuate primary and secondary radiation so that the exposure rate at any accessible external point does not exceed two milliroentgens (~~0.02 mSv~~ 5.16 x 10^{-7} C/kg) per hour when:

[For text of items A and B, see M.R.]

[For text of subps 3 to 7, see M.R.]

4730.2530 CLASS B INDUSTRIAL EQUIPMENT.

[For text of subpart 1, see M.R.]

Subp. 2. **Restricted areas.** In all areas in which the exposure rate exceeds two milliroentgens (~~0.02 mSv~~ 5.16 x 10^{-7} C/kg) per hour, a fence, rope, or other suitable personnel barrier must be used outside the two milliroentgens (~~0.02 mSv~~ 5.16 x 10^{-7} C/kg) per hour iso-line to restrict entry.

[For text of subp 3, see M.R.]

4730.2570 CLASS F INDUSTRIAL EQUIPMENT.

[For text of subps 1 and 2, see M.R.]

Subp. 3. **Shielding.** The enclosure construction must attenuate the primary and secondary radiation beam so that the exposure rate through any portion of the shielding is less than 0.5 milliroentgen (~~0.005 mSv~~ 1.29 x 10^{-7} C/kg) per hour and the exposure rate through openings in the shielding is less than five milliroentgens (~~0.05 mSv~~ 1.29 x 10^{-6} C/kg) per hour at any accessible external point when the equipment is being operated at its maximum potential.

Subp. 4. **Interlocks.** Reliable interlocks must be provided on access doors in the primary and secondary shielding. The interlocks must terminate the generation of ionizing radiation or attenuate the radiation exposure rate to five milliroentgens (~~0.05 mSv~~ 1.29 x 10^{-6} C/kg) per hour if an access door is opened.

[For text of subp 5, see M.R.]

4730.2600 RADIUM USE IN HEALING ARTS.

[For text of subps 1 to 3, see M.R.]

Subp. 4. **Storage.** 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~~ ensure that the appropriate limits of radiation will not be exceeded.

Subp. 5. **Local transportation.** For local transportation the container shall have sufficient shielding to ~~assure~~ ensure that the appropriate limits of radiation are not exceeded.

[For text of subps 6 to 9, see M.R.]

4730.2710 INDUSTRIAL USES OF NARM.

[For text of subpart 1, see M.R.]

Subp. 2. **Operating and emergency procedures.** A copy of a registrant's written operating and emergency procedures must be supplied to the registrant's employees and must include:

[For text of items A to D, see M.R.]

E. methods and conditions for personnel monitoring and using personnel monitoring ~~equipment~~ dosimeters under part 4730.1510, subpart 11, item C;

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[For text of items F to L, see M.R.]

Subp. 3. **Instruction and training.** The registrant must provide a worker who operates or maintains active NARM devices with a copy of and instruction in the operating and emergency procedures for the active NARM devices used. The registrant must ensure that the worker receives and maintains training in the following areas:

[For text of items A to C, see M.R.]

D. recognizing the symptoms of an ~~overexposure~~ overdose; and

E. the procedures for reporting an actual or suspected ~~overexposure~~ overdose.

[For text of subps 4 to 11, see M.R.]

4730.2750 RADIATION SAFETY REQUIREMENTS; NUCLEAR LOGGING USING NARM.

[For text of subps 1 and 2, see M.R.]

Subp. 3. **Operating and emergency procedures.** A copy of a registrant's written operating and emergency procedures must be supplied to the registrant's employees and must include:

[For text of items A to D, see M.R.]

E. methods and conditions for personnel monitoring and using personnel monitoring ~~equipment~~ dosimeters under part 4730.1510, subpart 11, item C;

[For text of items F to L, see M.R.]

Subp. 4. **Instruction and training.** The registrant must provide a worker who performs nuclear logging with a copy of and instruction in the operating and emergency procedures for the equipment used. The registrant must ensure that the worker receives and maintains training in the following areas:

[For text of items A to C, see M.R.]

D. recognizing the symptoms of an ~~overexposure~~ overdose; and

E. the procedures for reporting an actual or suspected ~~overexposure~~ overdose.

[For text of subps 5 to 7, see M.R.]

Subp. 8. **Notification of incidents.** The registrant must immediately notify the commissioner and the state duty officer by telephone according to ~~parts~~ part 4730.1110 ~~and 4730.1120, subpart 1,~~ if the registrant knows or has reason to believe that a sealed source has been lodged, damaged, or ruptured. A written report must be filed within 30 days with the commissioner according to part 4730.1130, subpart 1. The report must:

[For text of items A to D, see M.R.]

4730.5500 INDIVIDUALS OPERATING X-RAY EQUIPMENT DURING TRAINING.

Subpart 1. **Exemptions from x-ray machine operator's exam.** An individual participating in a training course for physicians, dentists, chiropractors, podiatrists, radiologic technologists, chiropractic radiologic technologists, dental hygienists, or dental assistants is exempt from the requirements of part 4730.5000 for the duration of the training course. The exemption applies to activities conducted within the scope of the training course. If an individual is operating x-ray equipment for use on humans outside the scope of the training course, the individual must comply with the requirements of part 4730.5000.

Subp. 2. **Exemption status following training.** An individual who successfully completes a training course under subpart 1 is exempt from part 4730.5000 until the next applicable national examination is given. The exemption ends on the date that the examination results are released. An individual who fails the examination is no longer exempt from part 4730.5000.

REPEALER. *Minnesota Rules*, parts 4730.0340, subpart 2; 4730.1120, subpart 1; 4730.1130, subpart 3; 4730.1140, subpart 1; 4730.1400; 4730.1691, subpart 10; 4730.1695, subpart 6; 4730.2450, subpart 18; and 4730.3000, are repealed.

INCORPORATIONS BY REFERENCE: Part 4730.1600: NCRP Report No. 49, "Structural Shielding Design and Evaluation for Medical Use of X-rays and Gamma Rays of Energies Up to 10 MeV," National Council on Radiation Protection and Measurements, September 15, 1976; ANSI N43.3-1993, "American National Standard for General Radiation Safety: Installations Using Nonmedical X-Ray and Sealed Gamma-Ray Sources, Energies up to 10 MeV," American National Standards Institute, January 28, 1993, and available through the Minitex interlibrary loan system. Part 4730.1675: Protocol TG-21 is titled "A Protocol for the Determination of Absorbed Dose from High Energy Photon and Electron Beams" and TG-25 is titled "Clinical Electron-Beam Dosimetry: Report of AAPM Radiation Therapy Committee Task Group No. 25." The protocols are published in *American Association of Physicists in Medicine, Medical Physics*, volume 10, number 6, pages 741 to 771 (1983) and volume 18, number 1, pages 73 to 102 (1991); available at the Biomedical Library of the University of Minnesota, Minneapolis, Minnesota, or through the Minitex interlibrary loan system.

Department of Natural Resources

Proposed Permanent Rules Relating to Public Use of Recreational Areas

DUAL NOTICE: Notice of Intent to Adopt Rules Without a Public Hearing Unless 25 or More Persons Request a Hearing, and Notice of Hearing If 25 or More Requests for Hearing Are Received

Proposed Amendment to Rules Governing Parks and Trails; Public Use of State Parks and Other Recreational Areas, *Minnesota Rules*, parts 6100.0100 to 6100.2400.

Introduction. The Department of Natural Resources intends to adopt amendments to rules without a public hearing following the procedures set forth in the Administrative Procedure Act, *Minnesota Statutes*, sections 14.22 to 14.28, and rules of the Office of Administrative Hearings, *Minnesota Rules*, parts 1400.2300 to 1400.2310. If, however, 25 or more persons submit a written request for a hearing on the rules within 30 days or by 4:30 p.m. on November 5, 1998, a public hearing will be held at the Kelly Inn, 161 Saint Anthony Street, Saint Paul, Minnesota 55103, starting at 1:00 p.m. on Monday, December 7, 1998, and at the Washington Middle School, Tornstrom Auditorium, 804 Oak Street, Brainerd, Minnesota 56401, starting at 4:30 p.m. To find out whether the rules will be adopted without a hearing or if the hearing will be held, you should contact the agency contact person after November 5, 1998, and before December 7, 1998.

Agency Contact Person. Comments or questions on the rules and written requests for a public hearing on the rules must be submitted to the agency contact person. The agency contact person is: Steve Simmer, Forest Recreation Program Coordinator, at Department of Natural Resources, Division of Forestry, Box 44, 500 Lafayette Road, Saint Paul, Minnesota 55115-4044, telephone (651) 297-3508, FAX (651) 296-5954. TTY users may call the Department of Natural Resources at 1-800-657-3929.

Subject of Rules and Statutory Authority. The proposed rules are to regulate public use and promote public enjoyment of State Park and State Forest lands and recreation areas in ways that will leave them unimpaired and minimize conflicts among users. The statutory authority to adopt the rules is *Minnesota Statutes*, sections 14.045, 84.03, 85.052, 85.053, 85.20, 86A.05, 86A.06, 89.031, 89.19, 89.20, 89.21, and 89.71. A copy of the proposed rules is published in the *State Register* and attached to this notice as mailed. A free copy of the rules is available upon request from the agency contact person listed above. The proposed rules may also be viewed on the Department of Natural Resources Internet website at: *www.dnr.state.mn.us.*

Comments. You have until 4:30 p.m. on Thursday, November 5, 1998, to submit written comment in support of or in opposition to the proposed rules or any part or subpart of the rules. Your comment must be in writing and received by the agency contact person by the due date. Comment is encouraged. Your comments should identify the portion of the proposed rules addressed, the reason for the comment, and any change proposed. You are encouraged to propose any change desired. Any comments that you would like to make on the legality of the proposed rules must also be made during this comment period.

Request for a Hearing. In addition to submitting comments, you may also request that a hearing be held on the rules. Your request for a public hearing must be in writing and must be received by the agency contact person by 4:30 p.m. on November 5, 1998. Your written request for a public hearing must include your name and address. You must identify the portion of the proposed rules to which you object or state that you oppose the entire set of rules. Any request that does not comply with these requirements is not valid and cannot be counted by the agency for determining whether a public hearing must be held. You are also encouraged to state the reason for the request and any changes you want made to the proposed rules.

Withdrawal of Requests. If 25 or more persons submit a written request for a hearing, a public hearing will be held unless a sufficient number withdraw their requests in writing. If enough requests for hearing are withdrawn to reduce the number below 25, the agency must give written notice of this to all persons who requested a hearing, explain the actions the agency took to effect the withdrawal, and ask for written comments on this action. If a public hearing is required, the agency will follow the procedures in *Minnesota Statutes*, sections 14.131 to 14.20.

Alternative Format/Accommodation. Upon request, this Notice can be made available in an alternative format, such as large print, Braille, or cassette tape. To make such a request or if you need an accommodation to make this hearing accessible, please contact the agency contact person at the address or telephone number listed above.

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike~~ ~~outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." **ADOPTED RULES SECTION** — Underlining indicates additions to proposed rule language. ~~Strike~~ ~~outs~~ indicate deletions from proposed rule language.

Modifications. The proposed rules may be modified, either as a result of public comment or as a result of the rule hearing process. Modifications must be supported by data and views submitted to the agency or presented at the hearing and the adopted rules may not be substantially different than these proposed rules. If the proposed rules affect you in any way, you are encouraged to participate in the rulemaking process.

Cancellation of Hearing. The hearing scheduled for December 7 and December 8, 1998, will be canceled if the agency does not receive requests from 25 or more persons that a hearing be held on the rules. If you requested a public hearing, the agency will notify you before the scheduled hearing whether or not the hearing will be held. You may also call the agency contact person at (651) 297-3508 after November 5, 1998, to find out whether the hearing will be held.

Notice of Hearing. If 25 or more persons submit written requests for a public hearing on the rules, a hearing will be held following the procedures in *Minnesota Statutes*, sections 14.131 to 14.20. The hearing will be held on the date and at the time and place listed above. The hearing will continue until all interested persons have been heard. Administrative Law Judge Allan W. Klein is assigned to conduct the hearing. Judge Klein can be reached at the Office of Administrative Hearings, 100 Washington Square, Suite 1700, Minneapolis, Minnesota 55401-2138, telephone (612) 341-7609, and FAX (612) 349-2665.

Hearing Procedure. If a hearing is held, you and all interested or affected persons, including representatives of associations or other interested groups, will have an opportunity to participate. You may present your views either orally at the hearing or in writing at any time before the close of the hearing record. All evidence presented should relate to the proposed rules. You may also submit written material to the Administrative Law Judge to be recorded in the hearing record for five working days after the public hearing ends. This five-day comment period may be extended for a longer period not to exceed 20 calendar days if ordered by the Administrative Law Judge at the hearing. Following the comment period, there is a five-working-day response period during which the agency and any interested person may respond in writing to any new information submitted. No additional evidence may be submitted during the five-day response period. All comments and responses submitted to the Administrative Law Judge must be received at the Office of Administrative Hearings no later than 4:30 p.m. on the due date. All comments or responses received will be available for review at the Office of Administrative Hearings. This rule hearing procedure is governed by *Minnesota Rules*, parts 1400.2000 to 1400.2240, and *Minnesota Statutes*, sections 14.131 to 14.20. Questions about procedure may be directed to the Administrative Law Judge.

The agency requests that any person submitting written views or data to the Administrative Law Judge prior to the hearing or during the comment or response period also submit a copy of the written views or data to the agency contact person at the address stated above.

Statement of Need and Reasonableness. A statement of need and reasonableness is now available from the agency contact person and may be reviewed at the agency headquarters and on the department's internet website at, *www.dnr.state.mn.us.* This statement contains a summary of the justification for the proposed rules, including a description of who will be affected by the proposed rules and an estimate of the probable cost of the proposed rules. Copies may be obtained at the cost of reproduction from either the agency or the Office of Administrative Hearings.

Lobbyist Registration. *Minnesota Statutes*, chapter 10A, requires each lobbyist to register with the Campaign Finance and Public Disclosure Board. Questions regarding this requirement may be directed to the campaign Finance and Public Disclosure Board at: First Floor South, Centennial Building, 658 Cedar Street, St. Paul, Minnesota 55155, telephone (651) 296-5148 or 1-800-657-3889.

Adoption Procedure if No Hearing. If no hearing is required, the agency may adopt the rules after the end of the comment period. The rules and supporting documents will then be submitted to the Office of Administrative Hearings for review for legality. You may ask to be notified of the date the rules are submitted to the office. If you want to be so notified, or want to receive a copy of the adopted rules, or want to register with the agency to receive notice of future rule proceedings, submit your request to the agency contact person listed above.

Adoption Procedure After a Hearing. If a hearing is held, after the close of the hearing record, the Administrative Law Judge will issue a report on the proposed rules. You may ask to be notified of the date when the Administrative Law Judge's report will become available, and can make this request at the hearing or in writing to the Administrative Law Judge. You may also ask to be notified of the date on which the agency adopts the rules and files them with the Secretary of State, and can make this request at the hearing or in writing to the agency contact person stated above.

Order. I order that the rulemaking hearing be held at the date, time, and location listed above.

Dated: 17 September 1998

Rodney W. Sando
Commissioner

by Gail I. Lewellan
Assistant Commissioner for Human
Resources and Legal Affairs

6100.0100 STATUTORY AUTHORITY.

Parts 6100.0100 to 6100.2400 are authorized by *Minnesota Statutes*, sections 16A.1285, 84.03, 85.052, 85.053, 85.20, 86A.05, 86A.06, 89.031, 89.19, ~~and~~ 89.20, 89.21, and 89.71, subdivision 4.

6100.0200 PURPOSE.

The purpose of parts 6100.0100 to 6100.2400 is to ~~provide for~~ regulate public use and promote public enjoyment of ~~the same~~ state parks and forest lands in ~~a way~~ ways that will leave them unimpaired and minimize conflicts among users.

6100.0300 SCOPE.

Unless stated otherwise, parts 6100.0100 to 6100.2400 apply to all state parks~~, recreational areas, historic sites, waysides,~~ and forest ~~campgrounds, and forest day use areas~~ lands under the control of or operated by the commissioner of natural resources.

~~Parts 6100.1910, 6100.1920, and 6100.2000 also apply to state forest lands in the Richard J. Dorer Memorial Hardwood State Forest which are under the control of, or operated by, the commissioner of natural resources.~~

~~Parts 6100.1905, 6100.1930, and 6100.2400 apply to all forest lands under the authority of the commissioner of natural resources as defined in *Minnesota Statutes*, section 89.001, subdivision 13.~~

~~Parts 6100.0100 to 6100.2400 shall not apply to a person lawfully engaged in the performance of the person's duties in the management and administration of these areas including, but not limited to, the commissioner of natural resources, the commissioner's agents, employees, those persons operating under contract with the Department of Natural Resources, and law enforcement officers.~~

6100.0500 DEFINITIONS.

[For text of subpart 1, see M.R.]

Subp. 1a. **All-terrain vehicle or ATV.** "All-terrain vehicle" or "ATV" has the meaning given in *Minnesota Statutes*, section 84.92, subdivision 8.

[For text of subps 2 and 3, see M.R.]

Subp. 3a. [See repealer.]

Subp. 3b. **Dispersed camping.** "Dispersed camping" means camping overnight outside of established campgrounds or designated campsites.

Subp. 3c. **Firearm.** "Firearm" has the meaning given in *Minnesota Statutes*, section 97A.015, subdivision 19.

Subp. 4. **Forest campground.** "Forest campground" means those areas developed and maintained by the commissioner on ~~state~~ forest lands ~~administered by the Division of Forestry~~ for camping and related recreational activities.

Subp. 5. **Forest day use area.** "Forest day use area" means a designated area on forest lands to be used for daytime activities, such as picnic areas, swimming beaches, and boat accesses~~, and the like~~.

Subp. 5a. **Forest lands ~~under the authority of the commissioner~~.** "Forest lands ~~under the authority of the commissioner~~" has the same meaning as the term "forest lands under the authority of the commissioner" as defined in *Minnesota Statutes*, section 89.001, subdivision 13, and includes forest campgrounds, forest day use areas, and forest recreation areas.

Subp. 5b. **Forest officer.** "Forest officer" means a ~~certified~~ Department of Natural Resources~~, Division of Forestry~~ employee authorized by *Minnesota Statutes* and ~~commissioner's operational orders~~ designated by the commissioner as a forest officer to enforce laws and rules~~;~~ and~~, for the purposes of parts 6100.0100 to 6100.2400,~~ also includes Minnesota ~~state~~ conservation officers.

Subp. 5c. [See repealer.]

Subp. 5d. [See repealer.]

Subp. 5e. **Forest recreation area.** "Forest recreation area"means an area on forest lands that is posted as a recreation site including campgrounds, campsites, picnic areas, day use areas, beaches, parking lots, interpretive sites, and trailheads.

Subp. 5f. **Forest road.** "Forest road" has the meaning given in *Minnesota Statutes*, section 89.001, subdivision 14, inventoried pursuant to *Minnesota Statutes*, section 89.71, subdivision 1.

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Subp. 5g. **Forest trail.** "Forest trail" means a trail that is either constructed, maintained, or administered by the commissioner for recreational activities on forest lands. Forest trail does not include state recreational trails as defined in *Minnesota Statutes*, section 85.015.

Subp. 5h. **Horse.** "Horse" includes a horse, mule, donkey, llama, alpaca, or other ungulate or ruminant that is used to transport people, equipment, or materials.

Subp. 6. **Intoxicating liquor.** "Intoxicating liquor" ~~means intoxicating liquor as defined~~ has the meaning given in *Minnesota Statutes*, section 340A.101, subdivision 14.

[For text of subps 7 and 7a, see M.R.]

Subp. 7b. **Park officer.** "Park officer" means ~~all certified~~ a Department of Natural Resources~~, Division of Parks and Recreation peace officers~~ employee authorized by *Minnesota Statutes* and ~~commissioner's operational orders;~~ designated by the commissioner as a state park officer to enforce laws and rules and~~, for the purposes of parts 6100.0100 to 6100.2400,~~ also includes Minnesota ~~state~~ conservation officers.

Subp. 7c. [See repealer.]

[For text of subp 8, see M.R.]

Subp. 8a. **Restricted area.** "Restricted area" means an area posted to prohibit entrance or posted to allow specific activities that may require a special use permit or payment of a fee.

Subp. 8b. **Road or highway.** "Road" or "highway" has the meaning given in *Minnesota Statutes*, section 160.02, subdivision 7. Road or highway does not include forest roads.

Subp. 8c. **Rock climbing.** "Rock climbing" means activities associated with a person moving upon, along, or across a nonhorizontal rock surface, including but not limited to scrambling, bouldering, free climbing, assisted climbing, and technical climbing.

Subp. 8d. **Scramble area.** "Scramble area" means an area that is posted and designated to permit motor vehicles to operate unrestricted by the limitations imposed in part 6100.1950.

Subp. 8e. **Service animal.** "Service animal" means an animal that performs tasks or assists in performing tasks for a person that are associated with major life activities and includes a seeing eye or hearing ear dog.

[For text of subp 9, see M.R.]

Subp. 10. **Snowmobile.** "Snowmobile" ~~means any self-propelled vehicle designed for travel on snow or ice and steered by skis or runners~~ has the meaning given in *Minnesota Statutes*, section 84.81, subdivision 3.

Subp. 10a. **Special event.** "Special event" means an event ~~that is~~ held in a state park or on forest lands ~~under the authority of the commissioner where an activity is occurring~~ that is not normally allowed ~~in the forest or where an event will~~, that is unusually destructive to the environment, or that is likely to attract large numbers of people that could disrupt normal use of the state park or forest lands. Special events include, but are not limited to, motorcycle ~~enduros~~, snowmobile, and sports car rallies and races~~,~~; orienteering trials~~,~~; group campouts that do not occur at designated group camps~~,~~; dog sled races~~, sports car rallies, and~~; dog trials; and commercial uses.

Subp. 11. **State park.** "State park" ~~means all of those areas over which the commissioner of natural resources has regulatory authority within the confines of any legislatively designated state park, state recreation area, state wayside, or state historic site~~ has the meaning given in *Minnesota Statutes*, section 85.012, and includes state monuments, state recreation areas, and state waysides as defined in *Minnesota Statutes*, section 85.013, and state historic sites under the authority of the commissioner.

Subp. 12. **Watercraft.** "Watercraft" ~~means any contrivance used or designed for navigation on water other than duck boats during the duck hunting season, rice boats during the harvest season, or seaplanes~~ has the meaning given in *Minnesota Statutes*, section 86B.005, subdivision 18.

Subp. 13. **Off-highway motorcycle or OHM.** "Off-highway motorcycle" or "OHM" has the meaning given in *Minnesota Statutes*, section 84.787, subdivision 7.

Subp. 14. **Off-road vehicle or ORV.** "Off-road vehicle" or "ORV" has the meaning given in *Minnesota Statutes*, section 84.797, subdivision 7.

6100.0525 PENALTY.

A person who violates any of parts 6100.0100 to 6100.2400 is guilty of a misdemeanor and subject to immediate removal from the state park or forest lands and to other appropriate legal action.

6100.0550 SPECIAL EVENTS.

Subpart 1. **Permit required.** Special events and commercial uses or operations may not be conducted in state parks or on forest lands except with a written permit from the commissioner obtained prior to the event, or under contract, lease, or other written agreement from the commissioner.

Subp. 2. **Fees and insurance.**

A. The commissioner shall establish and charge fees for special events and commercial uses of state parks and forest lands. Fees shall be set to recoup the costs of developing, operating, and maintaining facilities necessary for the specified uses, or to prevent or mitigate resource impacts of those uses.

B. The commissioner may require sponsors or permittees of special events or commercial uses to furnish a certificate of liability insurance valid for the effective dates of the permit, listing the state of Minnesota as a named insured. The amount of coverage shall be at least as much as the state's limits of liability under the Minnesota Tort Claims Act, *Minnesota Statutes*, section 3.736.

C. The commissioner may require sponsors or permittees of special events or commercial uses to provide security such as a bond or cashier's check to ensure that appropriate cleanup measures, removal of signs, repair of damage, and other required actions are completed.

Subp. 3. **Protection from peddling and soliciting.** It is unlawful for a person to engage in or solicit business of any nature whatsoever from visitors, or to post signs, handbills, or advertisements, except for authorized concessions, without the prior written consent of the park manager or forest officer.

6100.0600 HOURS AND DAYS OF OPERATION.

[For text of subpart 1, see M.R.]

Subp. 2. **Forest ~~campgrounds and forest day use areas~~ lands.** Forest ~~campgrounds and forest day use areas will be open each day of the year~~ lands are open at all times unless otherwise posted, except as provided in this subpart. ~~In campgrounds where fees are charged, fees will be collected as long as the facility is being maintained.~~ After 10:00 p.m. and until 8:00 a.m. the next day, no person shall enter or remain in a ~~state~~ forest campground unless as a member of a registered camping party. Forest day use areas ~~will be~~ are open from 6:00 a.m. to 10:00 p.m.

6100.0650 RESTRICTED AREAS.

It is unlawful to enter by any means a restricted area that has been posted to prohibit entrance.

It is unlawful for a person to use a state park or forest lands facility that requires a special use permit or a fee, without first obtaining a permit or paying the fee.

6100.0700 PERSONAL CONDUCT AND PROHIBITIONS.

Subpart 1. **Disorderly conduct.** ~~A person's conduct shall be as prescribed in~~ It is unlawful for a person to engage in disorderly conduct, as provided under *Minnesota Statutes*, section 609.72.

Subp. 2. **Noise.** Without prior permission from the park manager or forest officer, no person shall make noise reasonably tending ~~reasonably~~ to arouse alarm or resentment of others by means of a public address system, radio, stereo, amplifier, or power equipment, or by any other means.

Subp. 3. **Liquor.** It is unlawful for ~~any~~ a person in a state park, ~~state~~ forest campground, or ~~state~~ forest day use area to consume intoxicating liquors, or to display in public intoxicating liquor containers. Possession of 3.2 beer in a keg is unlawful without written permission of the park manager or forest officer.

Subp. 4. **Disturbance.** No person shall engage in brawling or fighting, or use offensive, obscene, or abusive language, or engage in boisterous ~~and~~, noisy, or threatening conduct reasonably tending ~~reasonably~~ to arouse alarm, anger, or resentment in others.

Subp. 5. **Drugs.** A person's possession and use of drugs shall be in accordance with state laws.

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6100.0800 PUBLIC SAFETY; HUNTING; FIREARMS; WEAPONS.

Subpart 1. **Restrictions.**

A. While in a state park, or while in or within 200 feet of a ~~shelter or motor vehicle in a forest campground, or forest day use area~~ forest recreation area, except as provided in subpart ~~3~~ 2 or by special permit from the commissioner, it is unlawful for ~~any~~ a person to:

~~A.~~ (1) possess explosives of any kind;

~~B.~~ (2) possess a firearm, ~~including an air gun,~~ unless the firearm is unloaded ~~both in barrel and magazine~~ and completely contained in a gun case expressly made for that purpose, which is fully enclosed by being zipped, snapped, buckled, tied, or otherwise fastened, or unless unloaded and contained in the trunk of a car with the trunk door closed;

~~C.~~ (3) possess a bow and arrows, unless either unstrung or completely contained in a case or contained in the trunk of a car with the trunk door closed;

~~D.~~ (4) use or display any other type of weapon including ~~but not limited to~~ slingshots, switchblade knives, traps, and spears; and

~~E.~~ (5) hunt, trap, or ~~in any manner~~ take wild animals in any manner except as authorized by the commissioner.

B. It is unlawful while hunting to pursue wildlife into a state park or to chase wildlife out of a state park without permission of a park officer.

Subp. 2. ~~**Waiver of restrictions**~~ **Exceptions.**

A. When hunting, trapping, or taking wild animals is authorized in a state park, the restrictions in subpart 1 on firearms, bows and arrows, and traps are waived to the extent necessary to allow the authorized activity. ~~However, it is unlawful at any time to construct, occupy, or use any elevated scaffold or other elevated device for the purpose of hunting, watching for, or killing big game, except that portable tree stands may be used for this purpose provided they are removed each day at the close of hunting hours and do no permanent damage to trees in which they are placed.~~

B. During the open seasons for hunting, a person may carry an unloaded, uncased firearm or bow and arrows from a forest recreation area to engage in hunting outside of the forest recreation area.

Subp. 3. [See repealer.]

Subp. 4. [See repealer.]

Subp. 5. **Hunting and shooting; forest lands.** Forest lands are open to hunting and to target, trap, and recreational shooting except where prohibited by law, posted or designated closed for management or public safety purposes, or otherwise restricted by this part.

Subp. 6. **Shooting ranges; forest lands.** Items A to G govern the use of designated shooting ranges on forest lands.

A. Shooting range hours are from sunrise to sunset, except that no shooting is allowed before 8:00 a.m. or after 8:00 p.m.

B. Shooting ranges are closed during the firearms deer season.

C. Alcoholic beverages and glass containers are prohibited on a shooting range.

D. Firearms must be unloaded and cased unless on the firing line.

E. Use of a firing point is limited to one hour when others are waiting.

F. Shooting is permitted only from the designated firing points on ranges where they are provided.

G. Targets permitted are:

(1) rifle or pistol - paper targets or steel silhouettes only. Paper targets must be attached to target holders where provided; and

(2) shotgun - clay targets only.

6100.0900 ENVIRONMENTAL PROTECTION.

Subpart 1. **Generally.** ~~The environment is for the enjoyment of all.~~ Unless otherwise provided by law, no person in a state park or forest recreation area shall disturb, destroy, injure, damage, deface, molest, or remove any state property, including, but not limited to, wildflowers or vegetation of any kind dead or alive, ruins, wild animals; geological formations, historical or archaeological artifacts or sites; historic structures; signs, or facilities, except edible fruit, mushrooms, ~~and~~ legally taken wild animals ~~legally taken~~, and vegetation unavoidably damaged or destroyed by the ordinary recreational uses of these areas as specifically permitted by parts 6100.0100 to 6100.2400. Collections for scientific and educational purposes may be made only with the written permission of the commissioner. It is unlawful to damage vegetation or damage and deface rock formations with rock-climbing equipment.

Subp. 2. **State parks.**

A. Within a state park, ~~any~~ collecting, harvesting, or taking ~~of any~~ a tangible object for resale or commercial use is prohibited, except by written permission of the commissioner. The commissioner may further restrict collecting, harvesting, or taking a plant, animal, or other tangible object for scientific, educational, commercial, or any other purpose if the commissioner finds it necessary for the protection of the park's resources.

B. Collection of firewood in state parks, except where expressly permitted, is prohibited.

~~Within~~ C. Subject to posted restrictions, rock specimens and fossils may be collected at Hill Annex Mine State Park for noncommercial use.

D. Harvesting wild rice on bodies of water totally enclosed within a state park boundary is prohibited except by written permission of the commissioner.

E. Collecting ~~watercress and ginseng~~ or possessing ~~such~~ naturally occurring plants in a fresh state in state parks is prohibited, except that edible fruit and mushrooms may be harvested for personal, noncommercial use.

F. Except for scientific research conducted under special permit from the commissioner and with a ~~state archaeological~~ field archaeology license issued by the state archaeologist, the use of metal detectors in state parks is permitted only for locating specifically identified items of lost personal property. Metal detectors may ~~not~~ be used ~~in any instances without~~ only with prior written permission from the park manager and under the supervision of the park manager.

G. It is unlawful at any time to construct, occupy, or use an elevated scaffold or other elevated device in a state park, except that a portable tree stand may be used for hunting or watching wild animals if the stand is removed each day and does no permanent damage to the tree in which it is placed.

H. A person may not release, place, or transplant plant or animal life in a state park unless approved by the commissioner. This item does not apply to a person operating under a contract, lease, license, or permit from the commissioner that allows releasing, placing, or transplanting plant or animal life in a state park.

Subp. 3. **~~State forest campgrounds and forest day use areas~~ Forest lands.**

~~Within state forest campgrounds and forest day use areas,~~ A. Wood that is dead and lying on the ground on forest lands may be used to build fires, as long as it is used ~~within the area~~ on forest lands and not removed, except under permit issued by the commissioner.

B. No person may cut live trees on forest lands for constructing an elevated scaffold, except that shrubs and the lateral branches of trees may be removed.

C. A person may not release, place, or transplant plant or animal life on forest lands unless approved by the commissioner. This item does not apply to a person operating under a contract, lease, license, or permit from the commissioner that allows releasing, placing, or transplanting plant or animal life on forest lands.

6100.1000 FIRES AND REFUSE.

Subpart 1. **Prohibition and permitted uses.** It is unlawful to build or maintain a fire in a state park, forest campground, or forest day use area except in a fireplace or a fire ring provided for that purpose. However, portable gas- or liquid-fueled camp stoves or charcoal burners may be used within a camping or day use area if ~~such~~ the use does not create a hazard or danger to the area or to others. It is unlawful to disobey a park officer or forest officer when ordered to extinguish a fire in any location at any time.

Subp. 2. **Fire bans.** In times of fire emergency, as prescribed by *Minnesota Statutes*, sections 88.02 to 88.22, the commissioner may limit or ban the building of fires ~~by declaring that a forest fire emergency exists~~. The ~~declaration will~~ notice shall be posted conspicuously at the entrance of the area affected.

Subp. 3. **Firewood.** If firewood is provided at no charge, the removal of the firewood from the state park, ~~state~~ forest campground, or forest day use area is prohibited.

[For text of subp 4, see M.R.]

Subp. 5. **Littering.** *Minnesota Statutes*, sections 85.20, subdivision 6, ~~and~~ 115A.99, and 609.68, forbidding littering, are incorporated in this part by reference.

[For text of subp 6, see M.R.]

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6100.1100 PETS.

~~Although pets are permitted,~~ In a state park, forest campground, or forest day use area:

A. No person shall allow ~~any~~ a dog, cat, or other pet animal, except ~~hearing or seeing eye dogs~~ a service animal, to enter ~~any~~ a building or beach~~;~~ or permit ~~any~~ a dog, cat, or other pet animal to be unrestrained. Pet animals shall be personally attended at all times and shall be effectively restrained by a portable enclosure or by a leash not exceeding six feet in length, and the animals shall not disrupt other persons or deprive them from using ~~any~~ an area.

B. Pet waste deposited in mowed or maintained areas must be immediately cleaned up by the pet owner or caretaker and deposited in an appropriate waste container. Horse waste must be removed, by the owner or custodian, from all areas except designated horse trails.

C. Pets and horses are prohibited on ski trails during the winter skiing season.

6100.1200 PICNICKING.

~~Picnicking is permitted only in areas designated for picnicking.~~ No person or group of persons shall unreasonably exclude others from a picnic area or shelter, except when the shelter has been reserved with consent of the park manager or forest officer.

6100.1250 CAMPING.

Subpart 1. **Camping in state parks.** The camping restrictions in items A to J apply in state parks.

A. A campsite's occupancy is limited to one camping group of six people or less, one camping shelter, and one vehicle. Additional persons, shelters, or vehicles are permitted only with prior approval of the park manager. These limits do not apply in designated group camping areas.

B. Camping is permitted only at assigned sites in designated camping areas or in watercraft subject to the restrictions described in item A.

C. A person, other than a campground host, may not camp in the same state park for more than 14 days in succession, provided, however, that the park manager may allow camping for additional days when use conditions warrant.

D. Each camping party must register. Registration must be in person. A responsible person of a camping party shall register for the group, giving the number in the party. The names of all persons in the party must be provided when requested by the park manager.

E. The rental period begins with the day of registration and all fees must be paid in full at the time of registration. The campsite must be occupied by a member of the party on the first night of the rental period and on any night when camping equipment or vehicles are left on the site. The registration shall be canceled if the site is not personally occupied on the first night. Camping equipment placed on a campsite by an unregistered party or any equipment on a site that is not occupied on the first night of the rental period shall be deemed abandoned and shall be transferred to the custody of the commissioner of administration for disposal in accordance with state law.

F. Camping permits expire at 4:00 p.m. and the campsite shall be vacated by 4:00 p.m. On departure, the campsite shall be left in a neat and clean condition.

G. Campers occupying a campsite must reregister by 11:00 a.m. to hold the campsite for that night.

H. Power units used to generate electricity shall not be operated between the hours of 10:00 p.m. and 8:00 a.m., nor at other hours of the day if the operation causes a disturbance for other visitors.

I. In a designated horse camping area, portable corrals may be set up if they do not unreasonably exclude others from using the area and they comply with conditions posted at that site.

J. Camping in designated group camps is limited to registered groups or individual campers assigned to the area by the park manager.

Subp. 2. **Camping in forest campgrounds and use of forest day use areas.** The restrictions in items A to J apply in forest campgrounds and day use areas.

A. A campsite's occupancy is limited to one camping group of eight people or less, two camping shelters, and two vehicles, except that not more than one camping trailer or motorized camper may occupy the site. Additional persons, shelters, or vehicles are permitted only with the prior approval of the forest officer. These limits do not apply in designated group camping areas.

B. Camping is permitted only at designated sites.

C. Camping shall be limited to a total period of 14 days in any one forest campground during the period from the first Saturday in May through the second Sunday in September, or 21 days the rest of the year, provided, however, that camping for longer periods may be allowed at the discretion of the forest officer in a forest campground when use conditions warrant.

D. A camping fee per campsite per night shall be charged in certain forest campgrounds. Camping fees shall be set to recoup the costs of developing, operating, and maintaining facilities or to prevent or mitigate resource impacts. Campers must pay the camping fee immediately upon occupying a campsite. If a party occupies a campsite and fails to pay the camping fee immediately, an additional charge equivalent to one night's camping fee shall be assessed if department personnel must visit the campsite to collect the camping fee.

E. In fee camping areas, each camping party must register. A responsible person in the camping party shall register for the group, giving the number in the party. The rental period begins with the day of registration. The campsite must be occupied by a member of the party on the first night of the rental period and on any night when camping equipment or vehicles are left on the site. Failure to occupy a site in person shall result in forfeiture of the site and the fee. Camping equipment placed on a campsite by an unregistered party or any equipment on a site that is not occupied on the first night of the rental period shall be deemed abandoned and shall be transferred to the custody of the commissioner of administration for disposal in accordance with state law.

F. Camping permits in fee campgrounds expire at 4:00 p.m. The site shall be vacated upon expiration of the camping permit. On departure, the campsite shall be left in a neat and clean condition.

G. Setting up camp between the hours of 10:00 p.m. and 8:00 a.m. is prohibited.

H. Any group desiring to occupy more than six campsites must obtain prior approval from the forest officer.

I. Disposal of sewage waste from a camping trailer or motorized camper must be in accordance with chapter 4630. Liquid wastes from cooking and washing shall be disposed of in the sump provided for that purpose. If a sump is not provided, the wastes may be disposed of on the surface of the ground at least 150 feet from a water body in a manner that does not endanger a water supply, pollute a surface water, create a nuisance, or otherwise constitute a hazard to the public health or safety.

J. In a designated horse camping area, portable corrals may be set up if they do not unreasonably exclude others from using the area and they comply with conditions posted at that site.

Subp. 3. **Other prohibitions.** In a state park, forest campground, or forest day use area, a person may not:

A. install or affix in a permanent manner a camping facility, equipment, or a structure;

B. move or remove picnic tables, fire rings, or other facilities from a campsite, day use area, or campground;

C. dig or excavate; or

D. make a noise at a level above that of a quiet conversation in camping areas between the hours of 10:00 p.m. and 8:00 a.m., which are designated quiet hours.

Subp. 4. **Watercraft.** A watercraft used for shelter or sleeping that is tied to, beached on, or docked on water frontage of a state park, state forest campground, or forest day use area, or anchored in waters that are completely within the boundary of a state park, constitutes camping and is subject to parts 6100.0100 to 6100.2400.

6100.1350 DISPERSED CAMPING.

Subpart 1. **Dispersed camping.** Dispersed camping is permitted on forest lands. A person who dispersed camps may not:

A. dig or trench around tents or other camping shelters;

B. camp on forest lands that are posted or designated to prohibit camping;

C. collect firewood, unless it is dead and laying on the ground. Wood collected and used for campfires may not be removed from state land;

D. camp within one mile of a fee campground without paying a fee, unless in a designated remote campsite;

E. construct permanent camping structures; or

F. place wood, nails, screws, or other fasteners in a living tree at a campsite.

Subp. 2. **Waste disposal.**

A. Areas used for dispersed camping must be kept in a neat, clean, sanitary condition. All litter must be removed from the site and disposed of according to state law.

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B. Disposal of human wastes in areas used for dispersed camping where no latrine or holding tank is available shall be accomplished by burying wastes in the immediate vicinity, at least 150 feet from a water body, in a manner that does not endanger a water supply, pollute a surface water, create a nuisance, or otherwise constitute a hazard to the public health and safety.

C. No person shall discharge sewage on the ground from a camping vehicle or trailer in areas used for dispersed camping. Holding tanks or other containers must be used and properly emptied at a trailer sanitation station or other suitable facility, except that liquid wastes from cooking and washing may be disposed of on the surface of the ground in a manner that does not endanger a water supply, pollute a surface water, create a nuisance, or otherwise constitute a hazard to the public health and safety.

Subp. 3. **Occupancy limited.** Dispersed camping on forest lands shall be limited to a total period of 14 days in any one section, township, and range from the first Saturday in May to the second Sunday in September, or 21 days the rest of the year. If a camp location is changed during a calendar year, the new camp shall be established at least 15 miles from the previous camp.

Subp. 4. **Occupation; abandonment.** Dispersed camps set up on forest lands must be occupied by a responsible person of the camping party during the time the equipment is left on state land. A tent or other camping structure unoccupied for more than 14 days shall be removed by a forest officer, stored for 30 days to allow the owner time to claim it, and then deemed abandoned and transferred to the custody of the commissioner of administration for disposal in accordance with state law.

6100.1355 NONMOTORIZED USE.

Subpart 1. **On foot, ski, or snowshoe.** People on foot, ski, or snowshoe may go anywhere in state parks or forest lands that is not posted to prohibit foot, ski, or snowshoe use or is not further limited by subparts 2 to 8.

Subp. 2. **Horses.** Within a state park and in the Richard J.Dorer memorial hardwood forest, no person shall ride, lead, or have a horse except on trails and areas designated for use by horses. Horses are prohibited from using forest campgrounds unless the area has been specifically designated for use by horses or a special use permit from a forest officer has been obtained. Horses are permitted on all other forest lands except where it is posted to prohibit the use of horses.

Subp. 3. **Bicycles.** Within a state park and in the Richard J. Dorer memorial hardwood forest, people riding bicycles may travel only on designated bike trails or where motor vehicles are allowed, except in areas posted to prohibit bicycle use. Bicycles are permitted on all other forest lands except where it is posted to prohibit bicycle use.

Subp. 4. **Restricted sensitive areas.** Hikers, skiers, and snowshoers shall not knowingly enter deer yards or other sensitive restricted areas.

Subp. 5. **Ski trails.** On groomed and tracked ski trails, activities which tend to damage the track or interfere with and disrupt use by skiers are prohibited.

Subp. 6. **Dogsledding.** In state parks, dogsledding is permitted only on trails designated for dogsled use, or as approved by the park manager. Any other dogsledding use is prohibited.

Subp. 7. **Speed.** No person in a state park, forest campground, or forest day use area shall bicycle, ski, or ride a horse in a reckless or careless manner, at an unreasonable or out of control speed, or in any way that unnecessarily endangers the person or other users.

Subp. 8. **Rock climbing.** Rock climbing is allowed only in designated areas and only by permit.

6100.1400 BOATING.

Boating conforming to *Minnesota law*s ~~and~~, rules, and local ordinances is permitted on waters within or adjacent to state parks, forest campgrounds, and forest day use areas except that:

A. no ~~one~~ person shall operate a ~~boat,~~ watercraft~~,~~ or motor on ~~any~~ a body of water or portion of ~~any~~ a body of water specifically posted prohibiting that use;

B. no ~~one~~ person shall moor a ~~boat~~ watercraft on ~~any~~ a beach or area specifically posted prohibiting that use; ~~and~~

C. on ~~any~~ a lake entirely within a state park, no person shall water-ski or operate a motorized watercraft in excess of ten miles per hour, unless the lake is otherwise designated and posted~~.~~; and

D. no person shall tie, anchor, or fasten a watercraft to a dock or pier in a manner that prevents free access to the dock or pier, except for short periods of time not to exceed 30 minutes to allow launching or loading of a watercraft or where signs are posted to permit tie ups for longer periods of time.

6100.1500 FISHING.

Subpart 1. **Fish only.** In waters entirely within state parks, fishing for fish only~~,~~ is permitted when conforming to *Minnesota law*s and rules ~~in the waters within and adjacent to state parks, forest campgrounds, and forest day use areas~~. Taking of minnows, turtles, frogs, mussels, and other aquatic life other than fish is prohibited. When spear fishing or bow and arrow fishing is permitted, the restriction on spears or bows and arrows is waived to the extent necessary to allow the activity.

Subp. 2. **Fish cleaning.** In a state park, forest campground, or forest day use area, if a fish-cleaning facility is provided, no person shall clean fish and dispose of the remains except at that facility. In state parks, ~~where~~ if a fish cleaning facility is not provided, fish cleaning shall take place only in areas or sites approved by the park manager.

6100.1600 SWIMMING ~~IN STATE PARKS~~.

Swimming is permitted in state parks, forest campgrounds, and forest day use areas according to items A to H.

A. Activities in and upon the beaches and swimming areas shall be under the direction of the lifeguard, if one is present.

~~It is unlawful to~~ B. No person shall swim in or enter ~~any~~ a body of water or area ~~where prohibited~~ posted closed to swimming.

~~It is unlawful in any area where swimming is not prohibited, including designated beaches, to:~~

~~A.~~ C. No person shall allow ~~any~~ a dog or other pet to enter the water with swimmers~~;~~.

~~B. while in the water, use air mattresses, inner tubes, and other flotation devices not approved by the Coast Guard, except when an area is specifically designated for that use;~~

~~C.~~ D. No person shall enter the water before sunrise or after sunset~~;~~.

~~D.~~ E. No person shall possess glass containers; enter a swimming area with a boat, canoe, or raft; fish; or engage in ~~any~~ an activity ~~which~~ that is hazardous and could cause injury to others~~; or~~.

~~E.~~ F. No person shall use ~~any~~ soap, detergent, or shampoo.

~~In addition to items A to E, it is unlawful on designated beaches to possess glass containers; enter with any boat, canoe, or raft; fish; or~~

G. When a facility for changing clothes is provided, it is unlawful to change clothes ~~except in a facility designated for that use, where a facility is provided~~ in any other building or facility.

H. In a state park, while in the water, no person shall use an air mattress, inner tube, or other flotation device that is not approved by the Coast Guard, except when an area is specifically designated for that use.

6100.1650 STORAGE AND ABANDONMENT OF PERSONAL PROPERTY.

Subpart 1. **Obstruction of passage.** No person shall leave standing, whether attended or unattended, a motor vehicle, trailer, boat, fish house, or other equipment or personal property so as to block, obstruct, or limit the use of a road, trail, waterway, water access, parking area, or winter sport facility.

Subp. 2. **Abandonment.** No vehicle, trailer, boat, fish house, or other equipment or personal property may be stored or abandoned in a state park or on forest lands. In state parks, overnight parking and storage of equipment is permitted only in connection with the use of campsites or fish houses, except by prior approval of the park manager. The temporary storage of personal property by a person who remains in the immediate vicinity is permitted. In state forest campgrounds and forest day use areas, overnight parking is permitted in designated parking areas.

Subp. 3. **Disposal.** A vehicle, trailer, boat, or other equipment or personal property left for a period longer than 14 days, except fish houses located on the ice surface of a body of water, shall be deemed abandoned and shall be transferred to the custody of the commissioner of administration for disposal in accordance with state law.

6100.1700 STATE PARK MOTOR VEHICLE PERMITS.

Motor vehicles entering state parks shall ~~be in accordance~~ comply with the motor vehicle permit requirements ~~as~~ stated in *Minnesota Statutes*, section 85.053~~, subdivision 2~~.

~~The permit shall be completely affixed by its own adhesive to the lower right-hand corner of the windshield, and~~ Permits may not be transferred to another vehicle.

6100.1710 STATE PARK GROUP DAILY VEHICLE PERMITS.

State park managers ~~have authority to~~ may issue special group daily vehicle permits to groups consisting of ten vehicles or more ~~at a rate of $1.50 per vehicle~~. The permit ~~will~~ shall be issued ~~by the park manager~~ for one day of use between 8:00 a.m. and 10:00 p.m. The group daily vehicle permit ~~will only~~ shall be sold only for days when the park manager determines that use in the particular park is normally minimal, such as weekdays, weekends in some parks, or off-season weekends.

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6100.1900 MOTOR VEHICLES AND SNOWMOBILES IN STATE PARKS, FOREST CAMPGROUNDS, AND DAY USE AREAS.

Subpart 1. **Motor vehicle use.** Only motor vehicles licensed for use on Minnesota highways may be operated within state parks, forest campgrounds, and forest day use areas. The operator must have a valid driver's license. Snowmobiles or other motor vehicles may operate in a forest campground or forest day use area on a trail or road that is posted and designated for that use. Operation must comply with all applicable laws and rules.

Subp. 2. **Designated roads.** Licensed motor vehicles may be operated only on designated roads and parking areas and may be parked only in designated parking areas or parking spurs. Motor vehicles may not be driven on roads that are posted, chained, or gated. Parking in an area not designated as a parking area is prohibited and subjects the vehicle to being towed at the owner's expense.

Subp. 3. **Speed limit.** A motor vehicle shall not be operated in excess of posted speeds or in a reckless, careless, or exhibitive manner. No person shall operate a vehicle in such a manner as to create unnecessary engine noise, tire squeals, skidding, or sliding.

Subp. 4. **Motor vehicle law.** *Minnesota Statutes*, chapter 169, governing motor vehicle use on public roads and highways, applies to all roads within state parks.

Subp. 5. **Snowmobiles.** No person shall operate a snowmobile in a state park unless on trails and areas posted and designated for ~~such~~ snowmobile use, under conditions of snow cover considered adequate for protection of the park by the park manager. Within state parks no snowmobile shall be operated before 8:00 a.m. or after 10:00 p.m., except as otherwise posted.

6100.1950 MOTOR VEHICLES AND SNOWMOBILES; FOREST LANDS.

Subpart 1. **Classified forest lands.** The operation of motor vehicles and snowmobiles on forest lands classified by the commissioner for purposes of motor vehicle use according to subpart 2 and *Minnesota Statutes*, section 89.002, is regulated according to items A to C.

A. Motor vehicles may operate on forest lands classified as managed only on forest roads and forest trails that are not posted and designated closed, subject to the limitations and exceptions in this part.

B. Motor vehicles may operate on forest lands classified as limited only on forest roads that are not posted and designated closed and on forest trails or areas that are posted and designated to allow motor vehicle use, subject to the limitations and exceptions in this part.

C. No person shall operate a motor vehicle or snowmobile on forest lands classified as closed, unless on frozen public waters where operation is not otherwise prohibited.Motor vehicles that are licensed for use on public highways may be operated on forest roads that are not posted or gated closed. Snowmobiles may operate on designated trails.

Subp. 2. **Criteria for classification.** The following criteria shall be considered when classifying forest lands for motor vehicle use:

A. resource sensitivity and management objectives;

B. resource impact by motorized and nonmotorized use, including erosion, rutting, and impacts on vegetation, wildlife, air, water, or natural habitats;

C. motorized and nonmotorized recreational opportunity in area;

D. user needs, such as trails, parking, signs, and access;

E. the degree and trend of motor vehicle use in the area;

F. the degree and trend of nonmotor vehicle use in the area;

G. competing interests among different user groups;

H. public safety and law enforcement concerns; and

I. any other factors deemed appropriate by the commissioner for resource or recreation management or public safety purposes.

Subp. 3. **Notice and public meeting.** Before changing the classification of forest lands for motor vehicle use, the commissioner shall provide notice and a public meeting according to items A to C.

A. A public meeting shall be held to provide information to and receive comment from the public regarding the proposed classification change.

B. Sixty days before the public meeting, notice of the proposed classification change shall be published in legal newspapers that serve the counties in which the lands are located and in a statewide Department of Natural Resources news release. The notice shall include a summary of the proposed action, a request for public comment, and notice of the public meeting.

C. Twenty-one days before the public meeting, notice of the meeting shall be announced in a statewide Department of Natural Resources news release.

Subp. 4. **Commissioner's decision.** The commissioner shall make a decision about the proposed classification change after considering the criteria listed in subpart 2 and any public comment received and explaining how the nature and magnitude of the criteria and comments relate to the classification.

Subp. 5. **Nonmotorized trails.** No person shall operate a motor vehicle or snowmobile on forest lands on a designated nonmotorized trail, including ski, foot, horse, bike, or accessible trail, unless the trail is also posted open for a motorized use.

Subp. 6. **Lakes, rivers, and streams.** No person shall operate a motor vehicle or snowmobile on forest lands on or over the beds of lakes, rivers, or streams when ice is not covering the water body, except on a bridge, culvert, or similar structure or designated low water crossing.

Subp. 7. **Other prohibitions and exceptions.**

A. No person shall operate a motor vehicle on forest lands off a forest road or trail, except:

(1) on forest lands classified as managed or limited during the seasons open for taking big game, licensed hunters may use ATVs off forest trails to retrieve big game animals by taking the most direct route between the carcass and the trail; and

(2) inside the boundaries of a posted and designated scramble area.

B. No person shall operate a motor vehicle or snowmobile on forest lands in a manner that causes erosion or rutting or injures, damages, or destroys trees or growing crops. The rutting prohibition does not apply on trails that are designated and maintained for motorized use.

C. No person shall create an unauthorized trail on forest lands.

D. No person shall operate motor vehicles or snowmobiles on forest lands within the boundaries of an area that is posted and designated as closed to the operation of motor vehicles or snowmobiles.

E. No person shall operate a motor vehicle or snowmobile in the Richard J. Dorer memorial hardwood forest, except on forest roads that are not posted and designated as closed, and on forest trails or areas that are posted and designated to allow the use of motor vehicles or snowmobiles. The exception for big game retrieval under item A, subitem (1), does not apply.

Subp. 8. **Forest roads.**

A. A motor vehicle on a forest road shall travel at a speed that is reasonable and prudent. It is a violation of this part to exceed a posted speed limit.

B. All posted parking and traffic regulations, including signs designating speed limits, stop signs, one-way traffic, and do not enter, shall be obeyed on a forest road.

C. No person, passenger, or operator of a motor vehicle shall travel on or along a forest road that is designated as closed with signs, barricaded, or blocked with a gate.

D. Removing snow from a forest road is prohibited when the road is posted for no snow removal.

E. No person shall operate, nor shall an owner permit the operation of a motor vehicle, on a forest road or trail in a manner that causes damage to the road, land, or other natural resources.

Subp. 9. **Operating under the influence.** A person may not operate or be in control of a motor vehicle or snowmobile on forest lands while under the influence of alcohol or a controlled or hazardous substance. Arrest and testing procedures are according to *Minnesota Statutes*, sections 84.91 to 84.911.

6100.2350 OFFICIAL USE AND VARIANCE.

Parts 6100.0100 to 6100.2400 do not apply to a licensed peace officer or an employee or agent of the department of natural resources while engaged in the performance of official duties. The commissioner may grant a variance from the requirements of parts 6100.0100 to 6100.2400 when the commissioner considers it necessary for maintenance, conservation, or public safety purposes.

6100.2400 SUSPENSION OF RULES.

In situations of emergency or in the case of authorized special events, the commissioner may provide temporary exceptions to ~~the general rules for a specific state park, forest campground, forest day use area, or on forest lands under the authority of the commissioner~~ parts 6100.0100 to 6100.2400 by posting notice of the exception at the ~~unit, trail, road, or land~~ site.

REPEALER. *Minnesota Rules*, parts 6100.0400; 6100.0500, subparts 3a, 5c, 5d, and 7c; 6100.0800, subparts 3 and 4; 6100.1300; 6100.1610; 6100.1800; 6100.1905; 6100.1910; 6100.1920; 6100.1930; 6100.2000; 6100.2100; and 6100.2300, are repealed.

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Official Notices

Pursuant to *Minnesota Statutes* §§ 14.101, an agency must first solicit comments from the public on the subject matter of a possible rulemaking proposal under active consideration within the agency by publishing a notice in the *State Register* at least 60 days before publication of a notice to adopt or a notice of hearing, and within 60 days of the effective date of any new statutory grant of required rulemaking.

The *State Register* also publishes other official notices of state agencies and non-state agencies, including notices of meetings and matters of public interest.

Administration Department
Office of Technology

Correction to Request for Comments Regarding Nonvisual Access to Technology

The Request for Comments Regarding Nonvisual Access to Technology published in the *State Register* on September 21, 1998 mistakenly referred to the *1997 Minnesota Law*s. The correct citation should be *1998 Minnesota Law*s ch. 366, sec. 27, 87 (to be codified at *Minnesota Statutes* §16B.104 (1998)).

Center for Arts Education

The Lola and Rudy Perpich Minnesota Center for Arts Education

Request for Comments for Planned Amendment to Arts High School Admissions Rules, *Minnesota Rules* pts. 3600.0010-.0070

Subject of Rules. The Lola and Rudy Perpich Minnesota Center for Arts Education requests comments on its planned amendment to rules governing admission into its arts high school. The Center is considering rule amendments that would include the following:

1). Establish new threshold requirements, including reference to response to the State's new high school graduation rules; 2). changes in the review process, which would include using a greater balance between an arts evaluation, an academic/student record evaluation, and an evaluation of the student as a member of the community; 3). process changes, including the site of the arts and overall evaluation, the number of arts areas a student will be able to apply in, and changes to the appeals process; and 4). changes to the Board's role in the admissions process, including consideration of whether to repeal the matrix presently in rule which regulates admission from different Congressional districts.

Persons Affected. The amendment to the arts high school admissions rules would likely affect 11th and 12th grade students and their parents or guardians wishing to apply for admission.

Statutory Authority. *Minnesota Statutes*, section 129C. 10. Subd. 4a gives the Board the authority to adopt rules for admission to the full-time high school program.

Public Comment. Interested persons or groups may submit comments or information on these planned rules in writing until 4:30 p.m. on November 5, 1998. The Center does not contemplate appointing an advisory committee to comment on the planned rules.

Rules Drafts. The Center has prepared a draft of the planned rule amendments.

Agency Contact Person. Written comments, questions requests to receive a draft of the rule, and requests for more information on these planned rules should be addressed to:

Cindy L. Lavorato
Lola and Rudy Perpich Minnesota Center for Arts Education
6125 Olson Memorial Highway
Golden Valley, Minnesota 55422
TTY users may call the Center at (612) 591-4770.

Alternative Format. Upon request, this Request for Comments can be made available in an alternative format, such as large print, Braille, or cassette tape. To make such a request, please contact the agency person at the address listed above.

Note: Comments received in response to this notice will not necessarily be included in the formal rulemaking record submitted to the administrative law judge when a proceeding to adopt rules is started. The Center is required to submit to the judge only those written comments received in response to the rules after they are proposed.

Dated: 28 September 1998

Department of Children, Families & Learning

Request for Comments on Planned Permanent Rules Relating to Desegregation

Background. In the March 18, 1996 *State Register*, the State Board of Education published a Request for Comments on planned desegregation rules. In December 1997, a draft of the desegregation rules was completed and approved by the State Board of Education. In 1998, legislation was enacted that transferred the rulemaking authority for the planned desegregation rules from the State Board of Education to the Commissioner of the Department of Children, Families & Learning.

Subject of Rules. The Commissioner of the Department of Children, Families & Learning requests comments on the planned Rules Relating to Desegregation. The planned permanent rules would 1) require evaluation of data to determine if certain school sites are racially identifiable due to intentional discrimination: if so, a plan to end the discrimination; is required; if not, 2) review the data to determine if certain school sites are racially identifiable due to having a percentage of protected students that is disproportionate as compared to the district average; if so, the district and its community collaboration council will provide a plan to encourage site balance while preserving choice; and 3) review the data to determine if certain districts are racially isolated when compared to the protected students populations of adjacent districts; if so, those districts and their multi-district collaboration councils will provide plans to encourage inter-district balance while preserving choice.

Persons Affected. The proposed rules would affect public school students, their parents, teachers, school administrators, local school boards, and communities. The Commissioner does not contemplate appointing an advisory committee to comment on the planned rule.

Statutory Authority. *Minnesota Law*, Chapter 398, Article 5, Section 7, requires the Commissioner to make rules for Desegregation.

Public Comment. Interested persons or groups may submit comments or information on the planned amendment of rules in writing or orally until 4:30 p.m. on November 5, 1998. A draft of the planned rules may be obtained by contacting the agency contact person.

Agency Contact Person. Written or oral comments, questions and requests for a draft of the planned rules should be addressed to:

Mary Lynne McAlonie
Room 731, Capitol Square Building
550 Cedar Street
St. Paul, MN 55101-2273
Phone: (651) 297-7820 or 1-800-657-3927
TTY: (651) 297-2094
FAX: (651) 282-6779

Alternative Format. Upon request, this Request for Comments can be made available in an alternative format, such as large print, Braille, or cassette tape. To make such a request, please contact the agency contact person at the address listed above.

Comments submitted in response to this notice will not be included in the formal rulemaking record when a proceeding to adopt the rules is started.

Dated: 18 September 1998

Robert Wedl
Commissioner

Environmental Quality Board

Request for Comments on a Draft Scoping Document for the Generic Environmental Impact Statement on Animal Agriculture

On September 30, 1998, the Environmental Quality Board approved a Draft Scoping Document for the Generic Environmental Impact Statement on Animal Agriculture. The Draft Scoping Document includes proposed topics to be addressed in the statewide study on animal agriculture as well as a proposal for more specific study questions.

Minnesotans are invited to comment on this Draft Scoping Document during the period October 5 - November 9, 1998. The EQB

will host the following series of public meetings to hear from Minnesotans on this draft scoping document. Citizens are encouraged to attend these public meetings:

Tuesday, October 27	Thief River Falls Best Western, Highway 32 South 7 - 9:30 p.m.
Wednesday, October 28	Morris Science Auditorium, U of M, Morris Campus, 600 E. 4th St. 7 - 9:30 p.m.
Thursday, October 29	Cold Spring Rocori High School, 534 5th Avenue North 7 - 9:30 p.m.
Wednesday, November 4	Marshall Southwest State University Student Center West, 1501 State Street 7 - 9:30 p.m.
Thursday, November 5	North Mankato South Central Technical College Conf Center A,B,C, 1920 Lee Blvd 7 - 9:30 p.m.
Monday, November 9	Rochester Best Western Apache 1517 16th Street SW 7 - 9:30 p.m.

To order a copy of the Draft Scoping Document please call or write the Environmental Quality Board. Citizens are also encouraged to submit written comments. These written comments should be submitted by November 9, 1998 to one of the following addresses:

- Mail: GEIS / EQB
300 Centennial Building, 658 Cedar Street, St. Paul, MN 55155
- FAX: (651) 296-3698
- Phone: (651) 296-9535 or leave a message 1 (800) 657-3794
- Email: *Animal.ag@mnplan.state.mn.us*

Department of Health

Health Policy & Systems Compliance Division

Request for Comments and for Participation on a Technical Advisory Group Regarding Uniform Paper Explanation of Benefits Document and Remittance Advice Report

Introduction: The Minnesota Department of Health (MDH) and the Administrative Uniformity Committee (AUC) request comments regarding the development of a manual for the uniform paper formats for explanation of benefits document and remittance advice report. MDH and AUC also request persons to participate on the Technical Advisory Group (TAG) to develop a manual for the uniform paper explanation of benefits document and the remittance advice report. The persons or groups likely to be affected by this are health care providers, payers, and consumers.

Summary of Issues: *Minnesota Statutes*, sections 62J.50 to 62J.61, known as the Health Care Administrative Simplification Act, require development of greater uniformity in billing and other administrative activities in health care. The statute addresses use of standard paper formats, use of standard electronic data interchange formats, use of universal identifiers for health care system participants, and use of a standard identification card for health care plan enrollees. This solicitation concerns only the potential standardization of data elements on the patient explanation of benefits (EOB) form and the remittance advice report (REMIT). The

EOB form is sent by payers to patients to inform them how claims are paid. The REMIT form is sent by payers to providers to inform them how the claim was paid.

Patient Explanation of Benefits: The AUC has been made aware that nonstandard explanation of benefits forms are confusing to patients and cause significant effort and expense for providers. Payers and providers spend considerable time and effort helping patients understand the payments made by their health plan and the patient's liability or responsibility to the provider. The goal is to reduce patient confusion regarding health care benefits, with the additional benefit of reducing the time that payers and providers spend dealing with patient correspondence and phone calls.

Remittance Advice Report: The AUC has been made aware that non-standard remittance advice formats cause significant effort and expense on the part of the providers and patients. A remittance advice is the information returned to the provider from the payer that tells the provider how a health care claim was paid.

Agency Contact Person: The AUC is convening a Technical Advisory Group (TAG) to write the manual for the standard data elements of the EOB and REMIT forms. Persons interested in contributing to or participating on this TAG may contact Kristin Loncorich at: Minnesota Department of Health, Health Policy and Systems Compliance Division, P.O. Box 64975, St. Paul, MN 55164-0975, phone: (651) 282-6343, FAX: (651) 282-5628, or internet: *kristin.loncorich@health.state.mn.us* TTY users may call the Minnesota Relay Service at 1-800-627-3529.

Meetings: The TAG will meet an undetermined number of times starting in November and continuing until approximately May 1999. Interested parties will be notified of meeting times and locations.

Dated: 23 September 1998

Higher Education Facilities Authority

Notice of Public Hearing on Revenue Obligations on Behalf of Augsburg College

NOTICE IS HEREBY GIVEN that a public hearing will be held by the Minnesota Higher Education Facilities Authority (the "Authority") with respect to a proposal to issue revenue bonds or other obligations on behalf of Augsburg College, a Minnesota nonprofit corporation and institution of higher education (the "College"), at Hamline University, Graduate School Building, Room 004, 1536 Hewitt Avenue, St. Paul, Minnesota on October 21, 1998 at 2:00 p.m. Under the proposal, the Authority would issue its revenue bonds or other obligations in an original aggregate principal amount of up to approximately $7,100,000 to finance a project generally described as the acquisition, construction, furnishing and equipping of a student residence hall, which will be approximately 60,800 gross square feet when completed, and related site improvements (the "Project"), owned or to be owned and operated by the College and located on its main campus, the principal street address of which is 2211 Riverside Avenue South, Minneapolis, Minnesota 55454.

At said time and place the Authority shall give all parties who appear or have submitted written comments an opportunity to express their views with respect to the proposal to undertake and finance the Project.

Dated: 5 October 1998

By Order Of The Minnesota Higher
Education Facilities Authority
J. Luther Anderson
Executive Director

Minnesota Historical Society

Notice of State Review Board Regular Meeting

A meeting of the State Review Board of the Minnesota Historical Society to consider nominations to the National Register of Historic Places will be held on Tuesday, October 20, 1998, in the Cargill Commons, MacMillan Education Wing, Minnesota Historical Society History Center, St. Paul, Minnesota. The State Review Board will meet at 7:00 p.m. for an informational presentation on program activities made by the Preservation Office staff. The meeting will be called to order and consideration of the meeting's agenda will begin at 7:30 p.m. A sign language interpreter is available with one weeks notice, and auxiliary aids are available with two weeks notice. Call (651) 296-5434, or TTY 800-627-3529. For further information contact the State Historic Preservation Office, Minnesota Historical Society, 345 Kellogg Boulevard West, St. Paul, MN 55102, (651) 296-5434.

Minnesota Housing Finance Agency

Notice of Public Hearing on the Housing Tax Credit Allocation Plan

The Minnesota Housing Finance Agency (MHFA) will hold a public hearing pursuant to Section 42 of the *Internal Revenue Code* of 1986, as amended. The public hearing will be held at the time and place listed below:

Tuesday, October 27, 1998
1 p.m. - 3 p.m. - Jelatis North
Minnesota Housing Finance Agency
400 Sibley Street, Suite 300
St. Paul, MN

The Omnibus Budget Reconciliation Act of 1989 (OBRA) requires that Housing Tax Credit Allocating Agencies develop a plan for allocating tax credits within their jurisdiction, setting forth criteria to determine priorities for selection of developments to receive tax credits. The OBRA also requires Tax Credit Agencies to hold a public hearing to receive public comment on the Allocation Plan.

The above public hearing is for the Allocation Plan developed by MHFA, in cooperation with local government representatives, for use within the Tax Credit Allocation jurisdiction of the MHFA. Other Tax Credit Suballocating Agencies in Minnesota will be holding public hearings for their areas of jurisdiction. Currently, the following cities and counties are eligible to be Suballocating Agencies in Minnesota: Duluth, St. Cloud, Rochester, Minneapolis, St. Paul and Dakota County.

All persons interested will be given an opportunity to express their views. In order to more effectively plan for the conduct of the hearings, persons desiring to speak at the hearing must so request in writing at least 24 hours before the hearing. Oral remarks by any person will be limited to 10 minutes. Written comments may also be submitted to the undersigned, and will be considered at the hearing.

Note that this public hearing is not a workshop or training session, but is intended to solicit the comments of the public.

Copies of summaries of the proposed changes to the Housing Tax Credit Procedural Manual and Qualified Allocation Plan may be picked up at the address listed below and also by written or phone request [(651) 296-8148] to MHFA.

Minnesota Housing Finance Agency
Multifamily Underwriting
Housing Tax Credit Program
400 Sibley Street, Suite 300
St. Paul, MN 55101

Metropolitan Council

Public Hearing on the Draft Facility Plan for Implementation of New Fluidized Bed Incineration with Energy Recovery for Treatment of Wastewater Solids at the Metropolitan Wastewater Treatment Plant, Project No. 970300

The Metropolitan Council will hold a public hearing on the Draft Facility Plan for implementation of new fluidized bed incineration with energy recovery as the primary technology for processing wastewater solids at the Metropolitan Wastewater Treatment Plant in St. Paul. The Draft Facility Plan also calls for a land application technology as a supplemental processing method for dealing with peak loadings and equipment down time. The solids processing improvements will replace existing sewage sludge incinerators and will reduce air emissions and odors, streamline operation and maintenance, and help to maintain low sewer rates.

The public hearing will be held:

Tuesday, November 10, 1998
4:00 p.m.
Metropolitan Council Chambers
230 East Fifth Street
St. Paul, Minnesota

Copies of the Draft Facility Plan are available for review at the following locations:

- Metropolitan Council Regional Data Center, 230 East Fifth Street, St. Paul

- Metropolitan Council Environmental Services, Office of Customer Relations and Environmental Education, 230 East Fifth Street, St. Paul
- Metropolitan Wastewater Treatment Plant, Metro Plant Engineering, 2400 Childs Road, St. Paul
- Sun Ray Library, 2105 Wilson Avenue, St. Paul
- Riverview Library, 1 East George Street, St. Paul

All interested people are encouraged to attend the hearing and provide comments.

Comments, which must be received by 5:00 p.m. on Friday, November 20, 1998, may also be submitted as follows:

- Send written comments to Tim O'Donnell at Metropolitan Council Environmental Services, 230 East Fifth Street, St. Paul, MN 55101
- FAX comments to Tim O'Donnell at (651) 602-1003
- Record comments on Metropolitan Council's Public Comment Line at 602-1500
- E-mail comments to *data.center@metc.state.mn.us*
- Send TTY comments to (651) 291-0904

Upon request, Metropolitan Council will provide reasonable accommodations to people with disabilities. Requests must be received prior to October 27, 1998.

Additional information can be obtained from Metropolitan Council Environmental Services, Office of Customer Relations and Environmental Education, at (651) 602-1269.

Pollution Control Agency

Policy and Planning Division

Notice that the Public Comment Period Is Open for Minnesota's Draft 1999 Intended Use Plan for the Water Pollution Control Revolving Fund

The draft 1999 Intended Use Plan (IUP) identifies and describes the water pollution control projects expected to receive loans from Fiscal Year 1999 funds. This is produced for the Water Pollution Control Revolving Fund, commonly known as the State Revolving Fund (SRF) which was created under the provisions in the federal Clean Water Act (Act) to provide financial assistance for water pollution control projects. As required by the Act, each state must annually prepare and submit to the U.S. Environmental Protection Agency (EPA) an IUP as part of its capitalization grant application.

The Minnesota Pollution Control Agency (MPCA) is responsible for preparing the IUP and for reviewing and monitoring projects to ensure they meet administrative and technical requirements. The Public Facilities Authority, housed in the Department of Trade and Economic Development, is responsible for reviewing the financial capability of the applicants, selling bonds to generate the loan funds, and setting the interest rates, terms and conditions of the loans.

The 1999 IUP lists two major activities to be funded by the SRF: 1) wastewater and storm water projects; and 2) nonpoint-source pollution programs. Because of the combination of increased demand, coupled with the need to maintain the long term viability of the revolving loan fund, not all of the 1999 IUP requests for wastewater or stormwater financing will be funded. Projects in both the fundable and unfundable ranges are listed in the draft IUP.

If you are interested on receiving a copy of the draft IUP please contact Ron Omann at (651) 296-4555. Any person may submit written comments on the draft IUP up to 4:30 P.M. on Wednesday November 4, 1998 by mailing them to Ron Omann, Policy and Planning Division, Minnesota Pollution Control Agency, 520 Lafayette Rd. N, St. Paul, MN 55155-4194 or by FAX at (651) 297-8676.

Public Employees Retirement Association

Notice of Meeting of the Board of Trustees

The regular meeting of the Board of Trustees of the Public Employees Retirement Association (PERA) will be held on Thursday, October 8, 1998, at 9:30 a.m. at The Minnesota Club, 317 North Washington Street, Saint Paul, Minnesota.

State Grants & Loans

In addition to requests by state agencies for technical/professional services (published in the State Contracts section), the *State Register* also publishes notices about grants and loans available through any agency or branch of state government. Although some grant and loan programs specifically require printing in a statewide publication such as the *State Register*, there is no requirement for publication in the *State Register* itself.

Agencies are encouraged to publish grant and loan notices, and to provide financial estimates as well as sufficient time for interested parties to respond.

Minnesota Center for Crime Victim Services

Notice of Availability of Funds for Statewide General Crime Victims Media Project

The Minnesota Center for Crime Victim Services, General Crime Victims Program, announces the availability of grant funds for a special time-limited project. The grant is for the six-month period from January 1, 1999, through June 30, 1999.

One grant of $60,000 is available for the development and implementation of a statewide general crime victims media project. Public and private non-profit organizations are eligible to apply. Organizations that do not have a major program focus of serving general crime victims will be required to work in close collaboration with general crime victim service providers.

Applications are due Monday, November 23, 1998. To receive a request for proposals that provides complete information and describes how to apply, contact:

Minnesota Center for Crime Victim Services
245 East Sixth Street, Suite 705
St. Paul, Minnesota 55101
(651) 282-6256 or 1-888-622-8799 outside the Twin Cities metropolitan area
TTY (hearing impaired): (651) 205-4827

Department of Public Safety

Minnesota Auto Theft Prevention Program

Grant Availability

The Board of the Minnesota Auto Theft Prevention Program announces the availability of over $1,865,000.00 in grant funds accessible for the July 1, 1999 through June 30, 2000 grant period. Applications will be accepted from State, County, Local Police Departments, Governmental Agencies, Prosecutors, Judiciary, Businesses, Community and Neighborhood Organizations. This reimbursement grant program must be for projects dedicated to the area of auto theft. Grant application packets may be obtained by contacting Dennis Roske at the Auto Theft Prevention Program Office at (612/405-6153 or 405-6155). To be considered, applications must be received in the MATPP office in Mendota Heights by 4:30 p.m. on December 31, 1998.

Professional, Technical & Consulting Contracts

Department of Administration procedures require that notice of any consultant services contract or professional and technical services contract which has an estimated cost of over $10,000 be printed in the *State Register.* These procedures also require that the following information be included in the notice: name of contact person, agency name and address, description of project and tasks, and final submission date of completed contract proposal.

In accordance with *Minnesota Rules* Part 1230.1910, certified Targeted Group Businesses and individuals submitting proposals as prime contractors shall receive the equivalent of up to 6% preference in the evaluation of their proposal. For information regarding certification, call the Materials Management Helpline (612) 296-2600 or [TTY (612) 297-5353 and ask for 296-2600].

Minnesota State Colleges and Universities (MnSCU)

Request for Proposals for Market Research/Enrollment Management Project

Minnesota State Colleges and Universities (MnSCU) is seeking proposals for a comprehensive system-wide market research/enrollment management project with students and non-students. The system seeks to establish a base of information to guide marketing and enrollment management strategies for the system as a whole, groups of institutions, and individual colleges and universities. MnSCU serves 140,000 students at 29 two-year colleges and seven state universities across Minnesota.

An information meeting will be held for companies interested in submitting a proposal Monday, Oct. 12, 1998, at 2 p.m. in Conference Room 502, Fifth Floor, World Trade Center, 30 E. 7th Street, St. Paul, MN.

Deadline for receipt of proposals is 4 p.m. October 30, 1998. Copies of the complete Request For Proposals are available from:

Public Affairs Office
Minnesota State Colleges and Universities
500 World Trade Center
30 E. 7th Street
St. Paul, Minnesota 55101
(651) 297-2720

Minnesota State Colleges and Universities (MnSCU)

Winona State University

Request for Bid for Trane Annual Service Program

NOTICE IS HEREBY GIVEN that Winona State University will receive sealed bids for a Trane Tracer 100 Energy Management System Annual Service Program.

Bid specifications will be available October 5, 1998 from Sandra Schmitt, Purchasing Director, PO Box 5838, 205 Somsen Hall, Winona State University, Winona, MN 55987 or by calling (507) 457-5067.

Sealed bids must be received by Sandra Schmitt, PO Box 5838 or Somsen 205C, Buisness Office, Winona State University, Winona, MN 55987 by 2:00 PM on October 26, 1998.

Winona State University reserves the right to reject any or all bids or portions thereof, or to waive any irregularities or informalities in proposals received.

Minnesota Forest Resources Council

Minnesota Department of Natural Resources, Division of Forestry - Fiscal Agent

Notice of Request for Proposals for the Public Concerns Registration Process

NOTICE IS HEREBY GIVEN that the Minnesota Forest Resources Council (MFRC) is requesting proposals to perform all necessary duties associated with implementation of its Public Concerns Registration Process (PCRP). The PCRP was established to provide an opportunity for citizens to register concerns and receive information on specific timber harvesting and forest management practices throughout the state. Information gathered through the process will provide the MFRC with a better understanding of public concerns over timber harvesting and forest management practices, as well as provide input into future natural resource professional and timber harvesting education and training programs.

Services needed by the Minnesota Forest Resources Council include, but are not limited to: contacting the citizen, the logger, the landowner and any other involved parties to verify their identification and the timber harvesting site location; gathering information about the concern in question; sending educational materials to individuals associated with the concern and encouraging communication between all parties; following up and maintaining contact with the individuals in questions; communicating with the Minnesota Logger Education Program; and writing summary reports to document all registered concerns and the outcome of efforts.

Proposals are due on October 26, 1998

To obtain a copy of the complete Request for Proposal, contact:

Sara Eliason
Minnesota Forest Resources Council
NRAB 35a
2003 Upper Buford Circle
St. Paul, MN 55108
(651) 603-0109
e-mail: *seliason@forestry.umn.edu*

Department of Natural Resources

Division of Forestry

Notice of Request for Proposals for Preparation of Forest Legacy Program Assessment of Need and Plan

NOTICE IS HEREBY GIVEN that the Department of Natural Resources through its Division of Forestry is requesting proposals to prepare a plan that assesses the need and usefulness of conservation easements on privately owned land in the forested areas of Minnesota. Where easements could be beneficial, the plan must also delineate and prioritize areas that would benefit the most. Maps are an important part of the product.

The final product must be a camera-ready paper copy of the plan including maps. It must also be provided in an electronic format to be mutually agreed upon. Allow for two reviews of plan drafts followed by the (not-reviewed) final copy.

Up to $13,000 is available to fund a proposal. The proposer will be granted flexibility to achieve the desired outcome. A review team will assist the proposer. The final product is expected to be completed no later than September 1, 1999.

A higher education degree in a natural resource science such as forestry or ecology is required. Geographic Information System (GIS) capability and technical writing skills are required.

Proposals due by October 19, 1998. To obtain a copy of the Request for Proposal, please contact:

Sharon Schmitz
DNR-Forestry
500 Lafayette Road
St. Paul, MN 55155-4044
(651) 297-7298

Non-State Public Bids, Contracts & Grants

The *State Register* also serves as a central marketplace for contracts let out on bid by the public sector. The *Register* meets state and federal guidelines for statewide circulation of public notices. Any tax-supported institution or government jurisdiction may advertise contracts and requests for proposals from the private sector.

It is recommended that contracts and RFPs include the following: 1) name of contact person; 2) institution name, address, and telephone number; 3) brief description of project and tasks; 4) cost estimate; and 5) final submission date of completed contract proposal. Allow at least three weeks from publication date (four weeks from date article is submitted for publication). Surveys show that subscribers are interested in hearing about contracts for estimates as low as $1,000. Contact the editor for further details.

University of Minnesota

Notice of Bid Information Service (BIS) Available for All Potential Vendors

The University of Minnesota offers 24 hour/day, 7 day/week access to all Requests for Bids/Proposals through its fax back Bid Information Service (BIS). Subscriptions to BIS are $75/per fiscal year (not prorated). Call 612-625-5534 for information or visit our web site at *http://purchserv.finop.umn.edu*. Choose BID Information Service.

Requests for Bids/Proposals are available to the public at no charge each business day from 8:00 a.m. - 4:30 p.m. in Purchasing Services lobby, Suite 560, 1300 S. 2nd Street, Mpls, MN 55454.

University of Minnesota

Department of Facilities Management

Notice of Request for Proposal for Ford Hall Renovation Project (071-98-1171) and Murphy Hall Renovation Project (062-98-1240)

Proposals are being requested by the University of Minnesota, Facilities Management (FM) Department, for **Design-Build Services** for the **Ford Hall and Murphy Hall Renovation Projects**.

Approximately 140,000 gross square feet of space in Ford and Murphy Halls will be renovated and upgraded for the relocation of four departments within the College of Liberal Arts. The focus will be on life safety codes, building accessibility, building systems, repair and replacement, and programmatic requirements.

Preliminary Construction Estimate: $11,500,000.

Proposals will be received until 3:00 p.m., local time, October 28, 1998.

Sealed proposals will be received by the Regents of the University of Minnesota at Facilities Management Purchasing Services, 400 Donhowe Building, 319 - 15th Avenue SE, Minneapolis, Minnesota 55455, until the stated times, when they will be publicly opened and only the names of the responding proposers will be made public. Proposals may be viewed publicly in Purchasing Services after the award has been made and notification given to all respondents.

Copies of the Pre-Design Report for Ford Hall and Murphy Hall are available at the office of Northco Real Estate Services, 4900 Viking Drive, Edina, Minnesota 55435. Any questions before the Pre-Proposal Meeting should be addressed to John Glover, Owner's Representative at (612) 820-1669.

A Pre-Proposal Meeting has been scheduled on **Monday, October 19, 1998, (time and place to be determined).** White the attendance at the Pre-Proposal Meeting is not mandatory, information presented may be very informative; therefore, all interested parties are encouraged to attend to be better able to prepare acceptable proposals. A site visit will be held in conjunction with this meeting.

Tentative Selection Schedule:

RFP Available for Distribution	**October 5, 1998**
Pre-Proposal Meeting	**October 19, 1998**
RFP Responses Due	**October 28, 1998**
Selection of Shortlisted Finalists	**November 2, 1998**
Interviews	**November 9, 1998**

Request for Proposal (RFP) information can be requested from:

John Glover
Northco Real Estate Services
4900 Viking Drive
Edina, MN 55435

University of Minnesota

Request for Qualifications (RFQ): Molecular & Cellular Biology Building Project

The University of Minnesota Facilities Management Department is accepting submittals from design professional teams in response to its Request for Qualifications for the design of the new Molecular & Cellular Biology Building on the University's Twin Cities Minneapolis Campus.

The Molecular & Cellular Biology Building Project is very complex and demanding, and will require the skills and experience of the highest quality design professional team. New construction on this project will total approximately 230,000 gross square feet. The total project budget is approximately $70 million. The project completion date is January, 2002.

A two-tiered selection process has been established. The first tier, known as a Request for Qualification (RFQ) will identify and refine a group of design professionals to be eligible for participation in the second tier of the process, which will be a Request for Proposal (RFP). Only design professional teams selected through the Request for Qualification (RFQ) process will be allowed to submit a Request for Proposal (RFP) for this project.

Non-State Public Bids, Contracts & Grants

All respondents to this Request for Qualifications (RFQ) must either be a University of Minnesota prequalified design professional team, or must collaborate with a University of Minnesota prequalified design professional team.

Request for Qualification (RFQ) submittal information can be requested from:

Mr. Earl North
McLauchlin, Armiln, North & Associates, LLC
125 Main Street Southeast, Suite 237
Minneapolis, MN 55414
(612) 331-9000

The deadline for submittals is 3:00 p.m. Thursday October 8, 1998.

Statement of Ownership, Management, and Circulation

UNITED STATES POSTAL SERVICE™ **Statement of Ownership, Management, and Circulation** *(Required by 39 USC 3685)*

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Full Name	Complete Mailing Address
State of Minnesota	117 University Avenue
Dept of Administration	St Paul, MN 55155
Communication.Media	

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Full Name	Complete Mailing Address

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☐ Has Changed During Preceding 12 Months *(Publisher must submit explanation of change with this statement)*

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I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including multiple damages and civil penalties).