Minnesota

State Register

(Published every Monday (Tuesday when Monday is a holiday.)

**Proposed, Adopted, Emergency, Expedited, Withdrawn, Vetoed Rules;
Executive Orders; Appointments; Commissioners' Orders; Revenue Notices;
Official Notices; State Grants & Loans; State Contracts;
Non-State Public Bids, Contracts &Grants**

Monday 29 December 2014

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Minnesota State Register

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

The *Minnesota State Register* is the official publication of the State of Minnesota's Executive Branch of government, published weekly to fulfill the legislative mandate set forth in *Minnesota Statutes*, Chapter 14, and *Minnesota Rules*, Chapter 1400. It contains:

- **Proposed Rules**
- **Adopted Rules**
- **Exempt Rules**
- **Expedited Rules**
- **Withdrawn Rules**
- **Vetoed Rules**
- **Executive Orders of the Governor**
- **Appointments**
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- **Revenue Notices**
- **Official Notices**
- **State Grants and Loans**
- **Contracts for Professional, Technical and Consulting Services**
- **Non-State Public Bids, Contracts and Grants**

Printing Schedule and Submission Deadlines

Vol. 39 Issue Number	PUBLISH DATE (**BOLDFACE** shows altered publish date)	Deadline for: all Short Rules, Executive and Commissioner's Orders, Revenue and Official Notices, State Grants, Professional-Technical-Consulting Contracts, Non-State Bids and Public Contracts	Deadline for LONG, Complicated Rules (contact the editor to negotiate a deadline)
# 27	Monday 5 January 2015	**NOON MONDAY 29 DECEMBER**	**NOON TUESDAY 23 DECEMBER**
# 28	Monday 12 January	Noon Tuesday 6 January 2015	**NOON TUESDAY 30 DECEMBER**
# 29	TUESDAY 20 JANUARY	Noon Tuesday 13 January	Noon Thursday 8 January 2015
# 30	Monday 26 January	Noon Tuesday 20 January	Noon Thursday 15 January

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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. 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, but 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.

The *State Register* features partial and cumulative listings of rules in this section on the following schedule: issues #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 #40-52 inclusive, with final index (#1-52, or 53 in some years). 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, 660 Olive Street (one block east of I-35E and one block north of University Ave), St. Paul, MN 55155, phone: (612) 297-3000, or toll-free 1-800-657-3757. TTY relay service phone number: (800) 627-3529

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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*.

KEY: Proposed Rules - Underlining indicates additions to existing rule language. ~~Strikeouts~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." **Adopted Rules** - Underlining indicates additions to proposed rule language. ~~Strikeout~~ indicates deletions from proposed rule language.

Minnesota Department of Health (MDH)

Division of Environmental Health

Proposed Permanent Rules Relating to Radioactive Materials

NOTICE OF INTENT TO ADOPT RULES WITHOUT A PUBLIC HEARING

Proposed Amendment to Rules Governing Radioactive Materials, *Minnesota Rules*, Chapter 4731; Revisor's ID Number RD4233

Introduction. The Department of Health intends to adopt rules without a public hearing following the procedures in the rules of the Office of Administrative Hearings, *Minnesota Rules*, parts 1400.2300 to 1400.2310, and the Administrative Procedure Act, *Minnesota Statutes*, sections 14.22 to 14.28. You may submit written comments on the proposed rules and may also submit a written request that a hearing be held on the rules until January 28, 2015.

Agency Contact Person. You must submit comments or questions on the rules and written requests for a public hearing to the agency contact person. The agency contact person is: Sherrie Flaherty at Minnesota Department of Health, P.O. Box 64975, St. Paul, MN, 55164-0975, **phone:** (651) 201-4522, and **e-mail:** ***sherrie.flaherty@state.mn.us*.**

Subject of Rules and Statutory Authority. The proposed rules reflect changes made to U.S. Nuclear Regulatory (NRC) regulations that Minnesota must adopt to meet compatibility requirements. There are also some MDH-initiated changes. The changes being made to meet NRC compatibility requirements are to:

- Improve decommissioning planning to reduce the likelihood that a current operating facility will not be able to complete decommissioning.
- Clarify the definitions of "construction" and "commencement of construction."
- Require advance notifications to Native American Tribes of shipments of certain nuclear wastes passing within or across their reservations.
- Correct some typographical errors.
- Redefine categories of devices people may use under exemptions, add flexibility for licensing users of sealed sources and devices, and remove prescriptive requirements for distributers of generally licensed devices.
- Establish security requirements for certain risk-significant quantities of radioactive material.
- Require distributors to have a specific license to initially distribute source material to general licensees with new reporting requirements, modify existing possession-and-use requirements of the general license for small quantities of source material, and clarify or delete certain source material exemptions from licensing to make the exemption more risk-informed.

- Remove certain radionuclides from the exempt quantities list.

The MDH-initiated changes are to:

- Change the reciprocity period from "in a one-year period" to "in a calendar year" and make the reciprocity requirements clearer.
- Clarify the posting requirements for worker notices.
- Remove the social security number from a report to MDH for an occupationally overexposed individual.
- Remove the requirement to report annual individual monitoring results to MDH.
- Remove the requirement for license applications to be submitted "in duplicate."
- Correct incorrect references.
- Change the language for survey-meter calibrations from "annually" to "not to exceed 12 months."
- Allow non-accredited nuclear medicine technologists to count continuing education credits that are not directly on nuclear medicine.

The statutory authority to adopt the rules is *Minnesota Statutes*, sections 144.1201 through 144.1205. 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, January 28, 2015, 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 the agency contact person must receive it by the due date. The Department encourages comment. 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 have about 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 the Department hold a hearing on the rules. Your request must be in writing and the agency contact person must receive it by 4:30 p.m. on January 28, 2015. Your written request for a public hearing must include your name and address. You must identify the portion of the proposed rules that you object to or state that you oppose the entire set of rules. Any request that does not comply with these requirements is not valid and the agency cannot count it when determining whether it must hold a public hearing. 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 valid written request for a hearing, the Department will hold a public hearing 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 information can be made available in an alternative format, such as large print, braille, or audio. To make such a request, please contact the agency contact person at the address or telephone number listed above.

Modifications. The Department may modify the proposed rules 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, unless the agency follows the procedure under *Minnesota Rules*, part 1400.2110. If the proposed rules affect you in any way, the Department encourages you to participate in the rulemaking process.

Statement of Need and Reasonableness. The statement of need and reasonableness 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. It is now available from the agency contact person. You may review it or obtain copies for the cost of reproduction by contacting the agency contact person.

Lobbyist Registration. *Minnesota Statutes*, chapter 10A, requires each lobbyist to register with the State Campaign Finance and Public Disclosure Board. You should direct questions about this requirement to the Campaign Finance and Public Disclosure Board at: Suite 190, Centennial Building, 658 Cedar Street, St. Paul, Minnesota 55155, telephone 651-296-5148 or 1-800-657-3889.

Adoption and Review of Rules. If no hearing is required, the agency may adopt the rules after the end of the comment period. The

agency will then submit the rules and supporting documents to the Office of Administrative Hearings for review for legality. You may ask to be notified of the date the Department submits the rules 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.

Dated: 11 December 2014 Signed by Commissioner Edward P. Ehlinger

4731.0100 DEFINITIONS.

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

Subp. 4b. **Access control.** "Access control" means a system for allowing only approved individuals to have unescorted access to the security zone and for ensuring that all other individuals are subject to escorted access.

[For text of subps 5 to 9, see M.R.]

Subp. 9a. **Aggregated.** "Aggregated" means accessible by the breach of a single physical barrier that would allow access to radioactive material in any form, including any devices that contain the radioactive material, when the total activity equals or exceeds a category 2 quantity of radioactive material.

[For text of subps 10 to 16, see M.R.]

Subp. 16a. **Approved individual.** "Approved individual" means an individual whom the licensee has determined to be trustworthy and reliable for unescorted access in accordance with parts 4731.8010 to 4731.8040 and who has completed the training required by part 4731.8055, subpart 3.

[For text of subps 17 to 24, see M.R.]

Subp. 24a. **Background investigation.** "Background investigation" means the investigation conducted by a licensee or applicant to support the determination of trustworthiness and reliability.

[For text of subps 25 to 33, see M.R.]

Subp. 33a. **Category 1 quantity of radioactive material.** "Category 1 quantity of radioactive material" means a quantity of radioactive material meeting or exceeding the category 1 threshold under part 4731.8140, subpart 1. This is determined by calculating the ratio of the total activity of each radionuclide to the category 1 threshold for that radionuclide and adding the ratios together. If the sum is equal to or exceeds one, the quantity would be considered a category 1 quantity. Category 1 quantities of radioactive material do not include the radioactive material contained in any fuel assembly, subassembly, fuel rod, or fuel pellet.

Subp. 33b. **Category 2 quantity of radioactive material.** "Category 2 quantity of radioactive material" means a quantity of radioactive material meeting or exceeding the category 2 threshold but less than the category 1 threshold under part 4731.8140, subpart 1. This is determined by calculating the ratio of the total activity of each radionuclide to the category 2 threshold for that radionuclide and adding the ratios together. If the sum is equal to or exceeds one, the quantity would be considered a category 2 quantity. Category 2 quantities of radioactive material do not include the radioactive material contained in any fuel assembly, subassembly, fuel rod, or fuel pellet.

Subp. ~~33a~~ 33c. **Certificate holder.** "Certificate holder" means a person who has been issued a certificate of compliance or other package approval by the NRC.

Subp. ~~33b~~ 33d. **Certificate of compliance.** "Certificate of compliance" means the certificate issued by the NRC under *Code of Federal Regulations*, title 10, part 71, subpart D, which approves the design of a package for transportation of radioactive material.

[For text of subps 34 to 39, see M.R.]

Subp. 40. **Commencement of construction.** "Commencement of construction" means ~~any clearing of land, excavation, or other substantial action that would adversely affect the natural environment of a site but does not include:~~ taking any action defined as construction or any other activity at the site of a facility subject to the regulations in this chapter that has a reasonable nexus to radiological health and safety.

~~A. changes desirable for the temporary use of the land for public recreational uses; or~~

~~B. necessary borings to determine site characteristics or other preconstruction monitoring to establish background information related to the suitability of a site or to the protection of environmental values.~~

[For text of subps 41 to 44, see M.R.]

Subp. 44a. **Construction.** "Construction" means the installation of foundations or in-place assembly, erection, fabrication, or testing for any structure, system, or component of a facility or activity subject to the regulations in this chapter that are related to radiological safety or security. Construction does not include:

A. changes for temporary use of the land for public recreational purposes;

B. site exploration, including necessary borings to determine foundation conditions or other preconstruction monitoring to establish background information related to the suitability of the site, the environmental impacts of construction or operation, or the protection of environmental values;

C. preparation of the site for construction of the facility, including clearing of the site, grading, installation of drainage, erosion and other environmental mitigation measures, and construction of temporary roads and borrow areas;

D. erection of fences and other access control measures that are not related to the safe use of, or security of, radiological materials subject to this part;

E. excavation;

F. erection of support buildings, such as construction equipment storage sheds, warehouse and shop facilities, utilities, concrete mixing plants, docking and unloading facilities, and office buildings for use in connection with the construction of the facility;

G. building of service facilities, such as paved roads, parking lots, railroad spurs, exterior utility and lighting systems, potable water systems, sanitary sewerage treatment facilities, and transmission lines;

H. procurement or fabrication of components or portions of the proposed facility occurring at other than the final, in-place location at the facility; or

I. taking any other action that has no reasonable nexus to radiological health and safety.

Subp. ~~44a~~ 44b. **Containment system.** "Containment system" means the assembly of components of the packaging intended to retain the radioactive material during transport.

[For text of subps 45 to 63, see M.R.]

Subp. 63a. **Diversion.** "Diversion" means the unauthorized movement of radioactive material subject to this chapter to a location different from the material's authorized destination inside or outside of the site at which the material is used or stored.

[For text of subps 64 to 75, see M.R.]

Subp. 75a. **Escorted access.** "Escorted access" means accompaniment while in a security zone by an approved individual who maintains continuous direct visual surveillance at all times over an individual who is not approved for unescorted access.

[For text of subps 76 to 83, see M.R.]

Subp. 83a. **Fingerprint orders.** "Fingerprint orders" means the orders issued by the NRC or the legally binding requirements issued by agreement states that require fingerprints and criminal history records checks for individuals with unescorted access to category 1 and category 2 quantities of radioactive material or safeguards information-modified handling.

[For text of subps 84 to 100, see M.R.]

Subp. 100a. **Indian tribe.** "Indian tribe" means an Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges to exist as an Indian tribe pursuant to the Federally Recognized Indian Tribe List Act of 1994, *United States Code*, title 25, section 479a.

[For text of subps 101 to 118, see M.R.]

Subp. 118a. **License issuing authority.** "License issuing authority" means the commissioner, the NRC, or the appropriate agency of an agreement state that issued the license.

[For text of subps 119 to 121a, see M.R.]

Subp. 121b. **Local law enforcement agency or LLEA.** "Local law enforcement agency" or "LLEA" means a public or private organization that has been approved by a federal, state, or local government to carry firearms and make arrests, and is authorized and has the capability to provide an armed response in the jurisdiction where the licensed category 1 or category 2 quantity of radioactive material is used, stored, or transported.

[For text of subps 122 to 144, see M.R.]

Subp. 144a. **Mobile device.** "Mobile device" means a piece of equipment containing licensed radioactive material that is either mounted on wheels or casters, or otherwise equipped for moving without a need for disassembly or dismounting; or designed to be hand carried. A mobile device does not include stationary equipment installed in a fixed location.

[For text of subps 145 and 146, see M.R.]

Subp. 146a. **Movement control center.** "Movement control center" means an operations center that is remote from transport activity and that maintains position information on the movement of radioactive material, receives reports of attempted attacks or thefts, provides a means for reporting these and other problems to appropriate agencies, and can request and coordinate appropriate aid.

[For text of subps 147 to 152, see M.R.]

Subp. 152a. **No-later-than arrival time.** "No-later-than arrival time" means the date and time that the shipping licensee and receiving licensee have established as the time at which an investigation will be initiated if the shipment has not arrived at the receiving facility. The no-later-than arrival time may not be more than six hours after the estimated arrival time for shipments of category 2 quantities of radioactive material.

[For text of subps 153 to 205, see M.R.]

Subp. 205a. **Reviewing official.** "Reviewing official" means the individual who must make the trustworthiness and reliability determination of an individual to determine whether the individual may have, or continue to have, unescorted access to the category 1 or category 2 quantities of radioactive materials that are possessed by the licensee.

[For text of subps 206 and 207, see M.R.]

Subp. 207a. **Sabotage.** "Sabotage" means deliberate damage, with malevolent intent, to a category 1 or category 2 quantity of radioactive material, a device that contains a category 1 or category 2 quantity of radioactive material, or the components of the security system.

Subp. 207b. **Safe haven.** "Safe haven" means a readily recognizable and readily accessible site at which security is present or from which, in the event of an emergency, the transport crew can notify and wait for the local law enforcement authorities.

[For text of subps 208 to 210, see M.R.]

Subp. 210a. **Security zone.** "Security zone" means any temporary or permanent area determined and established by the licensee for the physical protection of category 1 or category 2 quantities of radioactive material.

[For text of subps 211 to 237, see M.R.]

Subp. 237a. **Telemetric position monitoring system.** "Telemetric position monitoring system" means a data transfer system that captures information by instrumentation and measuring devices about the location and status of a transport vehicle or package between the departure and destination locations.

[For text of subps 238 to 247, see M.R.]

Subp. 247a. **Tribal official.** "Tribal official" means the highest ranking individual that represents tribal leadership, such as the chief, president, or tribal council leadership.

[For text of subp 248, see M.R.]

Subp. 248a. **Trustworthiness and reliability.** "Trustworthiness and reliability" means characteristics of an individual considered dependable in judgment, character, and performance, such that unescorted access to category 1 or category 2 quantities of radioactive

material by that individual does not constitute an unreasonable risk to public health and safety or security. A determination of trustworthiness and reliability for this purpose is based upon the results from a background investigation.

[For text of subps 249 to 253, see M.R.]

Subp. 253a. **Unescorted access.** "Unescorted access" means solitary access to an aggregated category 1 or category 2 quantity of radioactive material or the devices that contain the material.

Subp. ~~253a~~ 253b. **Unirradiated uranium.** "Unirradiated uranium" means uranium containing not more than 2×10^{3} Bq of plutonium per gram of uranium-235, not more than 9×10^{6} Bq of fission products per gram of uranium-235, and not more than 5×10^{-3} gram of uranium-236 per gram of uranium-235.

[For text of subp 254, see M.R.]

Subp. 255. **Unrefined and unprocessed ore.** "Unrefined and unprocessed ore" means ore in its natural form prior to any processing, such as grinding, roasting, or beneficiating, or refining. Processing does not include sieving or encapsulation of ore or preparation of samples for laboratory analysis.

[For text of subps 256 to 269, see M.R.]

4731.0355 RECIPROCITY.

Subpart 1. **Application; recognition.**

A. Subject to this chapter, a person who holds a specific license from the NRC or an agreement state, and issued by the agency having jurisdiction where the licensee maintains an office for directing the licensed activity and at which radiation safety records are normally maintained, may apply for reciprocity. Once reciprocity is approved, the out-of-state licensee is granted a general license to conduct the activities authorized in the NRC or agreement state license within this state for a period not in excess of 180 days in a calendar year.

~~A.~~ B. Applications for reciprocal recognition of licenses issued by the NRC or other agreement states may be made by completing a report of proposed activity reciprocity form prescribed by the commissioner. The form may be obtained by contacting the Radioactive Materials Unit, Minnesota Department of Health, 625 Robert Street N, P.O. Box 64975, St. Paul, MN 55164-0975.

~~B. The commissioner shall reciprocally recognize radioactive materials licenses issued by the NRC or another agreement state according to this part. The NRC maintains jurisdiction in nonagreement states, areas of exclusive federal jurisdiction within agreement states, and offshore waters.~~

C. The application must be signed and dated by the radiation safety officer or the responsible management representative.

D. The applicant must submit a copy of the current licensing document. The licensing document must not limit the activity authorized by the document to specified installations or locations.

E. The applicant must pay the reciprocity fee under *Minnesota Statutes*, section 144.1205.

Subp. 2. **Review and inspection.**

A. The commissioner shall review applications for reciprocity for compliance with this chapter ~~in the same manner as applications from within the state. The application must be signed and dated by the radiation safety officer or the responsible management representative~~. The commissioner may withdraw, limit, or qualify acceptance of a specific license or equivalent licensing document issued by the NRC or an agreement state or a product distributed under the licensing document upon determining that the action is necessary to prevent undue hazard to public health and safety or property.

B. Inspections by the commissioner may be performed on any licensee who has been granted a reciprocal license. ~~Considerations for selecting reciprocal licensees for inspection include:~~

~~(1) potential risk to employees, the public, or the environment;~~

~~(2) activities that are new or unusual for the state;~~

~~(3) the frequency of the licensee entering the state to perform activities;~~

~~(4) the length of time to complete the intended activity; and~~

~~(5) the concern expressed by the public about a specific activity.~~

~~C. The frequency of inspection for any particular licensee is dependent on the considerations listed in item B.~~

Subp. 3. **~~Licenses of radioactive material, source and special nuclear material in quantities not sufficient to form a critical mass~~ Notification.**

A. ~~Subject to this chapter, a person who holds a specific license from the NRC or an agreement state, and issued by the agency having jurisdiction where the licensee maintains an office for directing the licensed activity and at which radiation safety records are normally maintained, is granted a general license to conduct the activities authorized in such licensing document within this state for a period not in excess of 180 days in a one-year period if:~~

~~(1)~~ ~~the~~ An out-of-state licensee ~~notifies~~ approved for reciprocity must notify the commissioner in writing at least three days before engaging in ~~the~~ activities in the state. The notification must include:

(1)

~~(a)~~ the name of the company for whom service will be performed;

(2)

~~(b)~~ the name and telephone number of the individual representing the company under ~~unit (a)~~ subitem (1);

(3)

~~(c)~~ the location where services will be performed;

(4)

~~(d)~~ the start date;

(5)

~~(e)~~ the duration of the service;

(6)

~~(f)~~ the type of service to be performed;

(7)

~~(g)~~ the name of individuals performing the service; and

(8)

~~(h)~~ identification of the sources of radiation to be used~~;~~.

~~(2) the notification is accompanied by a copy of the current licensing document;~~

~~(3) the licensing document does not limit the activity authorized by the document to specified installations or locations; and~~

~~(4) the licensee pays the reciprocity fee under Minnesota Statutes, section 144.1205.~~

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

~~E. Failure to provide the required information or fee may result in denial of reciprocity privileges.~~

~~F. Notwithstanding item A, a person who holds a specific license issued by the NRC or an agreement state authorizing the holder to manufacture, transfer, install, or service a device described in parts 4731.3200 to 4731.3245 within areas subject to the jurisdiction of the licensing body is granted a general license to install, transfer, demonstrate, or service the device if:~~

~~(1) the person files a report with the commissioner within 30 days after the end of each calendar quarter in which any device is transferred to or installed in this state. The report must identify each general licensee to whom the device is transferred by name and address, the type and model number of devices transferred, and the quantity and type of radioactive material contained in the device;~~

~~(2) the device has been manufactured, labeled, installed, and serviced under applicable provisions of the specific license issued to the person by the NRC or an agreement state;~~

~~(3) the person provides assurance that any labels required to be affixed to the device under rules of the authority that licensed manufacture of the device bear the statement "Removal of this label is prohibited"; and~~

~~(4) the holder of the specific license furnishes to each general licensee to whom the device is transferred or on whose premises the device is installed a copy of the general license issued under this item, or under equivalent rules of the agency having jurisdiction over the manufacture and distribution of the device.~~

~~G. The commissioner may withdraw, limit, or qualify acceptance of a specific license or equivalent licensing document issued by the NRC or an agreement state or a product distributed under the licensing document upon determining that the action is necessary to prevent undue hazard to public health and safety or property.~~

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

4731.0419 ADVANCE NOTIFICATION OF SHIPMENT OF IRRADIATED REACTOR FUEL AND NUCLEAR WASTE.

Subpart 1. **Notice required.** As specified in subparts 2 to 4, a licensee must provide advance notification to:

A. the commissioner, the governor of the state or the governor's designee, and the NRC of a shipment of licensed material through or across the boundary of the state before the transport, or delivery to a carrier for transport, of licensed material outside the confines of the licensee's plant or other place of use or storage~~.~~; and

B. the tribal official of participating tribes referenced in subpart 3, item B, or the official's designee, of the shipment of licensed material, within or across the boundary of the tribe's reservation, before the transport, or delivery to a carrier, for transport, of licensed material outside the confines of the licensee's plant or other place of use or storage.

Subp. 2. **Shipments requiring notice.** ~~Advance notification is required under this part for shipments of irradiated reactor fuel in quantities less than that subject to the advance notification requirements of *Code of Federal Regulations*, title 10, section 73.37, paragraph (f).~~ Advance notification is ~~also~~ required under this part for shipments of licensed material, other than irradiated fuel, meeting the following three conditions:

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

Subp. 3. **Procedures for submitting notification.**

A. The notification required under this part must:

(1) be made in writing to the commissioner, the office of each appropriate state governor or governor's designee, the office of each appropriate tribal official or tribal official's designee, and to the director of the Division of ~~Nuclear~~ Security Policy, Office of Nuclear Security and Incident Response, NRC;

(2) if delivered by mail, be postmarked at least seven days before the beginning of the seven-day period during which departure of the shipment is estimated to occur; and

(3) if delivered by any other means than mail, reach the office of the commissioner and the governor or governor's designee or the tribal official or tribal official's designee at least four days before the beginning of the seven-day period during which departure of the shipment is estimated to occur.

B. A list of the names and mailing addresses of the ~~governor's~~ governors' designees and tribal officials' designees of participating tribes receiving advance notification of transportation of nuclear waste is published annually in the Federal Register on or about June 30 to reflect changes in information. The list ~~of the names and mailing addresses of the governor's designees~~ is available on request from the Director, Office of ~~State and Tribal~~ Federal and State Materials and Environmental Programs, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

C. The licensee must retain a copy of the notification as a record for three years.

Subp. 4. **Information to be furnished in advance notification of shipment.** An advance notification of shipment of irradiated reactor fuel or nuclear waste must contain the following information:

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

D. the seven-day period during which arrival of the shipment at state boundaries or tribal reservation boundaries is estimated to occur;

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

Subp. 5. **Revision notice.** A licensee who finds that schedule information, previously furnished under this part to the commissioner and a governor or governor's designee or a tribal official or tribal official's designee, will not be met must telephone a responsible individual in the commissioner's office and the governor or governor's designee or the tribal official or the tribal official's designee and inform the individual of the extent of the delay beyond the schedule originally reported.

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

Subp. 6. **Cancellation notice.**

A. A licensee who cancels an irradiated reactor fuel or nuclear waste shipment for which advance notification has been sent must send a cancellation notice to the commissioner, the governor of each state or the governor's designee previously notified, each tribal official or the tribal official's designee previously notified, and the director of the Division of ~~Nuclear~~ Security Policy, Office of Nuclear Security and Incident Response, NRC.

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

4731.0422 A_1 AND A_2 VALUES FOR RADIONUCLIDES.

Subpart 1. [Repealed, 32 SR 831]

Subp. 1a. **A_1 and A_2 values.**

Element and atomic number and symbol of radionuclide	A_1 (TBq)	A_1 (Ci)[b]	A_2 (TBq)	A_2 (Ci)[b]
Actinium (89)				
Ac-225[a]	8.0×10^{-1}	2.2×10^{1}	6.0×10^{-3}	1.6×10^{-1}
Ac-227[a]	9.0×10^{-1}	2.4×10^{1}	9.0×10^{-5}	2.4×10^{-3}
Ac-228	6.0×10^{-1}	1.6×10^{1}	5.0×10^{-1}	1.4×10^{1}
Silver (47)				
Ag-105	2.0	5.4×10^{1}	2.0	5.4×10^{1}
Ag-108m[a]	7.0×10^{-1}	1.9×10^{1}	7.0×10^{-1}	1.9×10^{1}
Ag-110m[a]	4.0×10^{-1}	1.1×10^{1}	4.0×10^{-1}	1.1×10^{1}
Ag-111	2.0	5.4×10^{1}	6.0×10^{-1}	1.6×10^{1}
Aluminum (13)				
Al-26	1.0×10^{-1}	2.7	1.0×10^{-1}	2.7
Americium (95)				
Am-241	1.0×10^{1}	2.7×10^{2}	1.0×10^{-3}	2.7×10^{-2}
Am-242m[a]	1.0×10^{1}	2.7×10^{2}	1.0×10^{-3}	2.7×10^{-2}
Am-243[a]	5.0	1.4×10^{2}	1.0×10^{-3}	2.7×10^{-2}
Argon (18)				
Ar-37	4.0×10^{1}	1.1×10^{3}	4.0×10^{1}	1.1×10^{3}
Ar-39	4.0×10^{1}	1.1×10^{3}	2.0×10^{1}	5.4×10^{2}
Ar-41	3.0×10^{-1}	8.1	3.0×10^{-1}	8.1
Arsenic (33)				
As-72	3.0×10^{-1}	8.1	3.0×10^{-1}	8.1

As-73	4.0×10^{1}	1.1×10^{3}	4.0×10^{1}	1.1×10^{3}
As-74	1.0	2.7×10^{1}	9.0×10^{-1}	2.4×10^{1}
As-76	3.0×10^{-1}	8.1	3.0×10^{-1}	8.1
As-77	2.0×10^{1}	5.4×10^{2}	7.0×10^{-1}	1.9×10^{1}
Astatine (85)				
At-211[a]	2.0×10^{1}	5.4×10^{2}	5.0×10^{-1}	1.4×10^{1}
Gold (79)				
Au-193	7.0	1.9×10^{2}	2.0	5.4×10^{1}
Au-194	1.0	2.7×10^{1}	1.0	2.7×10^{1}
Au-195	1.0×10^{1}	2.7×10^{2}	6.0	1.6×10^{2}
Au-198	1.0	2.7×10^{1}	6.0×10^{-1}	1.6×10^{1}
Au-199	1.0×10^{1}	2.7×10^{2}	6.0×10^{-1}	1.6×10^{1}
Barium (56)				
Ba-131[a]	2.0	5.4×10^{1}	2.0	5.4×10^{1}
Ba-133	3.0	8.1×10^{1}	3.0	8.1×10^{1}
Ba-133m	2.0×10^{1}	5.4×10^{2}	6.0×10^{-1}	1.6×10^{1}
Ba-140[a]	5.0×10^{-1}	1.4×10^{1}	3.0×10^{-1}	8.1
Beryllium (4)				
Be-7	2.0×10^{1}	5.4×10^{2}	2.0×10^{1}	5.4×10^{2}
Be-10	4.0×10^{1}	1.1×10^{3}	6.0×10^{-1}	1.6×10^{1}
Bismuth (83)				
Bi-205	7.0×10^{-1}	1.9×10^{1}	7.0×10^{-1}	1.9×10^{1}
Bi-206	3.0×10^{-1}	8.1	3.0×10^{-1}	8.1
Bi-207	7.0×10^{-1}	1.9×10^{1}	7.0×10^{-1}	1.9×10^{1}
Bi-210	1.0	2.7×10^{1}	6.0×10^{-1}	1.6×10^{1}
Bi-210m[a]	6.0×10^{-1}	1.6×10^{1}	2.0×10^{-2}	5.4×10^{-1}
Bi-212[a]	7.0×10^{-1}	1.9×10^{1}	6.0×10^{-1}	1.6×10^{1}
Berkelium (97)				
Bk-247	8.0	2.2×10^{2}	8.0×10^{-4}	2.2×10^{-2}
Bk-249[a]	4.0×10^{1}	1.1×10^{3}	3.0×10^{-1}	8.1
Bromine (35)				
Br-76	4.0×10^{-1}	1.1×10^{1}	4.0×10^{-1}	1.1×10^{1}
Br-77	3.0	8.1×10^{1}	3.0	8.1×10^{1}
Br-82	4.0×10^{-1}	1.1×10^{1}	4.0×10^{-1}	1.1×10^{1}
Carbon (6)				
C-11	1.0	2.7×10^{1}	6.0×10^{-1}	1.6×10^{1}
C-14	4.0×10^{1}	1.1×10^{3}	3.0	8.1×10^{1}
Calcium (20)				
Ca-41	Unlimited	Unlimited	Unlimited	Unlimited
Ca-45	4.0×10^{1}	1.1×10^{3}	1.0	2.7×10^{1}
Ca-47[a]	3.0	8.1×10^{1}	3.0×10^{-1}	8.1
Cadmium (48)				
Cd-109	3.0×10^{1}	8.1×10^{2}	2.0	5.4×10^{1}
Cd-113m	4.0×10^{1}	1.1×10^{3}	5.0×10^{-1}	1.4×10^{1}

Cd-115[a]	3.0	8.1×10^{1}	4.0×10^{-1}	1.1×10^{1}
Cd-115m	5.0×10^{-1}	1.4×10^{1}	5.0×10^{-1}	1.4×10^{1}
Cerium (58)				
Ce-139	7.0	1.9×10^{2}	2.0	5.4×10^{1}
Ce-141	2.0×10^{1}	5.4×10^{2}	6.0×10^{-1}	1.6×10^{1}
Ce-143	9.0×10^{-1}	2.4×10^{1}	6.0×10^{-1}	1.6×10^{1}
Ce-144[a]	2.0×10^{-1}	5.4	2.0×10^{-1}	5.4
Californium (98)				
Cf-248	4.0×10^{1}	1.1×10^{3}	6.0×10^{-3}	1.6×10^{-1}
Cf-249	3.0	8.1×10^{1}	8.0×10^{-4}	2.2×10^{-2}
Cf-250	2.0×10^{1}	5.4×10^{2}	2.0×10^{-3}	5.4×10^{-2}
Cf-251	7.0	1.9×10^{2}	7.0×10^{-4}	1.9×10^{-2}
Cf-252[h]	5.0×10^{-2}	1.4	3.0×10^{-3}	8.1×10^{-2}
Cf-253[a]	4.0×10^{1}	1.1×10^{3}	4.0×10^{-2}	1.1
Cf-254	1.0×10^{-3}	2.7×10^{-2}	1.0×10^{-3}	2.7×10^{-2}
Chlorine (17)				
Cl-36	1.0×10^{1}	2.7×10^{2}	6.0×10^{-1}	1.6×10^{1}
Cl-38	2.0×10^{-1}	5.4	2.0×10^{-1}	5.4
Curium (96)				
Cm-240	4.0×10^{1}	1.1×10^{3}	2.0×10^{-2}	5.4×10^{-1}
Cm-241	2.0	5.4×10^{1}	1.0	2.7×10^{1}
Cm-242	4.0×10^{1}	1.1×10^{3}	1.0×10^{-2}	2.7×10^{-1}
Cm-243	9.0	2.4×10^{2}	1.0×10^{-3}	2.7×10^{-2}
Cm-244	2.0×10^{1}	5.4×10^{2}	2.0×10^{-3}	5.4×10^{-2}
Cm-245	9.0	2.4×10^{2}	9.0×10^{-4}	2.4×10^{-2}
Cm-246	9.0	2.4×10^{2}	9.0×10^{-4}	2.4×10^{-2}
Cm-247[a]	3.0	8.1×10^{1}	1.0×10^{-3}	2.7×10^{-2}
Cm-248	2.0×10^{-2}	5.4×10^{-1}	3.0×10^{-4}	8.1×10^{-3}
Cobalt (27)				
Co-55	5.0×10^{-1}	1.4×10^{1}	5.0×10^{-1}	1.4×10^{1}
Co-56	3.0×10^{-1}	8.1	3.0×10^{-1}	8.1
Co-57	1.0×10^{1}	2.7×10^{2}	1.0×10^{1}	2.7×10^{2}
Co-58	1.0	2.7×10^{1}	1.0	2.7×10^{1}
Co-58m	4.0×10^{1}	1.1×10^{3}	4.0×10^{1}	1.1×10^{3}
Co-60	4.0×10^{-1}	1.1×10^{1}	4.0×10^{-1}	1.1×10^{1}
Chromium (24)				
Cr-51	3.0×10^{1}	8.1×10^{2}	3.0×10^{1}	8.1×10^{2}
Cesium (55)				
Cs-129	4.0	1.1×10^{2}	4.0	1.1×10^{2}
Cs-131	3.0×10^{1}	8.1×10^{2}	3.0×10^{1}	8.1×10^{2}
Cs-132	1.0	2.7×10^{1}	1.0	2.7×10^{1}
Cs-134	7.0×10^{-1}	1.9×10^{1}	7.0×10^{-1}	1.9×10^{1}
Cs-134m	4.0×10^{1}	1.1×10^{3}	6.0×10^{-1}	1.6×10^{1}
Cs-135	4.0×10^{1}	1.1×10^{3}	1.0	2.7×10^{1}
Cs-136	5.0×10^{-1}	1.4×10^{1}	5.0×10^{-1}	1.4×10^{1}
Cs-137[a]	2.0	5.4×10^{1}	6.0×10^{-1}	1.6×10^{1}

Copper (29)				
Cu-64	6.0	1.6×10^{2}	1.0	2.7×10^{1}
Cu-67	1.0×10^{1}	2.7×10^{2}	7.0×10^{-1}	1.9×10^{1}
Dysprosium (66)				
Dy-159	2.0×10^{1}	5.4×10^{2}	2.0×10^{1}	5.4×10^{2}
Dy-165	9.0×10^{-1}	2.4×10^{1}	6.0×10^{-1}	1.6×10^{1}
Dy-166[a]	9.0×10^{-1}	2.4×10^{1}	3.0×10^{-1}	8.1
Erbium (68)				
Er-169	4.0×10^{1}	1.1×10^{3}	1.0	2.7×10^{1}
Er-171	8.0×10^{-1}	2.2×10^{1}	5.0×10^{-1}	1.4×10^{1}
Europium (63)				
Eu-147	2.0	5.4×10^{1}	2.0	5.4×10^{1}
Eu-148	5.0×10^{-1}	1.4×10^{1}	5.0×10^{-1}	1.4×10^{1}
Eu-149	2.0×10^{1}	5.4×10^{2}	2.0×10^{1}	5.4×10^{2}
Eu-150 (short-lived)	2.0	5.4×10^{1}	7.0×10^{-1}	1.9×10^{1}
Eu-150 (long-lived)	7.0×10^{-1}	1.9×10^{1}	7.0×10^{-1}	1.9×10^{1}
Eu-152	1.0	2.7×10^{1}	1.0	2.7×10^{1}
Eu-152m	8.0×10^{-1}	2.2×10^{1}	8.0×10^{-1}	2.2×10^{1}
Eu-154	9.0×10^{-1}	2.4×10^{1}	6.0×10^{-1}	1.6×10^{1}
Eu-155	2.0×10^{1}	5.4×10^{2}	3.0	8.1×10^{1}
Eu-156	7.0×10^{-1}	1.9×10^{1}	7.0×10^{-1}	1.9×10^{1}
Fluorine (9)				
F-18	1.0	2.7×10^{1}	6.0×10^{-1}	1.6×10^{1}
Iron (26)				
Fe-52[a]	3.0×10^{-1}	8.1	3.0×10^{-1}	8.1
Fe-55	4.0×10^{1}	1.1×10^{3}	4.0×10^{1}	1.1×10^{3}
Fe-59	9.0×10^{-1}	2.4×10^{1}	9.0×10^{-1}	2.4×10^{1}
Fe-60[a]	4.0×10^{1}	1.1×10^{3}	2.0×10^{-1}	5.4
Gallium (31)				
Ga-67	7.0	1.9×10^{2}	3.0	8.1×10^{1}
Ga-68	5.0×10^{-1}	1.4×10^{1}	5.0×10^{-1}	1.4×10^{1}
Ga-72	4.0×10^{-1}	1.1×10^{1}	4.0×10^{-1}	1.1×10^{1}
Gadolinium (64)				
Gd-146[a]	5.0×10^{-1}	1.4×10^{1}	5.0×10^{-1}	1.4×10^{1}
Gd-148	2.0×10^{1}	5.4×10^{2}	2.0×10^{-3}	5.4×10^{-2}
Gd-153	1.0×10^{1}	2.7×10^{2}	9.0	2.4×10^{2}
Gd-159	3.0	8.1×10^{1}	6.0×10^{-1}	1.6×10^{1}
Germanium (32)				
Ge-68[a]	5.0×10^{-1}	1.4×10^{1}	5.0×10^{-1}	1.4×10^{1}
Ge-71	4.0×10^{1}	1.1×10^{3}	4.0×10^{1}	1.1×10^{3}
Ge-77	3.0×10^{-1}	8.1	3.0×10^{-1}	8.1
Hafnium (72)				
Hf-172[a]	6.0×10^{-1}	1.6×10^{1}	6.0×10^{-1}	1.6×10^{1}
Hf-175	3.0	8.1×10^{1}	3.0	8.1×10^{1}
Hf-181	2.0	5.4×10^{1}	5.0×10^{-1}	1.4×10^{1}

Hf-182	Unlimited	Unlimited	Unlimited	Unlimited
Mercury (80)				
Hg-194[a]	1.0	2.7×10^{1}	1.0	2.7×10^{1}
Hg-195m[a]	3.0	8.1×10^{1}	7.0×10^{-1}	1.9×10^{1}
Hg-197	2.0×10^{1}	5.4×10^{2}	1.0×10^{1}	2.7×10^{2}
Hg-197m	1.0×10^{1}	2.7×10^{2}	4.0×10^{-1}	1.1×10^{1}
Hg-203	5.0	1.4×10^{2}	1.0	2.7×10^{1}
Holmium (67)				
Ho-166	4.0×10^{-1}	1.1×10^{1}	4.0×10^{-1}	1.1×10^{1}
Ho-166m	6.0×10^{-1}	1.6×10^{1}	5.0×10^{-1}	1.4×10^{1}
Iodine (53)				
I-123	6.0	1.6×10^{2}	3.0	8.1×10^{1}
I-124	1.0	2.7×10^{1}	1.0	2.7×10^{1}
I-125	2.0×10^{1}	5.4×10^{2}	3.0	8.1×10^{1}
I-126	2.0	5.4×10^{1}	1.0	2.7×10^{1}
I-129	Unlimited	Unlimited	Unlimited	Unlimited
I-131	3.0	8.1×10^{1}	7.0×10^{-1}	1.9×10^{1}
I-132	4.0×10^{-1}	1.1×10^{1}	4.0×10^{-1}	1.1×10^{1}
I-133	7.0×10^{-1}	1.9×10^{1}	6.0×10^{-1}	1.6×10^{1}
I-134	3.0×10^{-1}	8.1	3.0×10^{-1}	8.1
I-135[a]	6.0×10^{-1}	1.6×10^{1}	6.0×10^{-1}	1.6×10^{1}
Indium (49)				
In-111	3.0	8.1×10^{1}	3.0	8.1×10^{1}
In-113m	4.0	1.1×10^{2}	2.0	5.4×10^{1}
In-114m[a]	1.0×10^{1}	2.7×10^{2}	5.0×10^{-1}	1.4×10^{1}
In-115m	7.0	1.9×10^{2}	1.0	2.7×10^{1}
Iridium (77)				
Ir-189[a]	1.0×10^{1}	2.7×10^{2}	1.0×10^{1}	2.7×10^{2}
Ir-190	7.0×10^{-1}	1.9×10^{1}	7.0×10^{-1}	1.9×10^{1}
Ir-192[c]	1.0	2.7×10^{1}	6.0×10^{-1}	1.6×10^{1}
Ir-194	3.0×10^{-1}	8.1	3.0×10^{-1}	8.1
Potassium (19)				
K-40	9.0×10^{-1}	2.4×10^{1}	9.0×10^{-1}	2.4×10^{1}
K-42	2.0×10^{-1}	5.4	2.0×10^{-1}	5.4
K-43	7.0×10^{-1}	1.9×10^{1}	6.0×10^{-1}	1.6×10^{1}
Krypton (36)				
Kr-81	4.0×10^{1}	1.1×10^{3}	4.0×10^{1}	1.1×10^{3}
Kr-85	1.0×10^{1}	2.7×10^{2}	1.0×10^{1}	2.7×10^{2}
Kr-85m	8.0	2.2×10^{2}	3.0	8.1×10^{1}
Kr-87	2.0×10^{-1}	5.4	2.0×10^{-1}	5.4
Lanthanum (57)				
La-137	3.0×10^{1}	8.1×10^{2}	6.0	1.6×10^{2}
La-140	4.0×10^{-1}	1.1×10^{1}	4.0×10^{-1}	1.1×10^{1}

Lutetium (71)				
Lu-172	6.0×10^{-1}	1.6×10^{1}	6.0×10^{-1}	1.6×10^{1}
Lu-173	8.0	2.2×10^{2}	8.0	2.2×10^{2}
Lu-174	9.0	2.4×10^{2}	9.0	2.4×10^{2}
Lu-174m	2.0×10^{1}	5.4×10^{2}	1.0×10^{1}	2.7×10^{2}
Lu-177	3.0×10^{1}	8.1×10^{2}	7.0×10^{-1}	1.9×10^{1}
Magnesium (12)				
Mg-28[a]	3.0×10^{-1}	8.1	3.0×10^{-1}	8.1
Manganese (25)				
Mn-52	3.0×10^{-1}	8.1	3.0×10^{-1}	8.1
Mn-53	Unlimited	Unlimited	Unlimited	Unlimited
Mn-54	1.0	2.7×10^{1}	1.0	2.7×10^{1}
Mn-56	3.0×10^{-1}	8.1	3.0×10^{-1}	8.1
Molybdenum (42)				
Mo-93	4.0×10^{1}	1.1×10^{3}	2.0×10^{1}	5.4×10^{2}
Mo-99[a,i]	1.0	2.7×10^{1}	6.0×10^{-1}	1.6×10^{1}
Nitrogen (7)				
N-13	9.0×10^{-1}	2.4×10^{1}	6.0×10^{-1}	1.6×10^{1}
Sodium (11)				
Na-22	5.0×10^{-1}	1.4×10^{1}	5.0×10^{-1}	1.4×10^{1}
Na-24	2.0×10^{-1}	5.4	2.0×10^{-1}	5.4
Niobium (41)				
Nb-93m	4.0×10^{1}	1.1×10^{3}	3.0×10^{1}	8.1×10^{2}
Nb-94	7.0×10^{-1}	1.9×10^{1}	7.0×10^{-1}	1.9×10^{1}
Nb-95	1.0	2.7×10^{1}	1.0	2.7×10^{1}
Nb-97	9.0×10^{-1}	2.4×10^{1}	6.0×10^{-1}	1.6×10^{1}
Neodymium (60)				
Nd-147	6.0	1.6×10^{2}	6.0×10^{-1}	1.6×10^{1}
Nd-149	6.0×10^{-1}	1.6×10^{1}	5.0×10^{-1}	1.4×10^{1}
Nickel (28)				
Ni-59	Unlimited	Unlimited	Unlimited	Unlimited
Ni-63	4.0×10^{1}	1.1×10^{3}	3.0×10^{1}	8.1×10^{2}
Ni-65	4.0×10^{-1}	1.1×10^{1}	4.0×10^{-1}	1.1×10^{1}
Neptunium (93)				
Np-235	4.0×10^{1}	1.1×10^{3}	4.0×10^{1}	1.1×10^{3}
Np-236 (short-lived)	2.0×10^{1}	5.4×10^{2}	2.0	5.4×10^{1}
Np-236 (long-lived)	9.0×10^{0}	2.4×10^{2}	2.0×10^{-2}	5.4×10^{-1}
Np-237	2.0×10^{1}	5.4×10^{2}	2.0×10^{-3}	5.4×10^{-2}
Np-239	7.0	1.9×10^{2}	4.0×10^{-1}	1.1×10^{1}
Osmium (76)				
Os-185	1.0	2.7×10^{1}	1.0	2.7×10^{1}
Os-191	1.0×10^{1}	2.7×10^{2}	2.0	5.4×10^{1}
Os-191m	4.0×10^{1}	1.1×10^{3}	3.0×10^{1}	8.1×10^{2}

Os-193	2.0	5.4×10^{1}	6.0×10^{-1}	1.6×10^{1}
Os-194[a]	3.0×10^{-1}	8.1	3.0×10^{-1}	8.1
Phosphorus (15)				
P-32	5.0×10^{-1}	1.4×10^{1}	5.0×10^{-1}	1.4×10^{1}
P-33	4.0×10^{1}	1.1×10^{3}	1.0	2.7×10^{1}
Protactinium (91)				
Pa-230[a]	2.0	5.4×10^{1}	7.0×10^{-2}	1.9
Pa-231	4.0	1.1×10^{2}	4.0×10^{-4}	1.1×10^{-2}
Pa-233	5.0	1.4×10^{2}	7.0×10^{-1}	1.9×10^{1}
Lead (82)				
Pb-201	1.0	2.7×10^{1}	1.0	2.7×10^{1}
Pb-202	4.0×10^{1}	1.1×10^{3}	2.0×10^{1}	5.4×10^{2}
Pb-203	4.0	1.1×10^{2}	3.0	8.1×10^{1}
Pb-205	Unlimited	Unlimited	Unlimited	Unlimited
Pb-210[a]	1.0	2.7×10^{1}	5.0×10^{-2}	1.4
Pb-212[a]	7.0×10^{-1}	1.9×10^{1}	2.0×10^{-1}	5.4
Palladium (46)				
Pd-103[a]	4.0×10^{1}	1.1×10^{3}	4.0×10^{1}	1.1×10^{3}
Pd-107	Unlimited	Unlimited	Unlimited	Unlimited
Pd-109	2.0	5.4×10^{1}	5.0×10^{-1}	1.4×10^{1}
Promethium (61)				
Pm-143	3.0	8.1×10^{1}	3.0	8.1×10^{1}
Pm-144	7.0×10^{-1}	1.9×10^{1}	7.0×10^{-1}	1.9×10^{1}
Pm-145	3.0×10^{1}	8.1×10^{2}	1.0×10^{1}	2.7×10^{2}
Pm-147	4.0×10^{1}	1.1×10^{3}	2.0	5.4×10^{1}
Pm-148m[a]	8.0×10^{-1}	2.2×10^{1}	7.0×10^{-1}	1.9×10^{1}
Pm-149	2.0	5.4×10^{1}	6.0×10^{-1}	1.6×10^{1}
Pm-151	2.0	5.4×10^{1}	6.0×10^{-1}	1.6×10^{1}
Polonium (84)				
Po-210	4.0×10^{1}	1.1×10^{3}	2.0×10^{-2}	5.4×10^{-1}
Praseodymium (59)				
Pr-142	4.0×10^{-1}	1.1×10^{1}	4.0×10^{-1}	1.1×10^{1}
Pr-143	3.0	8.1×10^{1}	6.0×10^{-1}	1.6×10^{1}
Platinum (78)				
Pt-188[a]	1.0	2.7×10^{1}	8.0×10^{-1}	2.2×10^{1}
Pt-191	4.0	1.1×10^{2}	3.0	8.1×10^{1}
Pt-193	4.0×10^{1}	1.1×10^{3}	4.0×10^{1}	1.1×10^{3}
Pt-193m	4.0×10^{1}	1.1×10^{3}	5.0×10^{-1}	1.4×10^{1}
Pt-195m	1.0×10^{1}	2.7×10^{2}	5.0×10^{-1}	1.4×10^{1}
Pt-197	2.0×10^{1}	5.4×10^{2}	6.0×10^{-1}	1.6×10^{1}
Pt-197m	1.0×10^{1}	2.7×10^{2}	6.0×10^{-1}	1.6×10^{1}
Plutonium (94)				
Pu-236	3.0×10^{1}	8.1×10^{2}	3.0×10^{-3}	8.1×10^{-2}
Pu-237	2.0×10^{1}	5.4×10^{2}	2.0×10^{1}	5.4×10^{2}
Pu-238	1.0×10^{1}	2.7×10^{2}	1.0×10^{-3}	2.7×10^{-2}

Pu-239	1.0×10^{1}	2.7×10^{2}	1.0×10^{-3}	2.7×10^{-2}
Pu-240	1.0×10^{1}	2.7×10^{2}	1.0×10^{-3}	2.7×10^{-2}
Pu-241[a]	4.0×10^{1}	1.1×10^{3}	6.0×10^{-2}	1.6
Pu-242	1.0×10^{1}	2.7×10^{2}	1.0×10^{-3}	2.7×10^{-2}
Pu-244[a]	4.0×10^{-1}	1.1×10^{1}	1.0×10^{-3}	2.7×10^{-2}
Radium (88)				
Ra-223[a]	4.0×10^{-1}	1.1×10^{1}	7.0×10^{-3}	1.9×10^{-1}
Ra-224[a]	4.0×10^{-1}	1.1×10^{1}	2.0×10^{-2}	5.4×10^{-1}
Ra-225[a]	2.0×10^{-1}	5.4	4.0×10^{-3}	1.1×10^{-1}
Ra-226[a]	2.0×10^{-1}	5.4	3.0×10^{-3}	8.1×10^{-2}
Ra-228[a]	6.0×10^{-1}	1.6×10^{1}	2.0×10^{-2}	5.4×10^{-1}
Rubidium (37)				
Rb-81	2.0	5.4×10^{1}	8.0×10^{-1}	2.2×10^{1}
Rb-83[a]	2.0	5.4×10^{1}	2.0	5.4×10^{1}
Rb-84	1.0	2.7×10^{1}	1.0	2.7×10^{1}
Rb-86	5.0×10^{-1}	1.4×10^{1}	5.0×10^{-1}	1.4×10^{1}
Rb-87	Unlimited	Unlimited	Unlimited	Unlimited
Rb (nat)	Unlimited	Unlimited	Unlimited	Unlimited
Rhenium (75)				
Re-184	1.0	2.7×10^{1}	1.0	2.7×10^{1}
Re-184m	3.0	8.1×10^{1}	1.0	2.7×10^{1}
Re-186	2.0	5.4×10^{1}	6.0×10^{-1}	1.6×10^{1}
Re-187	Unlimited	Unlimited	Unlimited	Unlimited
Re-188	4.0×10^{-1}	1.1×10^{1}	4.0×10^{-1}	1.1×10^{1}
Re-189[a]	3.0	8.1×10^{1}	6.0×10^{-1}	1.6×10^{1}
Re (nat)	Unlimited	Unlimited	Unlimited	Unlimited
Rhodium (45)				
Rh-99	2.0	5.4×10^{1}	2.0	5.4×10^{1}
Rh-101	4.0	1.1×10^{2}	3.0	8.1×10^{1}
Rh-102	5.0×10^{-1}	1.4×10^{1}	5.0×10^{-1}	1.4×10^{1}
Rh-102m	2.0	5.4×10^{1}	2.0	5.4×10^{1}
Rh-103m	4.0×10^{1}	1.1×10^{3}	4.0×10^{1}	1.1×10^{3}
Rh-105	1.0×10^{1}	2.7×10^{2}	8.0×10^{-1}	2.2×10^{1}
Radon (86)				
Rn-222[a]	3.0×10^{-1}	8.1	4.0×10^{-3}	1.1×10^{-1}
Ruthenium (44)				
Ru-97	5.0	1.4×10^{2}	5.0	1.4×10^{2}
Ru-103[a]	2.0	5.4×10^{1}	2.0	5.4×10^{1}
Ru-105	1.0	2.7×10^{1}	6.0×10^{-1}	1.6×10^{1}
Ru-106[a]	2.0×10^{-1}	5.4	2.0×10^{-1}	5.4
Sulphur (16)				
S-35	4.0×10^{1}	1.1×10^{3}	3.0	8.1×10^{1}
Antimony (51)				
Sb-122	4.0×10^{-1}	1.1×10^{1}	4.0×10^{-1}	1.1×10^{1}
Sb-124	6.0×10^{-1}	1.6×10^{1}	6.0×10^{-1}	1.6×10^{1}
Sb-125	2.0	5.4×10^{1}	1.0	2.7×10^{1}

Sb-126	4.0×10^{-1}	1.1×10^{1}	4.0×10^{-1}	1.1×10^{1}
Scandium (21)				
Sc-44	5.0×10^{-1}	1.4×10^{1}	5.0×10^{-1}	1.4×10^{1}
Sc-46	5.0×10^{-1}	1.4×10^{1}	5.0×10^{-1}	1.4×10^{1}
Sc-47	1.0×10^{1}	2.7×10^{2}	7.0×10^{-1}	1.9×10^{1}
Sc-48	3.0×10^{-1}	8.1	3.0×10^{-1}	8.1
Selenium (34)				
Se-75	3.0	8.1×10^{1}	3.0	8.1×10^{1}
Se-79	4.0×10^{1}	1.1×10^{3}	2.0	5.4×10^{1}
Silicon (14)				
Si-31	6.0×10^{-1}	1.6×10^{1}	6.0×10^{-1}	1.6×10^{1}
Si-32	4.0×10^{1}	1.1×10^{3}	5.0×10^{-1}	1.4×10^{1}
Samarium (62)				
Sm-145	1.0×10^{1}	2.7×10^{2}	1.0×10^{1}	2.7×10^{2}
Sm-147	Unlimited	Unlimited	Unlimited	Unlimited
Sm-151	4.0×10^{1}	1.1×10^{3}	1.0×10^{1}	2.7×10^{2}
Sm-153	9.0	2.4×10^{2}	6.0×10^{-1}	1.6×10^{1}
Tin (50)				
Sn-113[a]	4.0	1.1×10^{2}	2.0	5.4×10^{1}
Sn-117m	7.0	1.9×10^{2}	4.0×10^{-1}	1.1×10^{1}
Sn-119m	4.0×10^{1}	1.1×10^{3}	3.0×10^{1}	8.1×10^{2}
Sn-121m[a]	4.0×10^{1}	1.1×10^{3}	9.0×10^{-1}	2.4×10^{1}
Sn-123	8.0×10^{-1}	2.2×10^{1}	6.0×10^{-1}	1.6×10^{1}
Sn-125	4.0×10^{-1}	1.1×10^{1}	4.0×10^{-1}	1.1×10^{1}
Sn-126[a]	6.0×10^{-1}	1.6×10^{1}	4.0×10^{-1}	1.1×10^{1}
Strontium (38)				
Sr-82[a]	2.0×10^{-1}	5.4	2.0×10^{-1}	5.4
Sr-85	2.0	5.4×10^{1}	2.0	5.4×10^{1}
Sr-85m	5.0	1.4×10^{2}	5.0	1.4×10^{2}
Sr-87m	3.0	8.1×10^{1}	3.0	8.1×10^{1}
Sr-89	6.0×10^{-1}	1.6×10^{1}	6.0×10^{-1}	1.6×10^{1}
Sr-90[a]	3.0×10^{-1}	8.1	3.0×10^{-1}	8.1
Sr-91[a]	3.0×10^{-1}	8.1	3.0×10^{-1}	8.1
Sr-92[a]	1.0	2.7×10^{1}	3.0×10^{-1}	8.1
Tritium (1)				
T (H-3)	4.0×10^{1}	1.1×10^{3}	4.0×10^{1}	1.1×10^{3}
Tantalum (73)				
Ta-178 (long-lived)	1.0	2.7×10^{1}	8.0×10^{-1}	2.2×10^{1}
Ta-179	3.0×10^{1}	8.1×10^{2}	3.0×10^{1}	8.1×10^{2}
Ta-182	9.0×10^{-1}	2.4×10^{1}	5.0×10^{-1}	1.4×10^{1}
Terbium (65)				
Tb-157	4.0×10^{1}	1.1×10^{3}	4.0×10^{1}	1.1×10^{3}
Tb-158	1.0	2.7×10^{1}	1.0	2.7×10^{1}
Tb-160	1.0	2.7×10^{1}	6.0×10^{-1}	1.6×10^{1}

Technetium (43)				
Tc-95m[a]	2.0	5.4×10^{1}	2.0	5.4×10^{1}
Tc-96	4.0×10^{-1}	1.1×10^{1}	4.0×10^{-1}	1.1×10^{1}
Tc-96m[a]	4.0×10^{-1}	1.1×10^{1}	4.0×10^{-1}	1.1×10^{1}
Tc-97	Unlimited	Unlimited	Unlimited	Unlimited
Tc-97m	4.0×10^{1}	1.1×10^{3}	1.0	2.7×10^{1}
Tc-98	8.0×10^{-1}	2.2×10^{1}	7.0×10^{-1}	1.9×10^{1}
Tc-99	4.0×10^{1}	1.1×10^{3}	9.0×10^{-1}	2.4×10^{1}
Tc-99m	1.0×10^{1}	2.7×10^{2}	4.0	1.1×10^{2}
Tellurium (52)				
Te-121	2.0	5.4×10^{1}	2.0	5.4×10^{1}
Te-121m	5.0	1.4×10^{2}	3.0	8.1×10^{1}
Te-123m	8.0	2.2×10^{2}	1.0	2.7×10^{1}
Te-125m	2.0×10^{1}	5.4×10^{2}	9.0×10^{-1}	2.4×10^{1}
Te-127	2.0×10^{1}	5.4×10^{2}	7.0×10^{-1}	1.9×10^{1}
Te-127m[a]	2.0×10^{1}	5.4×10^{2}	5.0×10^{-1}	1.4×10^{1}
Te-129	7.0×10^{-1}	1.9×10^{1}	6.0×10^{-1}	1.6×10^{1}
Te-129m[a]	8.0×10^{-1}	2.2×10^{1}	4.0×10^{-1}	1.1×10^{1}
Te-131m[a]	7.0×10^{-1}	1.9×10^{1}	5.0×10^{-1}	1.4×10^{1}
Te-132[a]	5.0×10^{-1}	1.4×10^{1}	4.0×10^{-1}	1.1×10^{1}
Thorium (90)				
Th-227	1.0×10^{1}	2.7×10^{2}	5.0×10^{-3}	1.4×10^{-1}
Th-228[a]	5.0×10^{-1}	1.4×10^{1}	1.0×10^{-3}	2.7×10^{-2}
Th-229	5.0	1.4×10^{2}	5.0×10^{-4}	1.4×10^{-2}
Th-230	1.0×10^{1}	2.7×10^{2}	1.0×10^{-3}	2.7×10^{-2}
Th-231	4.0×10^{1}	1.1×10^{3}	2.0×10^{-2}	5.4×10^{-1}
Th-232	Unlimited	Unlimited	Unlimited	Unlimited
Th-234[a]	3.0×10^{-1}	8.1	3.0×10^{-1}	8.1
Th (nat)	Unlimited	Unlimited	Unlimited	Unlimited
Titanium (22)				
Ti-44[a]	5.0×10^{-1}	1.4×10^{1}	4.0×10^{-1}	1.1×10^{1}
Thallium (81)				
Tl-200	9.0×10^{-1}	2.4×10^{1}	9.0×10^{-1}	2.4×10^{1}
Tl-201	1.0×10^{1}	2.7×10^{2}	4.0	1.1×10^{2}
Tl-202	2.0	5.4×10^{1}	2.0	5.4×10^{1}
Tl-204	1.0×10^{1}	2.7×10^{2}	7.0×10^{-1}	1.9×10^{1}
Thulium (69)				
Tm-167	7.0	1.9×10^{2}	8.0×10^{-1}	2.2×10^{1}
Tm-170	3.0	8.1×10^{1}	6.0×10^{-1}	1.6×10^{1}
Tm-171	4.0×10^{1}	1.1×10^{3}	4.0×10^{1}	1.1×10^{3}
Uranium (92)				
U-230 (fast lung absorption)[a,d]	4.0×10^{1}	1.1×10^{3}	1.0×10^{-1}	2.7
U-230 (medium lung absorption)[a,e]	4.0×10^{1}	1.1×10^{3}	4.0×10^{-3}	1.1×10^{-1}
U-230 (slow lung absorption)[a,f]	3.0×10^{1}	8.1×10^{2}	3.0×10^{-3}	8.1×10^{-2}
U-232 (fast lung absorption)[d]	4.0×10^{1}	1.1×10^{3}	1.0×10^{-2}	2.7×10^{-1}
U-232 (medium lung absorption)[e]	4.0×10^{1}	1.1×10^{3}	7.0×10^{-3}	1.9×10^{-1}
U-232 (slow lung absorption)[f]	1.0×10^{1}	2.7×10^{2}	1.0×10^{-3}	2.7×10^{-2}
U-233 (fast lung absorption)[d]	4.0×10^{1}	1.1×10^{3}	9.0×10^{-2}	2.4

U-233 (medium lung absorption)[e]	4.0×10^{1}	1.1×10^{3}	2.0×10^{-2}	5.4×10^{-1}
U-233 (slow lung absorption)[f]	4.0×10^{1}	1.1×10^{3}	6.0×10^{-3}	1.6×10^{-1}
U-234 (fast lung absorption)[d]	4.0×10^{1}	1.1×10^{3}	9.0×10^{-2}	2.4
U-234 (medium lung absorption)[e]	4.0×10^{1}	1.1×10^{3}	2.0×10^{-2}	5.4×10^{-1}
U-234 (slow lung absorption)[f]	4.0×10^{1}	1.1×10^{3}	6.0×10^{-3}	1.6×10^{-1}
U-235 (all lung absorption types)[a,d,e,f]	Unlimited	Unlimited	Unlimited	Unlimited
U-236 (fast lung absorption)[d]	Unlimited	Unlimited	Unlimited	Unlimited
U-236 (medium lung absorption)[e]	4.0×10^{1}	1.1×10^{3}	2.0×10^{-2}	5.4×10^{-1}
U-236 (slow lung absorption)[f]	4.0×10^{1}	1.1×10^{3}	6.0×10^{-3}	1.6×10^{-1}
U-238 (all lung absorption types)[d,e,f]	Unlimited	Unlimited	Unlimited	Unlimited
U (nat)	Unlimited	Unlimited	Unlimited	Unlimited
U (enriched to 20% or less)[g]	Unlimited	Unlimited	Unlimited	Unlimited
U (dep)	Unlimited	Unlimited	Unlimited	Unlimited
Vanadium (23)				
V-48	4.0×10^{-1}	1.1×10^{1}	4.0×10^{-1}	1.1×10^{1}
V-49	4.0×10^{1}	1.1×10^{3}	4.0×10^{1}	1.1×10^{3}
Tungsten (74)				
W-178[a]	9.0	2.4×10^{2}	5.0	1.4×10^{2}
W-181	3.0×10^{1}	8.1×10^{2}	3.0×10^{1}	8.1×10^{2}
W-185	4.0×10^{1}	1.1×10^{3}	8.0×10^{-1}	2.2×10^{1}
W-187	2.0	5.4×10^{1}	6.0×10^{-1}	1.6×10^{1}
W-188[a]	4.0×10^{-1}	1.1×10^{1}	3.0×10^{-1}	8.1
Xenon (54)				
Xe-122[a]	4.0×10^{-1}	1.1×10^{1}	4.0×10^{-1}	1.1×10^{1}
Xe-123	2.0	5.4×10^{1}	7.0×10^{-1}	1.9×10^{1}
Xe-127	4.0	1.1×10^{2}	2.0	5.4×10^{1}
Xe-131m	4.0×10^{1}	1.1×10^{3}	4.0×10^{1}	1.1×10^{3}
Xe-133	2.0×10^{1}	5.4×10^{2}	1.0×10^{1}	2.7×10^{2}
Xe-135	3.0	8.1×10^{1}	2.0	5.4×10^{1}
Yttrium (39)				
Y-87[a]	1.0	2.7×10^{1}	1.0	2.7×10^{1}
Y-88	4.0×10^{-1}	1.1×10^{1}	4.0×10^{-1}	1.1×10^{1}
Y-90	3.0×10^{-1}	8.1	3.0×10^{-1}	8.1
Y-91	6.0×10^{-1}	1.6×10^{1}	6.0×10^{-1}	1.6×10^{1}
Y-91m	2.0	5.4×10^{1}	2.0	5.4×10^{1}
Y-92	2.0×10^{-1}	5.4	2.0×10^{-1}	5.4
Y-93	3.0×10^{-1}	8.1	3.0×10^{-1}	8.1
Ytterbium (70)				
Yb-169	4.0	1.1×10^{2}	1.0	2.7×10^{1}
Yb-175	3.0×10^{1}	8.1×10^{2}	9.0×10^{-1}	2.4×10^{1}
Zinc (30)				
Zn-65	2.0	5.4×10^{1}	2.0	5.4×10^{1}
Zn-69	3.0	8.1×10^{1}	6.0×10^{-1}	1.6×10^{1}
Zn-69m[a]	3.0	8.1×10^{1}	6.0×10^{-1}	1.6×10^{1}

Zirconium (40)				
Zr-88	3.0	8.1×10^{1}	3.0	8.1×10^{1}
Zr-93	Unlimited	Unlimited	Unlimited	Unlimited
Zr-95[a]	2.0	5.4×10^{1}	8.0×10^{-1}	2.2×10^{1}
Zr-97[a]	4.0×10^{-1}	1.1×10^{1}	4.0×10^{-1}	1.1×10^{1}

[a]A_1 and A_2 values include contributions from daughter nuclides with half-lives less than ten days. [b]The values of A_1 and A_2 in curies (Ci) are approximate and for information only; the regulatory standard units are Terabecquerels (TBq). See ~~Appendix A to *Code of Federal Regulations*, title 10, Part 71~~ part 4731.0423, subpart 1 - Determination of A_1 and A_2~~, Section I~~. [c]The quantity may be determined from a measurement of the rate of decay or a measurement of the radiation level at a prescribed distance from the source. [d]These values apply only to compounds of uranium that take the chemical form of UF_6, UO_2F_2, and $UO_2(NO_3)_2$ in both normal and accident conditions of transport. [e]These values apply only to compounds of uranium that take the chemical form of UO_3, UF_4, and UCl_4 and hexavalent compounds in both normal and accident conditions of transport. [f]These values apply to all compounds of uranium other than those specified in notes d and e. [g]These values apply to unirradiated uranium only. [h]A_1 = 0.1 TBq (2.7 Ci) and A_2 = 0.001 TBq (0.027 Ci) for Cf-252 for domestic use. [i]A_2 = 0.74 TBq (20 Ci) for Mo-99 for domestic use.

Subp. 2. **Specific activity.** This subpart specifies specific activity for individual radionuclides.

Element and Atomic Number and Symbol of Radionuclide	**Specific Activity (Tbq/g)**	**(Ci/g)**
Actinium (89)		
Ac-225	2.1×10^{3}	5.8×10^{4}
Ac-227	2.7	7.2×10^{1}
Ac-228	8.4×10^{4}	2.2×10^{6}
Silver (47)		
Ag-105	1.1×10^{3}	3.0×10^{4}
Ag-108m	9.7×10^{-1}	2.6×10^{1}
Ag-110m	1.8×10^{2}	4.7×10^{3}
Ag-111	5.8×10^{3}	1.6×10^{5}
Aluminum (13)		
Al-26	7.0×10^{-4}	1.9×10^{-2}
Americium (95)		
Am-241	1.3×10^{-1}	3.4
Am-242m	3.6×10^{-1}	1.0×10^{1}
Am-243	7.4×10^{-3}	2.0×10^{-1}
Argon (18)		
Ar-37	3.7×10^{3}	9.9×10^{4}
Ar-39	1.3	3.4×10^{1}
Ar-41	1.5×10^{6}	4.2×10^{7}
Ar-42	9.6	2.6×10^{2}
Arsenic (33)		
As-72	6.2×10^{4}	1.7×10^{6}
As-73	8.2×10^{2}	2.2×10^{4}
As-74	3.7×10^{3}	9.9×10^{4}
As-76	5.8×10^{4}	1.6×10^{6}
As-77	3.9×10^{4}	1.0×10^{6}

Astatine (85)		
At-211	7.6×10^{4}	2.1×10^{6}
Gold (79)		
Au-193	3.4×10^{4}	9.2×10^{5}
Au-194	1.5×10^{4}	4.1×10^{5}
Au-195	1.4×10^{2}	3.7×10^{3}
Au-196	4.0×10^{3}	1.1×10^{5}
Au-198	9.0×10^{3}	2.4×10^{5}
Au-199	7.7×10^{3}	2.1×10^{5}
Barium (56)		
Ba-131	3.1×10^{3}	8.4×10^{4}
Ba-133m	2.2×10^{4}	6.1×10^{5}
Ba-133	9.4	2.6×10^{2}
Ba-140	2.7×10^{3}	7.3×10^{4}
Beryllium (4)		
Be-7	1.3×10^{4}	3.5×10^{5}
Be-10	8.3×10^{-4}	2.2×10^{-2}
Bismuth (83)		
Bi-205	1.5×10^{-3} [3]	4.2×10^{4}
Bi-206	3.8×10^{3}	1.0×10^{5}
Bi-207	1.9	5.2×10^{1}
Bi-210m	2.1×10^{-5}	5.7×10^{-4}
Bi-210	4.6×10^{3}	1.2×10^{5}
Bi-212	5.4×10^{5}	1.5×10^{7}
Berkelium (97)		
Bk-247	3.8×10^{-2}	1.0
Bk-249	6.1×10^{1}	1.6×10^{3}
Bromine (35)		
Br-76	9.4×10^{4}	2.5×10^{6}
Br-77	2.6×10^{4}	7.1×10^{5}
Br-82	4.0×10^{4}	1.1×10^{6}
Carbon (6)		
C-11	3.1×10^{7}	8.4×10^{8}
C-14	1.6×10^{-1}	4.5
Calcium (20)		
Ca-41	3.1×10^{-3}	8.5×10^{-2}
Ca-45	6.6×10^{2}	1.8×10^{4}
Ca-47	2.3×10^{4}	6.1×10^{5}
Cadmium (48)		
Cd-109	9.6×10^{1}	2.6×10^{3}
Cd-113m	8.3	2.2×10^{2}
Cd-115m	9.4×10^{2}	2.5×10^{4}
Cd-115	1.9×10^{4}	5.1×10^{5}

Cerium (58)		
Ce-139	2.5×10^{2}	6.8×10^{3}
Ce-141	1.1×10^{3}	2.8×10^{4}
Ce-143	2.5×10^{4}	6.6×10^{5}
Ce-144	1.2×10^{2}	3.2×10^{3}
Californium (98)		
Cf-248	5.8×10^{1}	1.6×10^{3}
Cf-249	1.5×10^{-1}	4.1
Cf-250	4.0	1.1×10^{2}
Cf-251	5.9×10^{-2}	1.6
Cf-252	2.0×10^{1}	5.4×10^{2}
Cf-253	1.1×10^{3}	2.9×10^{4}
Cf-254	3.1×10^{2}	8.5×10^{3}
Chlorine (17)		
Cl-36	1.2×10^{-3}	3.3×10^{-2}
Cl-38	4.9×10^{6}	1.3×10^{8}
Curium (96)		
Cm-240	7.5×10^{2}	2.0×10^{4}
Cm-241	6.1×10^{2}	1.7×10^{4}
Cm-242	1.2×10^{2}	3.3×10^{3}
Cm-243	1.9×10^{-3}	5.2×10^{1}
Cm-244	3.0	8.1×10^{1}
Cm-245	6.4×10^{-3}	1.7×10^{-1}
Cm-246	1.1×10^{-2}	3.1×10^{-1}
Cm-247	3.4×10^{-6}	9.3×10^{-5}
Cm-248	$1.6 \times 10^{-5\,-4}$	4.2×10^{-3}
Cobalt (27)		
Co-55	1.1×10^{5}	3.1×10^{6}
Co-56	1.1×10^{3}	3.0×10^{4}
Co-57	3.1×10^{2}	8.4×10^{3}
Co-58m	2.2×10^{5}	5.9×10^{6}
Co-58	1.2×10^{3}	3.2×10^{4}
Co-60	4.2×10^{1}	1.1×10^{3}
Chromium (24)		
Cr-51	3.4×10^{3}	9.2×10^{4}
Cesium (55)		
Cs-129	2.8×10^{4}	7.6×10^{5}
Cs-131	3.8×10^{3}	1.0×10^{5}
Cs-132	5.7×10^{3}	1.5×10^{5}
Cs-134m	3.0×10^{5}	8.0×10^{6}
Cs-134	4.8×10^{1}	1.3×10^{3}
Cs-135	4.3×10^{-5}	1.2×10^{-3}
Cs-136	2.7×10^{3}	7.3×10^{4}
Cs-137	3.2	8.7×10^{1}
Copper (29)		
Cu-64	1.4×10^{5}	3.9×10^{6}
Cu-67	2.8×10^{4}	7.6×10^{5}

Dysprosium (66)		
Dy-159	2.1×10^{2}	5.7×10^{3}
Dy-165	3.0×10^{5}	8.2×10^{6}
Dy-166	8.6×10^{3}	2.3×10^{5}
Erbium (68)		
Er-169	3.1×10^{3}	8.3×10^{4}
Er-171	9.0×10^{4}	2.4×10^{6}
Einsteinium (99)		
Es-253	—	—
Es-254	—	—
Es-254m	—	—
Es-255	—	—
Europium (63)		
Eu-147	1.4×10^{3}	3.7×10^{4}
Eu-148	6.0×10^{2}	1.6×10^{4}
Eu-149	3.5×10^{2}	9.4×10^{3}
Eu-150	6.1×10^{4}	1.6×10^{6}
Eu-152m	8.2×10^{4}	2.2×10^{6}
Eu-152	6.5	1.8×10^{2}
Eu-154	9.8	2.6×10^{2}
Eu-155	1.8×10^{1}	4.9×10^{2}
Eu-156	2.0×10^{3}	5.5×10^{4}
Fluorine (9)		
F-18	3.5×10^{6}	9.5×10^{7}
Iron (26)		
Fe-52	2.7×10^{5}	7.3×10^{6}
Fe-55	8.8×10^{1}	2.4×10^{3}
Fe-59	1.8×10^{3}	5.0×10^{4}
Fe-60	7.4×10^{-4}	2.0×10^{-2}
Fermium (100)		
Fm-255	—	—
Fm-257	—	—
Gallium (31)		
Ga-67	2.2×10^{4}	6.0×10^{5}
Ga-68	1.5×10^{6}	4.1×10^{7}
Ga-72	1.1×10^{5}	3.1×10^{6}
Gadolinium (64)		
Gd-146	6.9×10^{2}	1.9×10^{4}
Gd-148	1.2	3.2×10^{1}
Gd-153	1.3×10^{2}	3.5×10^{3}
Gd-159	3.9×10^{4}	1.1×10^{6}
Germanium (32)		
Ge-68	2.6×10^{2}	7.1×10^{3}
Ge-71	5.8×10^{3}	1.6×10^{5}
Ge-77	1.3×10^{5}	3.6×10^{6}

Hydrogen (1)		
H-3 (T)	3.6×10^{2}	9.7×10^{3}
Hafnium (72)		
Hf-172	4.1×10^{1}	1.1×10^{3}
Hf-175	3.9×10^{2}	1.1×10^{4}
Hf-181	6.3×10^{2}	1.7×10^{4}
Hf-182	8.1×10^{-6}	2.2×10^{-4}
Mercury (80)		
Hg-194	1.3×10^{-1}	3.5
Hg-195m	1.5×10^{4}	4.0×10^{5}
Hg-197m	2.5×10^{4}	6.7×10^{5}
Hg-197	9.2×10^{3}	2.5×10^{5}
Hg-203	5.1×10^{2}	1.4×10^{4}
Holmium (67)		
Ho-163	2.7	7.6×10^{1}
Ho-166m	6.6×10^{-2}	1.8
Ho-166	2.6×10^{4}	7.0×10^{5}
Iodine (53)		
I-123	7.1×10^{4}	1.9×10^{6}
I-124	9.3×10^{3}	2.5×10^{5}
I-125	6.4×10^{2}	1.7×10^{4}
I-126	2.9×10^{3}	8.0×10^{4}
I-129	6.5×10^{-6}	1.8×10^{-4}
I-131	4.6×10^{3}	1.2×10^{5}
I-132	3.8×10^{5}	1.0×10^{7}
I-133	4.2×10^{4}	1.1×10^{6}
I-134	9.9×10^{5}	2.7×10^{7}
I-135	1.3×10^{5}	3.5×10^{6}
Indium (49)		
In-111	1.5×10^{4}	4.2×10^{5}
In-113m	6.2×10^{5}	1.7×10^{7}
In-114m	8.6×10^{2}	2.3×10^{4}
In-115m	2.2×10^{5}	6.1×10^{6}
Iridium (77)		
Ir-189	1.9×10^{3}	5.2×10^{4}
Ir-190	2.3×10^{3}	6.2×10^{4}
Ir-192	3.4×10^{2}	9.2×10^{3}
Ir-193m	2.4×10^{3}	6.4×10^{4}
Ir-194	3.1×10^{4}	8.4×10^{5}
Potassium (19)		
K-40	2.4×10^{-7}	6.4×10^{-6}
K-42	2.2×10^{5}	6.0×10^{6}
K-43	1.2×10^{5}	3.3×10^{6}
Krypton (36)		
Kr-81	7.8×10^{-4}	2.1×10^{-2}
Kr-85m	3.0×10^{5}	8.2×10^{6}

Kr-85	1.5×10^{1}	3.9×10^{2}
Kr-87	1.0×10^{6}	2.8×10^{7}
Lanthanum (57)		
La-137	1.6×10^{-3}	4.4×10^{-2}
La-140	2.1×10^{4}	5.6×10^{5}
Lutetium (71)		
Lu-172	4.2×10^{3}	1.1×10^{5}
Lu-173	5.6×10^{1}	1.5×10^{3}
Lu-174m	2.0×10^{2}	5.3×10^{3}
Lu-174	2.3×10^{1}	6.2×10^{2}
Lu-177	4.1×10^{3}	1.1×10^{5}
Magnesium (12)		
Mg-28	2.0×10^{5}	5.4×10^{6}
Manganese (25)		
Mn-52	1.6×10^{4}	4.4×10^{5}
Mn-53	6.8×10^{-5}	1.8×10^{-3}
Mn-54	2.9×10^{2}	7.7×10^{3}
Mn-56	8.0×10^{5}	2.2×10^{7}
Molybdenum (42)		
Mo-93	4.1×10^{-2}	1.1
Mo-99	1.8×10^{4}	4.8×10^{5}
Nitrogen (7)		
N-13	5.4×10^{7}	1.5×10^{9}
Sodium (11)		
Na-22	2.3×10^{2}	6.3×10^{3}
Na-24	3.2×10^{5}	8.7×10^{6}
Niobium (41)		
Nb-92m	5.2×10^{3}	1.4×10^{5}
Nb-93m	8.8	2.4×10^{2}
Nb-94	6.9×10^{-3}	1.9×10^{-1}
Nb-95	1.5×10^{3}	3.9×10^{4}
Nb-97	9.9×10^{5}	2.7×10^{7}
Neodymium (60)		
Nd-147	3.0×10^{3}	8.1×10^{4}
Nd-149	4.5×10^{5}	1.2×10^{7}
Nickel (28)		
Ni-59	3.0×10^{-3}	8.0×10^{-2}
Ni-63	2.1	5.7×10^{1}
Ni-65	7.1×10^{5}	1.9×10^{7}
Neptunium (93)		
Np-235	5.2×10^{1}	1.4×10^{3}
Np-236	4.7×10^{-4}	1.3×10^{-2}
Np-237	2.6×10^{-5}	7.1×10^{-4}
Np-239	8.6×10^{3}	2.3×10^{5}

Osmium (76)		
Os-185	2.8×10^{2}	7.5×10^{3}
Os-191m	4.6×10^{4}	1.3×10^{6}
Os-191	1.6×10^{3}	4.4×10^{4}
Os-193	2.0×10^{4}	5.3×10^{5}
Os-194	1.1×10^{1}	3.1×10^{2}
Phosphorus (15)		
P-32	1.1×10^{4}	2.9×10^{5}
P-33	5.8×10^{3}	1.6×10^{5}
Protactinium (91)		
Pa-230	1.2×10^{3}	3.3×10^{4}
Pa-231	1.7×10^{-3}	4.7×10^{-2}
Pa-233	7.7×10^{2}	2.1×10^{4}
Lead (82)		
Pb-201	6.2×10^{4}	1.7×10^{6}
Pb-202	1.2×10^{-4}	3.4×10^{-3}
Pb-203	1.1×10^{4}	3.0×10^{5}
Pb-205	4.5×10^{-6}	1.2×10^{-4}
Pb-210	2.8	7.6×10^{1}
Pb-212	5.1×10^{4}	1.4×10^{6}
Palladium (46)		
Pd-103	2.8×10^{3}	7.5×10^{4}
Pd-107	1.9×10^{-5}	5.1×10^{-4}
Pd-109	7.9×10^{4}	2.1×10^{6}
Promethium (61)		
Pm-143	1.3×10^{2}	3.4×10^{3}
Pm-144	9.2×10^{1}	2.5×10^{3}
Pm-145	5.2	1.4×10^{2}
Pm-147	3.4×10^{1}	9.3×10^{2}
Pm-148m	7.9×10^{2}	2.1×10^{4}
Pm-149	1.5×10^{4}	4.0×10^{5}
Pm-151	2.7×10^{4}	7.3×10^{5}
Polonium (84)		
Po-208	2.2×10^{1}	5.9×10^{2}
Po-209	6.2×10^{-1}	1.7×10^{1}
Po-210	1.7×10^{2}	4.5×10^{3}
Praseodymium (59)		
Pr-142	4.3×10^{4}	1.2×10^{6}
Pr-143	2.5×10^{3}	6.7×10^{4}
Platinum (78)		
Pt-188	2.5×10^{3}	6.8×10^{4}
Pt-191	8.7×10^{3}	2.4×10^{5}
Pt-193m	5.8×10^{3}	1.6×10^{5}
Pt-193	1.4	3.7×10^{1}
Pt-195m	6.2×10^{3}	1.7×10^{5}
Pt-197m	3.7×10^{5}	1.0×10^{7}
Pt-197	3.2×10^{4}	8.7×10^{5}

Plutonium (94)		
Pu-236	2.0×10^{1}	5.3×10^{2}
Pu-237	4.5×10^{2}	1.2×10^{4}
Pu-238	6.3×10^{-1}	1.7×10^{1}
Pu-239	2.3×10^{-3}	6.2×10^{-2}
Pu-240	8.4×10^{-3}	2.3×10^{-1}
Pu-241	3.8	1.0×10^{2}
Pu-242	1.5×10^{-4}	3.9×10^{-3}
Pu-244	6.7×10^{-7}	1.8×10^{-5}
Radium (88)		
Ra-223	1.9×10^{3}	5.1×10^{4}
Ra-224	5.9×10^{3}	1.6×10^{5}
Ra-225	1.5×10^{3}	3.9×10^{4}
Ra-226	3.7×10^{-2}	1.0
Ra-228	1.0×10^{1}	2.7×10^{2}
Rubidium (37)		
Rb-81	3.1×10^{5}	8.4×10^{6}
Rb-83	6.8×10^{2}	1.8×10^{4}
Rb-84	1.8×10^{3}	4.7×10^{4}
Rb-86	3.0×10^{3}	8.1×10^{4}
Rb-87	3.2×10^{-9}	8.6×10^{-8}
Rb (natural)	6.7×10^{6}	1.8×10^{8}
Rhenium (75)		
Re-183	3.8×10^{2}	1.0×10^{4}
Re-184m	1.6×10^{2}	4.3×10^{3}
Re-184	6.9×10^{2}	1.9×10^{4}
Re-186	6.9×10^{3}	1.9×10^{5}
Re-187	1.4×10^{-9}	3.8×10^{-8}
Re-188	3.6×10^{4}	9.8×10^{5}
Re-189	2.5×10^{4}	6.8×10^{5}
Re (natural)	—	2.4×10^{-8}
Rhodium (45)		
Rh-99	3.0×10^{3}	8.2×10^{4}
Rh-101	4.1×10^{1}	1.1×10^{3}
Rh-102m	2.3×10^{2}	6.2×10^{3}
Rh-102	4.5×10^{1}	1.2×10^{3}
Rh-103m	1.2×10^{6}	3.3×10^{7}
Rh-105	3.1×10^{4}	8.4×10^{5}
Radon (86)		
Rn-222	5.7×10^{3}	1.5×10^{5}
Ruthenium (44)		
Ru-97	1.7×10^{4}	4.6×10^{5}
Ru-103	1.2×10^{3}	3.2×10^{4}
Ru-105	2.5×10^{5}	6.7×10^{6}
Ru-106	1.2×10^{2}	3.3×10^{3}
Sulfur (16)		
S-35	1.6×10^{3}	4.3×10^{4}

Antimony (51)		
Sb-122	1.5×10^{4}	4.0×10^{5}
Sb-124	6.5×10^{2}	1.7×10^{4}
Sb-125	3.9×10^{1}	1.0×10^{3}
Sb-126	3.1×10^{3}	8.4×10^{4}
Scandium (21)		
Sc-44	6.7×10^{5}	1.8×10^{7}
Sc-46	1.3×10^{3}	3.4×10^{4}
Sc-47	3.1×10^{4}	8.3×10^{5}
Sc-48	5.5×10^{4}	1.5×10^{6}
Selenium (34)		
Se-75	5.4×10^{2}	1.5×10^{4}
Se-79	2.6×10^{-3}	7.0×10^{-2}
Silicon (14)		
Si-31	1.4×10^{6}	3.9×10^{7}
Si-32	3.9	1.1×10^{2}
Samarium (62)		
Sm-145	9.8×10^{1}	2.6×10^{3}
Sm-147	8.5×10^{-1}	2.3×10^{-8}
Sm-151	9.7×10^{-1}	2.6×10^{1}
Sm-153	1.6×10^{4}	4.4×10^{5}
Tin (50)		
Sn-113	3.7×10^{2}	1.0×10^{4}
Sn-117m	3.0×10^{3}	8.2×10^{4}
Sn-119m	1.4×10^{2}	3.7×10^{3}
Sn-121m	2.0	5.4×10^{1}
Sn-123	3.0×10^{2}	8.2×10^{3}
Sn-125	4.0×10^{3}	1.1×10^{5}
Sn-126	1.0×10^{-3}	2.8×10^{-2}
Strontium (38)		
Sr-82	2.3×10^{3}	6.2×10^{4}
Sr-85m	1.2×10^{6}	3.3×10^{7}
Sr-85	8.8×10^{2}	2.4×10^{4}
Sr-87m	4.8×10^{5}	1.3×10^{7}
Sr-89	1.1×10^{3}	2.9×10^{4}
Sr-90	5.1	1.4×10^{2}
Sr-91	1.3×10^{5}	3.6×10^{6}
Sr-92	4.7×10^{5}	1.3×10^{7}
Tritium (1)		
T (H-3)	3.6×10^{2}	9.7×10^{3}
Tantalum (73)		
Ta-178	4.2×10^{6}	1.1×10^{8}
Ta-179	4.1×10^{1}	1.1×10^{3}
Ta-182	2.3×10^{2}	6.2×10^{3}
Terbium (65)		
Tb-157	5.6×10^{-1}	1.5×10^{1}

Tb-158	5.6×10^{-1}	1.5×10^{1}
Tb-160	4.2×10^{2}	1.1×10^{4}
Technetium (43)		
Tc-95m	8.3×10^{2}	2.2×10^{4}
Tc-96m	1.4×10^{6}	3.8×10^{7}
Tc-96	1.2×10^{4}	3.2×10^{5}
Tc-97m	5.6×10^{2}	1.5×10^{4}
Tc-97	5.2×10^{-5}	1.4×10^{-3}
Tc-98	3.2×10^{-5}	8.7×10^{-4}
Tc-99m	1.9×10^{5}	5.3×10^{6}
Tc-99	6.3×10^{-4}	1.7×10^{-2}
Tellurium (52)		
Te-118	6.8×10^{3}	1.8×10^{5}
Te-121m	2.6×10^{2}	7.0×10^{3}
Te-121	2.4×10^{3}	6.4×10^{4}
Te-123m	3.3×10^{2}	8.9×10^{3}
Te-125m	6.7×10^{2}	1.8×10^{4}
Te-127m	3.5×10^{2}	9.4×10^{3}
Te-127	9.8×10^{4}	2.6×10^{6}
Te-129m	1.1×10^{3}	3.0×10^{4}
Te-129	7.7×10^{5}	2.1×10^{7}
Te-131m	3.0×10^{4}	8.0×10^{5}
Te-132	1.1×10^{4}	~~8.0~~ 3.0 $\times 10^{5}$
Thorium (90)		
Th-227	1.1×10^{3}	3.1×10^{4}
Th-228	3.0×10^{1}	8.2×10^{2}
Th-229	7.9×10^{-3}	2.1×10^{-1}
Th-230	7.6×10^{-4}	2.1×10^{-2}
Th-231	2.0×10^{4}	5.3×10^{5}
Th-232	4.0×10^{-9}	1.1×10^{-7}
Th-234	8.6×10^{2}	2.3×10^{4}
Th (natural)	8.1×10^{-9}	2.2×10^{-7}
Titanium (22)		
Ti-44	6.4	1.7×10^{2}
Thallium (81)		
Tl-200	2.2×10^{4}	6.0×10^{5}
Tl-201	7.9×10^{3}	2.1×10^{5}
Tl-202	2.0×10^{3}	5.3×10^{4}
Tl-204	1.7×10^{1}	4.6×10^{2}
Thulium (69)		
Tm-167	3.1×10^{3}	8.5×10^{4}
Tm-168	3.1×10^{2}	8.3×10^{3}
Tm-170	2.2×10^{2}	6.0×10^{3}
Tm-171	4.0×10^{1}	1.1×10^{3}
Uranium (92)		
U-230	1.0×10^{3}	2.7×10^{4}
U-232	8.3×10^{-1}	2.2×10^{1}
U-233	3.6×10^{-4}	9.7×10^{-3}

U-234	2.3×10^{-4}	6.2×10^{-3}
U-235	8.0×10^{-8}	2.2×10^{-6}
U-236	2.4×10^{-6}	6.5×10^{-5}
U-238	1.2×10^{-8}	3.4×10^{-7}
U (natural)	2.6×10^{-8}	7.1×10^{-7}
U (enriched 5% or less)	—	(See part 4731.0424)
U (enriched more than 5%)	—	(See part 4731.0424)
U (depleted)	—	(See part 4731.0424)
Vanadium (23)		
V-48	6.3×10^{3}	1.7×10^{5}
V-49	3.0×10^{2}	8.1×10^{3}
Tungsten (74)		
W-178	1.3×10^{3}	3.4×10^{4}
W-181	2.2×10^{2}	6.0×10^{3}
W-185	3.5×10^{2}	9.4×10^{3}
W-187	2.6×10^{4}	7.0×10^{5}
W-188	3.7×10^{2}	1.0×10^{4}
Xenon (54)		
Xe-122	4.8×10^{4}	1.3×10^{6}
Xe-123	4.4×10^{5}	1.2×10^{7}
Xe-127	1.0×10^{3}	2.8×10^{4}
Xe-131m	3.1×10^{3}	8.4×10^{4}
Xe-133	6.9×10^{3}	1.9×10^{5}
Xe-135	9.5×10^{4}	2.6×10^{6}
Yttrium (39)		
Y-87	1.7×10^{4}	4.5×10^{5}
Y-88	5.2×10^{2}	1.4×10^{4}
Y-90	2.0×10^{4}	5.4×10^{5}
Y-91m	1.5×10^{6}	4.2×10^{7}
Y-91	9.1×10^{2}	2.5×10^{4}
Y-92	3.6×10^{5}	9.6×10^{6}
Y-93	1.2×10^{5}	3.3×10^{6}
Ytterbium (70)		
Yb-169	8.9×10^{2}	2.4×10^{4}
Yb-175	6.6×10^{3}	1.8×10^{5}
Zinc (30)		
Zn-65	3.0×10^{2}	8.2×10^{3}
Zn-69m	1.2×10^{5}	3.3×10^{6}
Zn-69	1.8×10^{6}	4.9×10^{7}
Zirconium (40)		
Zr-88	6.6×10^{2}	1.8×10^{4}
Zr-93	9.3×10^{-5}	2.5×10^{-3}
Zr-95	7.9×10^{2}	2.1×10^{4}
Zr-97	7.1×10^{4}	1.9×10^{6}

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

4731.0580 APPLICATION; FINANCIAL ASSURANCE AND RECORD KEEPING FOR DECOMMISSIONING.

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

Subp. 4. **Funding plan requirements.** ~~A~~ Each decommissioning funding plan must be submitted for review and approval and must contain:

A. a detailed cost estimate for decommissioning ~~and a description of the method of assuring funds for decommissioning from subpart 5, including means of adjusting cost estimates and associated funding levels periodically over the life of the facility. Cost estimates must be adjusted at intervals not to exceed three years; and~~, in an amount reflecting:

(1) the cost of an independent contractor to perform all decommissioning activities;

(2) the cost of meeting part 4731.2100, subpart 2, criteria for unrestricted use, provided that, if the applicant or licensee can demonstrate the ability to meet the provisions of part 4731.2100, subpart 3, the cost estimate may be based on meeting the part 4731.2100, subpart 3, criteria;

(3) the volume of on-site subsurface material containing residual radioactivity that will require remediation; and

(4) an adequate contingency factor;

B. identification of and justification for using the key assumptions contained in the DCE;

C. a description of the method of assuring funds for decommissioning from subpart 5, including the means for adjusting cost estimates and associated funding levels periodically over the life of the facility;

~~B.~~ D. a certification by the licensee that financial assurance for decommissioning has been provided in the amount of the cost estimate for decommissioning~~. A signed original of the financial instrument obtained to satisfy the requirements of subpart 5 must accompany the certification.~~; and

E. a signed original, or, if permitted, a copy, of the financial instrument obtained to satisfy the requirements of subpart 5, unless a previously submitted and accepted financial instrument continues to cover the cost estimate for decommissioning.

Subp. 4a. **Resubmittal of decommissioning funding plan.** At the time of license renewal and at intervals not to exceed three years, the decommissioning funding plan must be resubmitted with adjustments as necessary to account for changes in costs and the extent of contamination. If the amount of financial assurance will be adjusted downward, this cannot be done until the updated decommissioning funding plan is approved. The decommissioning funding plan must update the information submitted with the original or prior approved plan, and must specifically consider the effect of the following events on decommissioning costs:

A. spills of radioactive material producing additional residual radioactivity in on-site subsurface material;

B. waste inventory increasing above the amount previously estimated;

C. waste disposal costs increasing above the amount previously estimated;

D. facility modifications;

E. changes in authorized possession limits;

F. actual remediation costs that exceed the previous cost estimate;

G. on-site disposal; and

H. use of a settling pond.

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

4731.0597 INALIENABILITY OF LICENSES.

A. No license granted under parts 4731.0525 to 4731.0630 and no right to possess or utilize special nuclear material granted by a license issued under parts 4731.0525 to 4731.0630 shall be transferred, assigned, or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of a license to a person unless the commissioner, after securing full information, finds that the transfer is in accordance with this chapter and gives consent in writing.

B. An application for transfer of license must include:

(1) the identity, technical, and financial qualifications of the proposed transferee; and

(2) financial assurance for decommissioning information required by part 4731.0580.

4731.0725 EXEMPTION; UNIMPORTANT QUANTITIES OF SOURCE MATERIAL.

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

Subp. 3. **Certain items and materials.**

A. A person is exempt from parts 4731.0700 to ~~4731.0840~~ 4731.2950 to the extent that the person receives, possesses, uses, or transfers:

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

(2) source material contained in the following products:

(a) glazed ceramic tableware manufactured before August 27, 2013, provided that the glaze contains not more than 20 percent by weight source material;

(b) piezoelectric ceramic containing not more than two percent by weight source material;

(c) glassware containing not more than two percent by weight source material or, for glassware manufactured before August 27, 2013, ten percent by weight source material, but not including commercially manufactured glass brick, pane glass, ceramic tile, or other glass or ceramic used in construction; or

(d) glass enamel or glass enamel frit containing not more than ten percent by weight source material imported or ordered for importation into the United States, or initially distributed by manufacturers in the United States, before July 25, 1983;

[For text of subitems (3) and (4), see M.R.]

(5) uranium contained in counterweights installed in aircraft, rockets, projectiles, and missiles or stored or handled in connection with installation or removal of such counterweights, provided that:

~~(a) the counterweights are manufactured according to a specific license issued by the NRC or the Atomic Energy Commission authorizing distribution by the licensee according to parts 4731.0700 to 4731.0840;~~

~~(b)~~ (a) each counterweight has been impressed with the following legend clearly legible through any plating or other covering: "Depleted Uranium." This subunit does not apply to counterweights manufactured before December 31, 1969, if the counterweights were manufactured under a specific license issued by the Atomic Energy Commission and were impressed with the legend required under Code of Federal Regulations, title 10, section 40.13, paragraph (c), clause (5), subclause ~~(ii)~~ (i), in effect June 30, 1969;

~~(c)~~ (b) each counterweight is durably and legibly labeled or marked with the identification of the manufacturer and the statement: "Unauthorized Alterations Prohibited." This subunit does not apply to counterweights manufactured before December 31, 1969, if the counterweights were manufactured under a specific license issued by the Atomic Energy Commission and were impressed with the legend required under Code of Federal Regulations, title 10, section 40.13, paragraph (c), clause (5), subclause ~~(ii)~~ (i), in effect June 30, 1969; and

~~(d)~~ (c) the exemption contained in this subitem shall not be deemed to authorize the chemical, physical, or metallurgical treatment or processing of any such counterweights other than repair or restoration of any plating or other covering;

[For text of subitem (6), see M.R.]

(7) thorium or uranium contained in or on finished optical lenses or mirrors, provided that each does not contain more than ~~30~~ ten percent by weight of thorium or uranium or for lenses manufactured before August 27, 2013, 30 percent by weight of thorium. The exemption in this subitem shall not be deemed to authorize:

(a) the shaping, grinding, or polishing of such lens or mirror or manufacturing processes other than the assembly of such lens or mirror into optical systems and devices without any alteration of the lens or mirror; or

(b) the receipt, possession, use, or transfer of thorium or uranium contained in contact lenses, spectacles, or eyepieces of binoculars or other optical instruments; or

[For text of subitem (8), see M.R.]

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

C. No person may initially transfer for sale or distribution a product containing source material to persons exempt under this subpart, or equivalent regulations of the NRC or an agreement state, unless authorized by a license issued under *Code of Federal Regulations*, title 10, section 40.52, to initially transfer such products for sale or distribution.

(1) Persons initially distributing source material in products covered by the exemptions in this subpart before August 27, 2013, without specific authorization may continue distribution for one year beyond this date. Initial distribution may also be continued until the NRC takes final action on a pending application for license or license amendment to specifically authorize distribution submitted no later than one year beyond this date.

(2) Persons authorized to manufacture, process, or produce these materials or products containing source material by the NRC or an agreement state, and persons who import finished products or parts, for sale or distribution must be authorized by a license issued under *Code of Federal Regulations*, title 10, section 40.52, for distribution only and are exempt from the requirements of parts 4731.0765, items B and C, and 4731.1000 to 4731.2950.

Subp. 4. [See repealer.]

4731.0745 GENERAL LICENSE; SMALL QUANTITIES OF SOURCE MATERIAL.

Subpart 1. **General license issued.** A general license is issued authorizing commercial and industrial firms; research, educational, and medical institutions; and state and local government agencies to ~~use and transfer not more than 15 pounds of source material at any one time for research, development, educational, commercial, or operational purposes. A person authorized to use or transfer source material under this general license may not receive more than a total of 150 pounds of source material in any one calendar year.~~ receive, possess, use, and transfer uranium and thorium, in their natural isotopic concentrations and in the form of depleted uranium, for research, development, educational, commercial, or operational purposes in the following forms and quantities:

A. no more than 1.5 kg (3.3 lb) of uranium and thorium in dispersible forms, for example gaseous, liquid, or powder, at any one time. Any material processed by the general licensee that alters the chemical or physical form of the material containing source material must be accounted for as a dispersible form. A person authorized to possess, use, and transfer source material under this item may not receive more than a total of 7 kg (15.4 lb) of uranium and thorium in any one calendar year. Persons possessing source material in excess of these limits as of December 31, 2014, may continue to possess up to 7 kg (15.4 lb) of uranium and thorium at any one time for one year beyond this date, or until the commissioner takes final action on a pending application submitted on or before December 31, 2015, for a specific license for such material and receive up to 70 kg (154 lb) of uranium or thorium in any one calendar year until December 31, 2015, or until the commissioner takes final action on a pending application submitted on or before December 31, 2015, for a specific license for such material; and

B. no more than a total of 7 kg (15.4 lb) of uranium and thorium at any one time. A person authorized to possess, use, and transfer source material under this item may not receive more than a total of 70 kg (154 lb) of uranium and thorium in any one calendar year. A person may not alter the chemical or physical form of the source material possessed under this item unless it is accounted for under the limits of item A; or

C. no more than 7 kg (15.4 lb) of uranium, removed during the treatment of drinking water, at any one time. A person may not remove more than 70 kg (154 lb) of uranium from drinking water during a calendar year under this item; or

D. no more than 7 kg (15.4 lb) of uranium and thorium at laboratories for the purpose of determining the concentration of uranium and thorium contained within the material being analyzed at any one time. A person authorized to possess, use, and transfer source material under this item may not receive more than a total of 70 kg (154 lb) of source material in any one calendar year.

Subp. 2. **Other law.** A person who receives, possesses, uses, or transfers source material under the general license issued under subpart 1 ~~is exempt from parts 4731.1000to 4731.2950, to the extent that the receipt, possession, use, or transfer is within the terms of the general license. This exemption does not apply to a person who is also in possession of source material under a specific license issued under parts 4731.0700 to 4731.0840.~~:

A. is prohibited from administering source material, or the radiation therefrom, either externally or internally, to human beings except as authorized by the commissioner in a specific license;

B. must not abandon the source material. Source material may be disposed of as follows:

(1) a cumulative total of 0.5 kg (1.1 lb) of source material in a solid, nondispersible form may be transferred each calendar year, by a person authorized to receive, possess, use, and transfer source material under this general license to persons receiving the material for permanent disposal. The recipient of source material transferred under the provisions of this subitem is exempt from the requirements to obtain a license under parts 4731.0700 to 4731.0840 to the extent the source material is permanently disposed. This provision does not apply to any person who is in possession of source material under a specific license issued under this chapter; or

(2) in accordance with part 4731.2400;

C. is subject to the provisions in parts 4731.0700 to 4731.0710, 4731.0785, and 4731.0810 to 4731.0840;

D. must respond to written requests from the commissioner to provide information relating to the general license within 30 calendar days of the date of the request, or other time specified in the request. If the person cannot provide the requested information within the allotted time, the person must, within that same time period, request a longer period to supply the information by providing the commissioner a written justification for the request; and

E. must not export such source material except in accordance with *Code of Federal Regulations*, title 10, section 110.

Subp. 2a. **Contamination.** Any person who receives, possesses, uses, or transfers source material in accordance with subpart 1 must conduct activities to minimize contamination of the facility and the environment. When activities involving source material are permanently ceased at any site, if evidence of significant contamination is identified, the general licensee must notify the commissioner about the contamination and may consult with the commissioner as to the appropriateness of sampling and restoration activities to ensure that any contamination or residual source material remaining at the site where source material was used under this general license is not likely to result in exposures that exceed the limits in part 4731.2100.

Subp. 3. ~~**Prohibition**~~ **Exemption.** A person who receives, possesses, uses, or transfers source material under the general license issued under subpart 1 is ~~prohibited from administering source material, or the radiation therefrom, either externally or internally, to human beings except as may be authorized by the commissioner, the NRC, or an agreement state in a specific license.~~ exempt from the provisions of parts 4731.1000 to 4731.2950 to the extent that receipt, possession, use, and transfer are within the terms of this general license, except that the person must comply with the provisions of parts 4731.2100, subpart 1, and 4731.2400 to the extent necessary to meet the provisions of subparts 2, item B, and 3. However, this exemption does not apply to any person who also holds a specific license issued under this chapter.

Subp. 4. **Transfer authorization required.** No person may initially transfer or distribute source material to persons generally licensed under subpart 1, item A or B, or equivalent regulations of the NRC or an agreement state, unless authorized by a specific license issued in accordance with part 4731.0816 or equivalent provisions of the NRC or an agreement state. This prohibition does not apply to analytical laboratories returning processed samples to the client who initially provided the sample. Initial distribution of source material to persons generally licensed by subpart 1 before December 31, 2014, without specific authorization may continue for one year beyond this date. Distribution may also be continued until the commissioner takes final action on a pending application for license or license amendment to specifically authorize distribution submitted on or before December 31, 2014.

4731.0780 FINANCIAL ASSURANCE AND RECORD KEEPING FOR DECOMMISSIONING.

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

Subp. 4. **Funding plan requirements.**

A. ~~A~~ Each decommissioning funding plan must be submitted for review and approval and must contain:

~~A.~~

(1) a detailed cost estimate for decommissioning ~~and a description of the method of assuring funds for decommissioning from subpart 5, including means of adjusting cost estimates and associated funding levels periodically over the life of the facility. Cost estimates must be adjusted at intervals not to exceed three years; and~~, in an amount reflecting:

(a) the cost of an independent contractor to perform all decommissioning activities;

(b) the cost of meeting the criteria in part 4731.2100, subpart 2, for unrestricted use, provided that, if the applicant or licensee can demonstrate its ability to meet the provisions of part 4731.2100, subpart 3, the cost estimate may be based on meeting the criteria in part 4731.2100, subpart 3;

(c) the volume of on-site subsurface material containing residual radioactivity that will require remediation; and

(d) an adequate contingency factor;

(2) identification of and justification for using the key assumptions contained in the DCE;

(3) a description of the method of assuring funds for decommissioning from subpart 5, including means for adjusting cost estimates and associated funding levels periodically over the life of the facility;

(4) a certification by the licensee that financial assurance for decommissioning has been provided in the amount of the cost estimate for decommissioning; and

(5) a signed original, or if permitted, a copy, of the financial instrument obtained to satisfy the requirements of subpart 5, unless a previously submitted and accepted financial instrument continues to cover the cost estimate for decommissioning.

B. ~~a certification by the licensee that financial assurance for decommissioning has been provided in the amount of the cost estimate for decommissioning. A signed original of the financial instrument obtained to satisfy the requirements of subpart 5 must accompany the certification.~~ At the time of license renewal and at intervals not to exceed three years, the decommissioning funding plan must be resubmitted with adjustments as necessary to account for changes in costs and the extent of contamination. If the amount of financial assurance will be adjusted downward, this cannot be done until the updated decommissioning funding plan is approved. The decommissioning funding plan must update the information submitted with the original or prior approved plan, and must specifically consider the effect of the following events on decommissioning costs:

(1) spills of radioactive material producing additional residual radioactivity in on-site subsurface material;

(2) waste inventory increasing above the amount previously estimated;

(3) waste disposal costs increasing above the amount previously estimated;

(4) facility modifications;

(5) changes in authorized possession limits;

(6) actual remediation costs that exceed the previous cost estimate;

(7) on-site disposal; and

(8) use of a settling pond.

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

4731.0810 INALIENABILITY OF LICENSES.

A. No license issued or granted under parts 4731.0700 to 4731.0840 shall be transferred, assigned, or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of a license to a person unless the commissioner, after securing full information, finds that the transfer is in accordance with this chapter and gives consent in writing.

B. An application for transfer of license must include:

(1) the identity, technical, and financial qualifications of the proposed transferee; and

(2) financial assurance for decommissioning information required by part 4731.0780, as applicable.

4731.0816 LICENSE TO TRANSFER SOURCE MATERIAL.

An application for a specific license to initially transfer source material for use under part 4731.0745 or equivalent regulations of the NRC or an agreement state shall be approved if:

A. the applicant satisfies the general requirements specified in part 4731.0765; and

B. the applicant submits adequate information on, and the commission approves, the methods to be used for quality control, labeling, and providing safety instructions to recipients.

4731.0817 REQUIREMENTS FOR LABELING SOURCE MATERIAL; INSTRUCTIONS.

Subpart 1. **Label required.** Each person licensed under part 4731.0816 must label the immediate container of each quantity of source material with the type of source material and quantity of material and the words "radioactive material."

Subp. 2. **Transfer records.** Each person licensed under part 4731.0816 must ensure that the quantities and concentrations of source material are as labeled and indicated in any transfer records.

Subp. 3. **Transfer information.** A person licensed under part 4731.0816 must provide the information specified in this subpart to each person to whom source material is transferred for use under part 4731.0745 or equivalent regulations of the NRC or an agreement state. This information must be transferred before the source material is transferred for the first time in each calendar year to the particular recipient. The required information includes:

A. a copy of parts 4731.0745 and 4731.0815 or equivalent regulations of the NRC or an agreement state; and

B. appropriate radiation safety precautions and instructions relating to handling, use, storage, and disposal of the material.

Subp. 4. **Transfer report.** Each person licensed under part 4731.0816 must report transfers as follows:

A. file a report with the commissioner. The report must include the following information:

(1) the name, address, and license number of the person who transferred the source material;

(2) for each general licensee under part 4731.0745 or equivalent NRC or agreement state regulations to whom greater than 50 grams (0.11 lb) of source material has been transferred in a single calendar quarter, the name and address of the general licensee to whom source material is distributed; a responsible agent, by name and position and telephone number, of the general licensee to whom the material was sent; and the type, physical form, and quantity of source material transferred; and

(3) the total quantity of each type and physical form of source material transferred in the reporting period to all generally licensed recipients;

B. file a report with the commissioner, NRC, and each responsible agreement state agency that identifies all persons operating under provisions equivalent to part 4731.0745 to whom greater than 50 grams (0.11 lb) of source material has been transferred within a single calendar quarter. The report must include the following information specific to those transfers made to the agreement state being reported to:

(1) the name, address, and license number of the person who transferred the source material; and

(2) the name and address of the general licensee to whom source material was distributed; a responsible agent, by name and position and telephone number, of the general licensee to whom the material was sent; and the type, physical form, and quantity of source material transferred; and

(3) the total quantity of each type and physical form of source material transferred in the reporting period to all such generally licensed recipients within NRC jurisdiction or the agreement state;

C. submit each report by January 31 of each year covering all transfers for the previous calendar year. If no transfers were made to persons generally licensed under part 4731.0745 or equivalent NRC or agreement state regulations during the current period, a report must be submitted to the commissioner indicating so. If no transfers have been made to general licensees in NRC jurisdiction or a particular agreement state during the reporting period, this information must be reported to the NRC or responsible agreement state agency upon request of the agency.

Subp. 5. **Records retention.** Each person licensed under part 4731.0816 must maintain all information that supports the reports required by this part concerning each transfer to a general licensee for a period of one year after the event is included in a report to the commissioner or to the NRC or an agreement state agency.

4731.1010 POSTING WORKER NOTICES.

Subpart 1. **Required postings.**

A. A licensee must post current copies of the following documents:

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

(4) any ~~notice of violation~~ correction order involving radiological working conditions, ~~proposed imposition of civil penalty, or order issued under part 4731.1090~~ administrative penalty order (APO), and any response from the licensee.

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

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

Subp. 4. ~~**Notice of violation**~~ **Correction order and APO.** Documents posted according to subpart 1, item A, subitem (4), must be posted within two working days after receipt of the documents from the commissioner. A licensee's response, if any, must be posted within two working days after dispatch by the licensee. The documents must remain posted for a minimum of five working days or until action correcting the violation is completed, whichever is later.

4731.2100 RADIOLOGICAL CRITERIA FOR LICENSE TERMINATION.

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

Subp. 3. **Criteria for termination under restricted conditions.** A site is considered acceptable for license termination under restricted conditions, if the licensee:

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

C. has provided sufficient financial assurance to enable an independent third party, including a governmental custodian of a site, to assume and carry out responsibilities for any necessary control and maintenance of the site. Acceptable financial assurance mechanisms are:

(1) funds placed into ~~an account~~ a trust segregated from the licensee's assets and outside the licensee's administrative control ~~as described under part 4731.3080, subpart 6, item B~~, and in which the adequacy of the trust funds is to be assessed based on an assumed annual one percent real rate of return on investment;

~~(2) surety method, insurance, or other guarantee method as described under part 4731.3080, subpart 6, item C;~~

~~(3)~~ (2) a statement of intent, in the case of federal, state, or local government licensees, as described under part 4731.3080, subpart 6, item E; or

~~(4)~~ (3) when a governmental entity is assuming custody and ownership of a site, an arrangement that is deemed acceptable by the governmental entity;

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

Subp. 4. **Alternative criteria for license termination.**

A. The commissioner may terminate a license using alternative criteria greater than the dose criterion of subparts 2 and 3, items B and E, subitem (1), unit (a), if the licensee:

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

(3) reduces doses to ALARA levels, taking into consideration any detriments, such as traffic accidents, expected to potentially

result from decontamination and waste disposal; ~~and~~

(4) submits a decommissioning plan or license termination plan to the commissioner indicating the licensee's intent to decommission according to part 4731.0600, subpart 2; 4731.0790, subpart 4; or 4731.3085, subpart 4, or *Code of Federal Regulations*, title 10, section 50.82, paragraphs (a) and (b), or 72.54, and specifying that the licensee proposes to decommission by use of alternate criteria. The licensee must document in the decommissioning plan or license termination plan how the advice of individuals and institutions in the community who may be affected by the decommissioning has been sought and addressed, as appropriate, following analysis of that advice. In seeking such advice, the licensee must provide for:

(a) participation by representatives of a broad cross section of community interests who may be affected by the decommissioning;

(b) an opportunity for a comprehensive, collective discussion on the issues by the participants represented; and

(c) a publicly available summary of the results of all such discussions, including a description of the individual viewpoints of the participants on the issues and the extent of agreement and disagreement among the participants on the issues~~.~~; and

(5) has provided sufficient financial assurance in the form of a trust fund to enable an independent third party, including a government custodian of a site, to assume and carry out responsibilities for any necessary control and maintenance of the site.

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

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

4731.2150 MINIMIZATION OF CONTAMINATION.

A. Applicants for licenses, other than renewals, must describe in the application how facility design and procedures for operation will minimize, to the extent practicable, contamination of the facility and the environment, facilitate eventual decommissioning, and minimize, to the extent practicable, the generation of radioactive waste.

B. Licensees must, to the extent practical, conduct operations to minimize the introduction of residual radioactivity into the site, including the subsurface, in accordance with the existing radiation protection requirements in part 4731.2010 and radiological criteria for license termination in item A and part 4731.2100.

4731.2200 SURVEYS AND MONITORING.

Subpart 1.**Required surveys.** A licensee must make or cause to be made, surveys of areas, including the subsurface, that:

A. may be necessary for the licensee to comply with this chapter; and

B. are reasonable under the circumstances to evaluate:

(1) the magnitude and extent of radiation levels;

(2) concentrations or quantities of ~~radioactive material~~ residual radioactivity; and

(3) potential radiological hazards of the radiation levels and residual radioactivity detected.

Subp. 1a. **Records.** Notwithstanding part 4731.2510, subpart 1, records from surveys describing the location and amount of subsurface residual radioactivity identified at the site must be kept with records important for decommissioning, and must be retained according to part 4731.0580, subpart 6; 4731.0780, subpart 6; or 4731.3080, subpart 7, as applicable.

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

4731.2620 REPORTS; RADIATION EXPOSURES, LEVELS, AND CONCENTRATIONS EXCEEDING CONSTRAINTS OR LIMITS.

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

Subp. 3. **Individual information.**

A. A report filed under subpart 1 must include, for each occupationally overexposed individual:

(1) the name; and

~~(2) Social Security number; and~~

~~(3)~~ (2) date of birth.

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

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

4731.3020 EXEMPTION; CARRIERS.

Common and contract carriers, freight forwarders, warehousers, and the United States Postal Service are exempt from parts 4731.3000 to ~~4731.7280~~ 4731.8140 to the extent that they transport or store radioactive material in the regular course of the carriage for another or storage incident thereto.

4731.3030 EXEMPTION; CERTAIN ITEMS CONTAINING RADIOACTIVE MATERIAL.

Subpart 1. **Exempt products.** Except for persons who apply radioactive material to or incorporate radioactive material into the following products or persons who initially transfer for sale or distribution the following products containing radioactive material, a person is exempt from parts 4731.3000 to 4731.7280 to the extent that the person receives, possesses, uses, transfers, owns, or acquires the following products:

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

B.

(1) static elimination devices which contain, as a sealed source or sources, by-product material consisting of a total of not more than 18.5 MBq (500 ìCi) of polonium-210 per device;

(2) ion-generating tubes designed for ionization of air that contain, as a sealed source or sources, by-product material consisting of a total of not more than 18.5 MBq (500ìCi) of polonium-210 per device or of a total of not more than 1.85 GBq (50 mCi) of hydrogen-3 (tritium) per device; and

(3) devices authorized before December 31, 2014, for use under the general license then provided in part 4731.3210 and equivalent regulations of the NRC or agreement states and manufactured, tested, and labeled by the manufacturer in accordance with the specifications contained in a specific license issued by the commissioner, the NRC, or an agreement state.

~~B.~~ C. balances of precision containing not more than one millicurie of tritium per balance or not more than 0.5 millicurie of tritium per balance part manufactured before December 17, 2007;

~~C.~~ D. marine compasses containing not more than 750 millicuries of tritium gas and other marine navigational instruments containing not more than 250 millicuries of tritium gas manufactured before December 17, 2007;

~~D.~~ E. ionization chamber smoke detectors containing not more than one microcurie (ìCi) of americium-241 per detector in the form of a foil and designed to protect life and property from fires;

~~E.~~ F. electron tubes. For purposes of this item, "electron tubes" include spark gap tubes, power tubes, gas tubes including glow lamps, receiving tubes, microwave tubes, indicator tubes, pickup tubes, radiation detection tubes, and any other completely sealed tube that is designed to conduct or control electrical currents. The exemption under this item applies only if the levels of radiation from each electron tube containing radioactive material do not exceed one millirad per hour at one centimeter from any surface when measured through seven milligrams per square centimeter of absorber and if each tube does not contain more than one of the following specified quantities of radioactive materials:

(1) 150 millicuries of tritium per microwave receiver protector tube or ten millicuries of tritium per any other electron tube;

(2) one microcurie of cobalt-60;

(3) five microcuries of nickel-63;

(4) 30 microcuries of krypton-85;

(5) five microcuries of cesium-137; or

(6) 30 microcuries of promethium-147; or

~~F.~~ G. ionizing radiation measuring instruments containing, for purposes of internal calibration or standardization, one or more sources of radioactive material. For purposes of this item, an instrument's source may contain either one type or different types of radionuclides and an individual exempt quantity may be composed of fractional parts of one or more of the exempt quantities in part 4731.3145, provided that the sum of the fractions does not exceed unity. For purposes of this item, 0.05 microcurie of americium-241 is an exempt quantity under part 4731.3145. The exemption under this item applies only if:

(1) each source contains no more than one exempt quantity under part 4731.3145; and

(2) each instrument contains no more than ten exempt quantities.

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

4731.3045 EXEMPTION; SELF-LUMINOUS PRODUCTS CONTAINING TRITIUM, KRYPTON-85, OR PROMETHIUM-147.

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

Subp. 2. **Specific license required.** A person who desires to manufacture, process, ~~or~~ produce, or initially transfer for sale or distribution self-luminous products containing tritium, krypton-85, or promethium-147 ~~or to transfer such products~~ for use under subpart 1 must apply for a license according to *Code of Federal Regulations*, title 10, section 32.22, ~~that states that the product may be transferred by the licensee to persons exempt under subpart 1 or equivalent regulations of the NRC or an agreement state~~ and for a certificate of registration in accordance with *Code of Federal Regulations*, title 10, section 32.210.

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

4731.3050 EXEMPTION; GAS AND AEROSOL DETECTORS CONTAINING RADIOACTIVE MATERIAL.

Subpart 1. **Specific license exemption.** Except for persons who manufacture, process, produce, or initially transfer for sale or distribution gas and aerosol detectors containing radioactive material, a person is exempt from parts 4731.1000 to 4731.2090 and 4731.3000 to 4731.7280 to the extent that the person receives, possesses, uses, transfers, owns, or acquires radioactive material in gas or aerosol detectors designed to protect ~~life~~ health, safety, or property ~~from fires and airborne hazards,~~ and manufactured, processed, produced, or initially transferred according to a specific license issued under *Code of Federal Regulations*, title 10, section 32.26, that authorizes the initial transfer of the product for use under this part. This exemption also covers gas and aerosol detectors manufactured or distributed before November 30, 2007, in accordance with a specific license issued by a state under comparable provisions to *Code of Federal Regulations*, title 10, section 32.26, authorizing distribution to persons exempt from regulatory requirements.

Subp. 2. **Specific license required.** A person who desires to manufacture, process, or produce gas and aerosol detectors containing radioactive material or to initially transfer such products for use under subpart 1 must apply for a license under *Code of Federal Regulations*, title 10, section 32.26, ~~that states that the product may be initially transferred by the licensee to persons exempt under subpart 1 or equivalent regulations of the NRC or an agreement state~~ and for a certificate of registration under *Code of Federal Regulations*, title 10, section 32.210.

4731.3056 EXEMPTION; CERTAIN INDUSTRIAL DEVICES.

Subpart 1. **Specific license exemption.** Except for persons who manufacture, process, produce, or initially transfer for sale or distribution industrial devices containing radioactive material designed and manufactured for the purpose of detecting, measuring, gauging, or controlling thickness, density, level, interface location, radiation leakage, or qualitative or quantitative chemical composition, or for producing an ionized atmosphere, a person is exempt from parts 4731.1000 to 4731.2090 and 4731.3000 to 4731.7280 to the extent that the person receives, possesses, uses, transfers, owns, or acquires radioactive material in these certain detecting, measuring, gauging, or controlling devices and certain devices for producing and ionized atmosphere, and manufactured, processed, produced, or initially transferred according to a specific license issued under *Code of Federal Regulations*, title 10, section 32.30, that authorizes the initial transfer of the device for use under this part. This exemption does not cover sources not incorporated into a device, such as calibration and reference sources.

Subp. 2. **Specific license required.** A person who desires to manufacture, process, produce, or initially transfer for sale or distribution industrial devices containing radioactive material for use under subpart 1 must apply for a license under *Code of Federal Regulations*, title 10, section 32.30, and for a certificate of registration under *Code of Federal Regulations*, title 10, section 32.210.

4731.3065 SPECIFIC LICENSES; APPLICATION.

Subpart 1. **General requirements.**

A. Applications for specific licenses must be filed ~~in duplicate~~ on an application for radioactive material license form prescribed by the commissioner.

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

Subp. 2. **Sealed source requirements.**

A. Except as provided in items B, C, and D, an application for a specific license to use radioactive material in the form of a sealed source or in a device that contains the sealed source must:

~~A.~~

(1) identify the source or device by manufacturer and model number as registered with the NRC under *Code of Federal Regulations*, title 10, section 32.210, with an agreement state, or for a source or a device containing radium-226 or accelerator-produced radioactive material with a state under provisions comparable to *Code of Federal Regulations*, title 10, section 32.210; or

~~B.~~

(2) contain the information identified in *Code of Federal Regulations*, title 10, section 32.210 (c)~~; or.~~

~~C.~~ B. For sources or devices ~~containing naturally occurring or accelerator-produced radioactive material~~ manufactured prior to ~~November 30, 2007~~ October 23, 2012, that are not registered with the NRC under *Code of Federal Regulations*, title 10, section 32.210, or with an agreement state, and for which the applicant is unable to provide all categories of information specified in *Code of Federal Regulations*, title 10, section 32.210 (c), the applicant must provide:

(1) all available information identified in *Code of Federal Regulations*, title 10, section 32.210 (c) and this chapter concerning the source, and, if applicable, the device; and

(2) sufficient additional information to demonstrate that there is reasonable assurance that the radiation safety properties of the source or device are adequate to protect health and minimize danger to life and property. This information must include a description of the source or device, a description of radiation safety features, the intended use and associated operating experience, and the results of a recent leak test.

C. For sealed sources and devices allowed to be distributed without registration of safety information according to *Code of Federal Regulations*, title 10, section 32.210(g)(1), the applicant may supply only the manufacturer, model number, and radionuclide and quantity.

D. If it is not feasible to identify each sealed source and device individually, the applicant may propose constraints on the number and type of sealed sources and devices to be used and the conditions under which they will be used, in lieu of identifying each sealed source and device.

Subp. 3. **Decommissioning requirements.** As provided under ~~parts~~ part 4731.3080, ~~4731.3300 to 4731.3420, and 4731.4000 to 4731.4527,~~ certain applications for specific licenses filed under ~~part 4731.3065~~ parts 4731.3000 to 4731.3175 and 4731.3300 to 4731.4527 must contain a proposed decommissioning funding plan or a certification of financial assurance for decommissioning.

[For text of subps 4 to 7, see M.R.]

4731.3070 SPECIFIC LICENSES; APPROVAL.

Subpart 1. **Application.** The commissioner shall approve an application for a specific license if:

A. the application is for a purpose authorized under this chapter;

B. the applicant is qualified by training and experience to use the material for the purpose requested in such manner as to protect health and minimize danger to life and property;

C. the applicant's proposed equipment and facilities are adequate to protect health and minimize danger to life and property;

D. the applicant satisfies any applicable special requirements under this chapter; and

E. in the case of an application for a license to receive and possess radioactive material for the conduct of any activity that the commissioner determines will significantly affect the quality of the environment, before commencement of construction of the plant or

facility in which the activity will be conducted, the commissioner, on the basis of information filed and evaluations made according to *Code of Federal Regulations*, title 10, part 51, subpart A, has concluded, after weighing the environmental, economic, technical, and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental values. Commencement of construction prior to such conclusion is grounds for denial of a license to receive and possess radioactive material in such plant or facility. ~~Commencement of construction does not mean site exploration, necessary roads for site exploration, borings to determine foundation conditions, or other preconstruction monitoring or testing to establish background information related to the suitability of the site or the protection of environmental values.~~

Subp. 2. **License.** Upon a determination that an application meets the requirements of this chapter, the commissioner shall issue a specific license authorizing the possession and use of radioactive material.

4731.3075 TERMS AND CONDITIONS OF LICENSES.

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

Subp. 2. **Transfer prohibited.**

A. No license issued or granted under this chapter nor any right under a license must be transferred, assigned, or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of a license to any person, unless the commissioner, after securing full information, finds that the transfer is in accordance with this chapter and gives consent in writing.

B. An application for transfer of license must include:

(1) the identity, technical, and financial qualifications of the proposed transferee; and

(2) financial assurance for decommissioning information required by part 4731.3080.

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

Subp. 4. **Bankruptcy.**

A. A general licensee required to register under part 4731.3215, subpart 3a, and a specific licensee issued a license under this chapter must notify the commissioner, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of *United States Code*, title 11, by or against:

(1) the licensee;

(2) an entity, ~~which includes a person, estate, trust, governmental unit, or United States trustee~~ as defined under *United States Code*, title 11, section 101, paragraph (15), that controls the licensee or lists the license or licensee as property; or

(3) an affiliate of the licensee, as defined under *United States Code*, ~~chapter~~ title 11, section 101, ~~clause~~ paragraph (2).

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

[For text of subps 5 to 9, see M.R.]

4731.3080 FINANCIAL ASSURANCE AND RECORD KEEPING FOR DECOMMISSIONING.

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

Subp. 5. **Funding plan requirements.**

A. ~~A~~ Each decommissioning funding plan must be submitted for review and approval and must contain:

~~A.~~

(1) a detailed cost estimate for decommissioning ~~and a description of the method of assuring funds for decommissioning from subpart 6, including means of adjusting cost estimates and associated funding levels periodically over the life of the facility. Cost estimates must be adjusted at intervals not to exceed three years; and~~, in an amount reflecting:

(a) the cost of an independent contractor to perform all decommissioning activities;

(b) the cost of meeting the criteria in part 4731.2100, subpart 2, for unrestricted use, provided that, if the applicant or licensee can demonstrate the ability to meet the provisions of part 4731.2100, subpart 3, the cost estimate may be based on meeting the criteria in part 4731.2100, subpart 3;

(c) the volume of on-site subsurface material containing residual radioactivity that will require remediation to meet the criteria

for license termination; and

(d) an adequate contingency factor;

(2) identification of and justification for using the key assumptions contained in the DCE;

(3) a description of the method of assuring funds for decommissioning under subpart 6, including the means for adjusting cost estimates and associated funding levels periodically over the life of the facility;

(4) a certification by the licensee that financial assurance for decommissioning has been provided in the amount of the cost estimate for decommissioning; and

(5) a signed original of the financial instrument obtained to satisfy the requirements of subpart 6, unless a previously submitted and accepted financial instrument continues to cover the cost estimate for decommissioning.

B. ~~a certification by the licensee that financial assurance for decommissioning has been provided in the amount of the cost estimate for decommissioning. A signed original of the financial instrument obtained to satisfy the requirements of subpart 6 must accompany the certification.~~ At the time of license renewal and at intervals not to exceed three years, the decommissioning funding plan must be resubmitted with adjustments as necessary to account for changes in costs and the extent of contamination. If the amount of financial assurance will be adjusted downward, this cannot be done until the updated decommissioning funding plan is approved. The decommissioning funding plan must update the information submitted with the original or prior approved plan, and must specifically consider the effect of the following events on decommissioning costs:

(1) spills of radioactive material producing additional residual radioactivity in on-site subsurface material;

(2) waste inventory increasing above the amount previously estimated;

(3) waste disposal costs increasing above the amount previously estimated;

(4) facility modifications;

(5) changes in authorized possession limits;

(6) actual remediation costs that exceed the previous cost estimate;

(7) on-site disposal; and

(8) use of a settling pond.

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

4731.3145EXEMPT QUANTITIES.

Radioactive Material	**Microcuries**
Antimony 122 (Sb 122)	100
Antimony 124 (Sb 124)	10
Antimony 125 (Sb 125)	10
Arsenic 73 (As 73)	100
Arsenic 74 (As 74)	10
Arsenic 76 (As 76)	10
Arsenic 77 (As 77)	100
Barium 131 (Ba 131)	10
Barium 133 (Ba 133)	10
Barium 140 (Ba 140)	10
Bismuth 210 (Bi 210)	1

Bromine 82 (Br 82)	10
Cadmium 109 (Cd 109)	10
Cadmium 115m (Cd 115m)	10
Cadmium 115 (Cd 115)	100
Calcium 45 (Ca 45)	10
Calcium 47 (Ca 47)	10
~~Carbon 11 (C 11)~~	~~1,000~~
Carbon 14 (C 14)	100
Cerium 141 (Ce 141)	100
Cerium 143 (Ce 143)	100
Cerium 144 (Ce 144)	1
Cesium 129 (Cs 129)	100
Cesium 131 (Cs 131)	1,000
Cesium 134m (Cs 134m)	100
Cesium 134 (Cs 134)	1
Cesium 135 (Cs 135)	10
Cesium 136 (Cs 136)	10
Cesium 137 (Cs 137)	10
Chlorine 36 (Cl 36)	10
Chlorine 38 (Cl 38)	10
Chromium 51 (Cr 51)	1,000
Cobalt 57 (Co 57)	100
Cobalt 58m (Co 58m)	10
Cobalt 58 (Co 58)	10
Cobalt 60 (Co 60)	1
Copper 64 (Cu 64)	100
Dysprosium 165 (Dy 165)	10
Dysprosium 166 (Dy 166)	100
Erbium 169 (Er 169)	100
Erbium 171 (Er 171)	100
Europium 152 9.2 h (Eu 152 9.2 h)	100
Europium 152 13 yr (Eu 152 13 yr)	1
Europium 154 (Eu 154)	1
Europium 155 (Eu 155)	10
Fluorine 18 (F 18)	1,000
Gadolinium 153 (Gd 153)	10
Gadolinium 159 (Gd 159)	100
Gallium 67 (Ga 67)	100
Gallium 72 (Ga 72)	10
Germanium 68 (Ge 68)	10
Germanium 71 (Ge 71)	100
Gold 195 (Au 195)	10
Gold 198 (Au 198)	100
Gold 199 (Au 199)	100
Hafnium 181 (Hf 181)	10
Holmium 166 (Ho 166)	100
Hydrogen 3 (H 3)	1,000
Indium 111 (In 111)	100

Indium 113m (In 113m)	100
Indium 114m (In 114m)	10
Indium 115m (In 115m)	100
Indium 115 (In 115)	10
Iodine 123 (I 123)	100
Iodine 125 (I 125)	1
Iodine 126 (I 126)	1
Iodine 129 (I 129)	0.1
Iodine 131 (I 131)	1
Iodine 132 (I 132)	10
Iodine 133 (I 133)	1
Iodine 134 (I 134)	10
Iodine 135 (I 135)	10
Iridium 192 (Ir 192)	10
Iridium 194 (Ir 194)	100
Iron 52 (Fe 52)	10
Iron 55 (Fe 55)	100
Iron 59 (Fe 59)	10
Krypton 85 (Kr 85)	100
Krypton 87 (Kr 87)	10
Lanthanum 140 (La 140)	10
Lutetium 177 (Lu 177)	100
Manganese 52 (Mn 52)	10
Manganese 54 (Mn 54)	10
Manganese 56 (Mn 56)	10
Mercury 197m (Hg 197m)	100
Mercury 197 (Hg 197)	100
Mercury 203 (Hg 203)	10
Molybdenum 99 (Mo 99)	100
Neodymium 147 (Nd 147)	100
Neodymium 149 (Nd 149)	100
Nickel 59 (Ni 59)	100
Nickel 63 (Ni 63)	10
Nickel 65 (Ni 65)	100
Niobium 93m (Nb 93m)	10
Niobium 95 (Nb 95)	10
Niobium 97 (Nb 97)	10
~~Nitrogen 13 (N 13)~~	~~1,000~~
Osmium 185 (Os 185)	10
Osmium 191m (Os 191m)	100
Osmium 191 (Os 191)	100
Osmium 193 (Os 193)	100
~~Oxygen 15 (O 15)~~	~~1,000~~
Palladium 103 (Pd 103)	100
Palladium 109 (Pd 109)	100
Phosphorus 32 (P 32)	10
Platinum 191 (Pt 191)	100
Platinum 193m (Pt 193m)	100

Platinum 193 (Pt 193)	100
Platinum 197m (Pt 197m)	100
Platinum 197 (Pt 197)	100
Polonium 210 (Po 210)	0.1
Potassium 42 (K 42)	10
Potassium 43 (K 43)	10
Praseodymium 142 (Pr 142)	100
Praseodymium 143 (Pr 143)	100
Promethium 147 (Pm 147)	10
Promethium 149 (Pm 149)	10
~~Radium 226 (Ra 226)~~	~~1~~
Rhenium 186 (Re 186)	100
Rhenium 188 (Re 188)	100
Rhodium 103m (Rh 103m)	100
Rhodium 105 (Rh 105)	100
Rubidium 81 (Rb 81)	10
Rubidium 86 (Rb 86)	10
Rubidium 87 (Rb 87)	10
Ruthenium 97 (Ru 97)	100
Ruthenium 103 (Ru 103)	10
Ruthenium 105 (Ru 105)	10
Ruthenium 106 (Ru 106)	1
Samarium 151 (Sm 151)	10
Samarium 153 (Sm 153)	100
Scandium 46 (Sc 46)	10
Scandium 47 (Sc 47)	100
Scandium 48 (Sc 48)	10
Selenium 75 (Se 75)	10
Silicon 31 (Si 31)	100
Silver 105 (Ag 105)	10
Silver 110m (Ag 110m)	1
Silver 111 (Ag 111)	100
Sodium 22 (Na 22)	10
Sodium 24 (Na 24)	10
Strontium 85 (Sr 85)	10
Strontium 89 (Sr 89)	1
Strontium 90 (Sr 90)	0.1
Strontium 91 (Sr 91)	10
Strontium 92 (Sr 92)	10
Sulfur 35 (S 35)	100
Tantalum 182 (Ta 182)	10
Technetium 96 (Tc 96)	10
Technetium 97m (Tc 97m)	100
Technetium 97 (Tc 97)	100
Technetium 99m (Tc 99m)	100
Technetium 99 (Tc 99)	10
Tellurium 125m (Te 125m)	10
Tellurium 127m (Te 127m)	10
Tellurium 127 (Te 127)	100
Tellurium 129m (Te 129m)	10
Tellurium 129 (Te 129)	100

Tellurium 131m (Te 131m)	10
Tellurium 132 (Te 132)	10
Terbium 160 (Tb 160)	10
Thallium 200 (Tl 200)	100
Thallium 201 (Tl 201)	100
Thallium 202 (Tl 202)	100
Thallium 204 (Tl 204)	10
Thulium 170 (Tm 170)	10
Thulium 171 (Tm 171)	10
Tin 113 (Sn 113)	10
Tin 125 (Sn 125)	10
Tungsten 181 (W 181)	10
Tungsten 185 (W 185)	10
Tungsten 187 (W 187)	100
Vanadium 48 (V 48)	10
Xenon 131m (Xe 131m)	1,000
Xenon 133 (Xe 133)	100
Xenon 135 (Xe 135)	100
Ytterbium 175 (Yb 175)	100
Yttrium 87 (Y 87)	10
Yttrium 88 (Y 88)	10
Yttrium 90 (Y 90)	10
Yttrium 91 (Y 91)	10
Yttrium 92 (Y 92)	100
Yttrium 93 (Y 93)	100
Zinc 65 (Zn 65)	10
Zinc 69m (Zn 69m)	100
Zinc 69 (Zn 69)	1,000
Zirconium 93 (Zr 93)	10
Zirconium 95 (Zr 95)	10
Zirconium 97 (Zr 97)	10
Any radioactive material not listed above other than alpha-emitting radioactive materials	0.1

4731.3215 GENERAL LICENSE; DETECTING, MEASURING, GAUGING, CONTROLLING, AND OTHER DEVICES.

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

Subp. 3. **Requirements.** A person who acquires, receives, possesses, uses, or transfers radioactive material in a device according to the general license issued under subpart 1 must:

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

C. ensure that the tests under item B and other testing, installation, servicing, and removal from installation involving the radioactive material, its shielding, or its containment are performed:

(1) according to the instructions provided by the labels; or

(2) by a person holding a specific license issued under parts 4731.3000 to 4731.3175 or 4731.3300 to ~~4731.3420~~ 4731.3400 or issued by the NRC or an agreement state to perform such activities;

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

F. immediately suspend operation of the device if there is a failure of or damage to or any indication of a possible failure of or damage to the shielding of the radioactive material or the on-off mechanism or indicator or upon the detection of 0.005 microcurie (185 Bq) or more removable radioactive material until the device has been repaired by the manufacturer or other person holding a specific license issued under parts 4731.3000 to 4731.3175 or 4731.3300 to ~~4731.3420~~ 4731.3400 or issued by the NRC or an agreement state to repair the device. The device and any radioactive material from the device may only be disposed of by transfer to a person authorized by a specific license to receive the radioactive material contained in the device or as otherwise approved by the commissioner;

G. within 30 days, furnish to the commissioner a report containing a brief description of any event under item F and the remedial actions taken and, in the case of detection of 0.005 microcurie or more of removable radioactive material or failure of or damage to a source likely to result in contamination of the premises or environs, a plan for ensuring that the premises and environs are acceptable for unrestricted use. Under these circumstances, the criteria under part ~~4731.2105~~ 4731.2100, subpart 2, may be applicable, as determined by the commissioner on a case-by-case basis;

[For text of items H and I, see M.R.]

J. transfer or dispose of the device containing radioactive material only:

(1) by export as provided in item I;

(2) by transfer to another general licensee as authorized under item M;

(3) to a person authorized to receive the device by a specific license issued under parts 4731.3000 to 4731.3175 or 4731.3300 to ~~4731.3420~~ 4731.3400 or under equivalent regulations of the NRC or an agreement state that authorizes waste collection; or

(4) as otherwise approved under item L;

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

Subp. 3a. **Registration of generally licensed devices.**

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

B. If in possession of a device meeting the criteria of item A, a person to whom subpart 3 applies must register the device annually with the commissioner and pay the fee required under *Minnesota Statutes*, section 144.1205.

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

(3) Persons generally licensed by the NRC or an agreement state with respect to devices meeting the criteria in item A are not subject to registration under this item if the devices are used in areas subject to the commissioner's jurisdiction for a period of less than 180 days in any calendar year. The commissioner shall not request registration information from such licensees.

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

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

4731.3240 GENERAL LICENSE; STRONTIUM-90 ICE DETECTION DEVICES.

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

Subp. 2. **Requirements.** Persons who own, receive, acquire, possess, use, or transfer strontium-90 contained in ice detection devices under the general license issued under subpart 1:

A. must, upon occurrence of visually observable damage to the device, such as a bend, crack, or discoloration from overheating:

(1) discontinue use of the device until it has been inspected, tested for leakage, and repaired by a person holding a specific license issued under parts 4731.3000to 4731.3175 or 4731.3300 to ~~4731.3420~~ 4731.3400 or by the NRC or an agreement state to manufacture or service the device; or

(2) dispose of the device according to part 4731.2400;

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

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

4731.3250 GENERAL LICENSE; CERTAIN ITEMS AND SELF-LUMINOUS PRODUCTS CONTAINING RADIUM-226.

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

Subp. 2. **Exempt provisions.** Persons who acquire, receive, possess, use, or transfer byproduct material under the general license issued in subpart 1~~, item A,~~ are exempt from the provisions of parts 4731.1000 to 4731.2950, 4731.3110 and 4731.3115, and *Code of Federal Regulations*, title 10, part 21, to the extent that the receipt, possession, use, or transfer of byproduct material is within the terms of the general license; provided, that this exemption is not deemed to apply to any person specifically licensed under this chapter.

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

4731.3300 SPECIFIC DOMESTIC LICENSES TO MANUFACTURE OR TRANSFER CERTAIN ITEMS CONTAINING RADIOACTIVE MATERIAL.

Subpart 1. **Scope.** Parts 4731.3300 to ~~4731.3420~~ 4731.3400 provide for:

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

Subp. 2. **Applicability.** Parts 4731.3300 to ~~4731.3420~~ 4731.3400 are in addition to, and not in substitution for, other requirements of this chapter. In particular, the provisions of parts 4731.3000 to 4731.3175 apply to applications, licenses, and certificates of registration subject to parts 4731.3300 to ~~4731.3420~~ 4731.3400.

4731.3330 SPECIFIC LICENSE; CERTAIN DEVICES CONTAINING RADIOACTIVE MATERIALS; MANUFACTURE OR INITIAL TRANSFER.

Subpart 1. **Approval criteria.** An application for a specific license to manufacture or initially transfer devices containing radioactive material to a person generally licensed under part 4731.3215 or equivalent regulations of the NRC or an agreement state shall be approved if:

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

D. each device having a separable source housing that provides the primary shielding for the source also bears, on the source housing, a durable label containing the device model number and serial number, the isotope and quantity, the words "Caution-Radioactive Material," the radiation symbol described in part 4731.2300, and the name of the manufacturer or initial distributor; ~~and~~

E. each device meeting the criteria of part 4731.3215, subpart 3a, bears a permanent embossed, etched, stamped, or engraved label affixed to the source housing if separable, or the device if the source housing is not separable, that includes the words "Caution-Radioactive Material" and, if practicable, the radiation symbol described in part 4731.2300~~.~~; and

F. the device has been registered in the Sealed Source and Device Registry.

[For text of subps 2 to 11, see M.R.]

4731.3345 SPECIFIC LICENSE; LUMINOUS SAFETY DEVICES; MANUFACTURE, ASSEMBLE, REPAIR, OR INITIALLY TRANSFER.

Subpart 1. **Approval criteria.** An application for a specific license to manufacture, assemble, repair, or initially transfer luminous safety devices containing tritium or promethium-147 for use in aircraft, for distribution to persons generally licensed under part 4731.3225, shall be approved if:

A. the applicant satisfies the general requirements of part 4731.3070;

B. the applicant submits sufficient information regarding each device pertinent to evaluation of the potential radiation exposure, including:

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

(5) ~~any~~ quality ~~control~~ assurance procedures ~~proposed as alternatives to those prescribed in~~ to be followed that are sufficient to ensure compliance with subpart 4; and

(6) any additional information, including experimental studies and tests, required by the commissioner to facilitate a determination of the safety of the device;

C. each device will contain no more than ten curies of tritium or 300 millicuries of promethium-147. The levels of radiation from each device containing promethium-147 will not exceed 0.5 millirad per hour at ten centimeters from any surface when measured through 50 milligrams per square centimeter of absorber; ~~and~~

D. the commissioner determines that:

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

(4) prototypes of the device ~~has~~ have been subjected to and ~~has~~ have satisfactorily passed the ~~prototype~~ tests under ~~part 4731.3405.~~ item E;

E. the applicant must subject at least five prototypes of the device to tests as follows:

(1) the devices are subjected to tests that adequately take into account the individual, aggregate, and cumulative effects of environmental conditions expected in service that could adversely affect the effective containment of tritium or promethium-147, such as temperature, moisture, absolute pressure, water immersion, vibration, shock, and weathering;

(2) the devices are inspected for evidence of physical damage and for loss of tritium or promethium-147, after each stage of testing, using methods of inspection adequate for determining compliance with the criteria in subitem (3); and

(3) device designs are rejected for which the following has been detected for any unit:

(a) a leak resulting in a loss of 0.1 percent or more of the original amount of tritium or promethium-147 from the device;

(b) surface contamination of tritium or promethium-147 on the device of more than 2,200 disintegrations per minute per 100 square centimeters of surface area; or

(c) any other evidence of physical damage; and

F. the device has been registered in the Sealed Source and Device Registry.

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

Subp. 4. **Quality assurance; transfer prohibition.**

A. A person licensed under this part must visually inspect each device and must reject any that has an observable physical defect that could adversely affect containment of the tritium or promethium-147.

B. A person licensed under this part must ~~take a random sample of the size required under part 4731.3420 for lot tolerance percent defective of five percent from each inspection lot and must subject each unit in the sample to the tests under items C to E.~~:

(1) maintain quality assurance systems in the manufacture of the luminous safety device in a manner sufficient to provide reasonable assurance that the safety-related components of the distributed devices are capable of performing their intended functions; and

(2) subject inspection lots to acceptance sampling procedures, by procedures specified in item C and in the license issued under this part, to provide at least 95 percent confidence that the Lot Tolerance Percent Defective of 5.0 percent will not be exceeded.

C. ~~Each device must be immersed in 30 inches of water for 24 hours and must show no visible evidence of water entry. Absolute pressure of the air above the water must then be reduced to one inch of mercury. Lowered pressure must be maintained for one minute or until air bubbles cease to be given off by the water, whichever is longer. Pressure must then be increased to normal atmospheric pressure. Any device that leaks as evidenced by bubbles emanating from within the device or water entering the device must be considered a defective unit.~~ The licensee must subject each inspection lot to:

(1) tests that adequately take into account the individual, aggregate, and cumulative effects of environmental conditions expected in service that could adversely affect the effective containment of tritium or promethium-147, such as absolute pressure and water immersion; and

(2) inspection for evidence of physical damage, containment failure, or for loss of tritium or promethium-147 after each stage of testing, using methods of inspection adequate for applying the following criteria for defective:

~~D.~~

(a) ~~The immersion test water from the test in item C must be measured for tritium or promethium-147 content by an apparatus that has been calibrated to measure tritium or promethium-147, as appropriate. If more than~~ a leak resulting in a loss of 0.1 percent or more of the original amount of tritium or promethium-147 ~~in any device is found to have leaked into the immersion test water, the leaking device must be considered a defective unit.~~ from the device;

~~E.~~

(b) ~~The~~ levels of radiation ~~from each device containing promethium-147 must be measured. Any device that has a radiation level~~ in excess of 0.5 millirad (5 microgray) per hour at ten centimeters from any surface when measured through 50 milligrams per square centimeter of absorber ~~must be considered a defective unit.~~, if the device contains promethium-147; and

(c) any other criteria specified in the license issued under this part.

~~F. An application for a license or for amendment of a license may include a description of procedures proposed as alternatives to those under items B to E and proposed criteria for acceptance under those procedures. The commissioner shall approve the proposed alternative procedures if the applicant demonstrates that:~~

~~(1) the procedures will consider defective any sampled device that has a leakage rate exceeding 0.1 percent of the original quantity of tritium or promethium-147 in any 24-hour period; and~~

~~(2) the operating characteristic curve or confidence interval estimate for the alternative procedures provides a lot tolerance percent defective of five percent at the consumer's risk of 0.10.~~

~~G.~~ D. No person licensed under this part shall transfer to persons generally licensed under part 4731.3225 or under an equivalent general license of the NRC or an agreement state:

(1) any luminous safety device that has been tested and found defective under ~~the criteria and procedures in this subpart~~ a condition of a license issued under this part, unless the defective ~~units have~~ luminous safety device has been repaired or reworked ~~and have then met the tests in items B to E~~, retested, and determined by an independent inspector to meet the applicable acceptance criteria; or

(2) ~~any inspection lot that has been rejected as a result of the procedures under part 4731.3420, or alternative procedures under item F, unless the defective units have been sorted and removed or have been repaired or reworked and have then met the tests under items B to E.~~ any luminous safety device contained within any lot that has been sampled and rejected as a result of the procedures in item B, subitem (2), unless:

(a) a procedure for defining sub-lot size, independence, and additional testing procedures is contained in the license issued under this part; and

(b) each individual sub-lot is sampled, tested, and accepted in accordance with items B, subitem (2), and D, subitem (2), unit (a), and any other criteria that may be required as a condition of the license issued under this part.

Subp. 5. **Transfer reports.**

A. A person licensed under this part must file an annual report with the commissioner that covers the year ending June 30 and is filed within 30 days thereafter. If no transfers have been made to persons generally licensed under part 4731.3225 during the reporting period, the report must so indicate. The report must:

~~A.~~

(1) ~~states~~ state the total quantity of tritium or promethium-147 transferred to persons generally licensed under part 4731.3225;

~~B.~~

(2) ~~identifies~~ identify each general licensee by name;

~~C.~~

(3) ~~states~~ state the kinds and numbers of luminous devices transferred; and

~~D.~~

(4) ~~specifies~~ specify the quantity of tritium or promethium-147 in each kind of device~~; and~~.

~~E. covers the year ending June 30 and is filed within 30 days thereafter.~~

B. A person licensed under this part must report annually all transfers of devices to persons for use under a general license in the NRC's or an agreement state's regulations that are equivalent to part 4731.3225 to the NRC or responsible agreement state agency. If no transfers have been made to the NRC or a particular agreement state during the reporting period, this information must be reported to the NRC or responsible agreement state agency upon request of the agency. The report must:

(1) state the total quantity of tritium of promethium-147 transferred;

(2) identify each general licensee by name;

(3) state the kinds and numbers of luminous devices transferred; and

(4) specify the quantity of tritium or promethium-147 in each kind of device.

4731.3365 SPECIFIC LICENSE; CALIBRATION OR REFERENCE SOURCES; MANUFACTURE OR INITIAL TRANSFER.

Subpart 1. **Approval criteria.** An application for a specific license to manufacture or initially transfer calibration and reference sources containing americium-241 or radium-226 for distribution to persons generally licensed under part 4731.3230 shall be approved if:

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

C. each source will contain no more than five microcuries (185 kBq) of americium-241 or radium-226; ~~and~~

D. the commissioner determines, with respect to any type of source containing more than 0.005 microcurie (185 Bq) of americium-241 or radium-226, that:

(1) the method of incorporation and binding of the americium-241 or radium-226 in the source is such that the americium-241 or radium-226 will not be released or be removed from the source under normal conditions of use and handling of the source; and

(2) the source has been subjected to and has satisfactorily passed ~~the prototype tests under part 4731.3410.~~ appropriate tests required by item E; and

E. the applicant subjects at least five prototypes of each source that is designed to contain more than 0.005 microcurie (0.185 kilobecquerel) of americium-241 or radium-226 to tests as follows:

(1) the initial quantity of radioactive material deposited on each source is measured by direct counting of the source;

(2) the sources are subjected to tests that adequately take into account the individual, aggregate, and cumulative effects of environmental conditions expected in service that could adversely affect the effective containment or binding of americium-241 or radium-226, such as physical handling, moisture, and water immersion;

(3) the sources are inspected for evidence of physical damage and for loss of americium-241 or radium-226, after each stage of testing, using methods of inspection adequate for determining compliance with the criteria in subitem (4); and

(4) source designs are rejected for which the following has been detected for any unit: removal of more than 0.005 microcurie (0.185 kilobecquerel) of americium-241 or radium-226 from the source or any other evidence of physical damage.

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

Subp. 3. **Leak testing.**

A. A person licensed under this part must perform a dry wipe test upon each source containing more than 0.1 microcurie (3.7 kBq) of americium-241 or radium-226 before transferring the source to a general licensee under part 4731.3230 or equivalent regulations of the NRC or an agreement state.

B. The test must be performed by wiping the entire radioactive surface of the source with a filter paper with the application of moderate finger pressure.

C. The radioactivity on the paper must be measured by using ~~radiation detection instrumentation~~ methods capable of detecting 0.005 microcurie (0.185 kBq) of americium-241 or radium-226.

D. If ~~the test discloses~~ a source has been shown to be leaking or losing more than 0.005 microcurie (0.185kBq) of ~~radioactive material~~ americium-241 or radium-226 by the methods described in this subpart, the source must be ~~deemed to be leaking or losing americium-241 or radium-226~~ rejected and must not be transferred to a general licensee under part 4731.3230, or equivalent regulations of the NRC or an agreement state.

4731.3380 SPECIFIC LICENSE; ICE DETECTION DEVICES; MANUFACTURE OR INITIAL TRANSFER.

Subpart 1. **Approval criteria.** An application for a specific license to manufacture or initially transfer ice detection devices containing strontium-90 for distribution to persons generally licensed under part 4731.3240 shall be approved if:

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

E. the commissioner determines that:

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

(4) prototypes of the device ~~has~~ have been subjected to and ~~has~~ have satisfactorily passed the ~~prototype~~ tests under ~~part 4731.3415~~ item F; and

(5) quality control procedures have been established to satisfy the requirements of subpart 2.~~:~~;

F. the applicant subjects at least five prototypes of the device to tests as follows:

(1) the devices are subjected to tests that adequately take into account the individual, aggregate, and cumulative effects of environmental conditions expected in service that could adversely affect the effective containment of strontium-90, such as temperature, moisture, absolute pressure, water immersion, vibration, shock, and weathering;

(2) the devices are inspected for evidence of physical damage and for loss of strontium-90 after each stage of testing, using methods of inspection adequate for determining compliance with the criteria in subitem (3); and

(3) device designs are rejected for which the following has been detected for any unit:

(a) a leak resulting in a loss of 0.1 percent or more of the original amount of strontium-90 from the device;

(b) surface contamination of strontium-90 on the device of more than 2,200 disintegrations per minute per 100 square centimeters of surface area; or

(c) any other evidence of physical damage; and

G. the device has been registered in the Sealed Source and Device Registry.

Subp. 2. **Quality assurance; transfer prohibition.**

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

C. A person licensed under this part must ~~take a random sample of the size required by part 4731.3420 for lot tolerance percent defective of five percent from each inspection lot and must subject each unit in the sample to the tests in items D and E.~~:

(1) maintain quality assurance systems in the manufacture of the ice detection device containing strontium-90 in a manner sufficient to provide reasonable assurance that the safety-related components of the distributed devices are capable of performing their intended functions; and

(2) subject inspection lots to acceptance sampling procedures, by procedures specified in item D and in the license issued under this part, to provide at least 95 percent confidence that the Lot Tolerance Percent Defective of 5.0 percent will not be exceeded.

D. Each ~~device must be immersed in 30 inches of water for 24 hours and must show no visible evidence of physical contact between the water and the strontium-90. Absolute pressure of the air above the water must then be reduced to one inch of mercury. Lowered pressure must be maintained for one minute or until air bubbles cease to be given off by the water, whichever is longer. Pressure must then be increased to normal atmospheric pressure. Any device that leaks, as evidenced by physical contact between the water and the strontium-90, must be considered a defective unit.~~ person licensed under this part must subject each inspection lot to:

(1) tests that adequately take into account the individual, aggregate, and cumulative effects of environmental conditions expected in service that could possibly affect the effective containment of strontium-90, such as absolute pressure and water immersion; and

(2) inspection for evidence of physical damage, containment failure, or for loss of strontium-90 after each stage of testing, using methods of inspection adequate to determine compliance with the following criteria for defective: a leak resulting in a loss of 0.1 percent

or more of the original amount of strontium-90 from the device and any other criteria specified in the license issued under this part.

~~E. The immersion test water from the test under item D must be measured for radioactive material. If the amount of radioactive material in the immersion test water is greater than 0.1 percent of the original amount of strontium-90 in any device, the device must be considered a defective unit.~~

~~F. An application for a license or for amendment to a license may include a description of procedures proposed as alternatives to those prescribed under items C to E and proposed criteria for acceptance under those procedures. The commissioner shall approve the proposed alternative procedures if the applicant demonstrates that:~~

~~(1) the procedures will consider defective any sampled device that has a leakage rate exceeding 0.1 percent of the original quantity of strontium-90 in any 24-hour period; and~~

~~(2) the operating characteristic curve or confidence interval estimate for the alternative procedures provides a lot tolerance percent defective of five percent at the consumer's risk of 0.10.~~

~~G.~~ E. No person licensed under this part shall transfer to persons generally licensed under part 4731.3240, or under an equivalent general license of the NRC or an agreement state:

(1) any ice detection device ~~that has been~~ containing strontium-90 tested and found defective under the criteria ~~and procedures~~ specified in a license issued under this ~~subpart~~ part, unless the defective ~~units have~~ ice detection device has been repaired or reworked ~~and then met the tests required under items C to E~~, retested, and determined by an independent inspector to meet the applicable acceptance criteria; or

(2) any ~~inspection lot that has been rejected as a result of the procedures under part 4731.3420, or alternative procedures under item F, unless the defective units have been sorted and removed or have been repaired or reworked and have then met the tests required under items C to E.~~ ice detection device containing strontium-90 contained within any lot that has been sampled and rejected as a result of the procedures in item C, subitem (2), unless:

(a) a procedure for defining sub-lot size, independence, and additional testing procedures is contained in the license issued under this part; and

(b) each individual sub-lot is sampled, tested, and accepted in accordance with unit (a) and item C, subitem (2), and any other criteria as may be required as a condition of the license issued under this part.

4731.3400 SPECIFIC LICENSE; SOURCES OR DEVICES FOR MEDICAL USE; MANUFACTURE AND DISTRIBUTION.

Subpart 1. **Approval criteria.** An application for a specific license to manufacture and distribute sources and devices containing radioactive material to persons licensed according to parts 4731.4400 to 4731.4527 for use as a calibration, transmission, or reference source or for the uses listed under parts 4731.4404, 4731.4450, 4731.4460, and 4731.4463 shall be approved if:

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

B. the applicant submits sufficient information regarding each type of source or device pertinent to an evaluation of its radiation safety, including:

[For text of subitems (1) to (7), see M.R.]

(8) instructions for handling and storing the source or device from the radiation safety standpoint. These instructions must be:

(a) included on a durable label attached to the source or device;

(b) attached to a permanent storage container for the source of device; or

(c) summarized on the label, for instructions that are too lengthy for the label, and printed in detail on a brochure that is referenced on the label; ~~and~~

C. the label affixed to the source or device, or to the permanent storage container for the source or device, contains:

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

(4) a statement that the commissioner has approved distribution of the (name of source or device) to persons licensed to use

radioactive material identified under parts 4731.4423, 4731.4450, 4731.4460, and 4731.4463, as appropriate, and to persons who hold equivalent licenses issued by the NRC or an agreement state.; and

D. the source or device has been registered in the Sealed Source and Device Registry.

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

4731.3520 SPECIFIC LICENSE OF BROAD SCOPE; APPLICATION.

A person must file an application for a specific license of broad scope ~~in duplicate~~ on an application for radioactive material license form according to part 4731.3065.

4731.4010 SPECIFIC LICENSE; APPLICATION.

A person must file an application for a specific license for use of sealed sources in industrial radiography ~~in duplicate~~ on the application for radioactive material license form according to part 4731.3070.

4731.4421 CALIBRATION OF SURVEY INSTRUMENTS.

A. A licensee must calibrate the survey instruments used to show compliance with parts 4731.2000 to 4731.2950 and 4731.4400 to 4731.4527 before first use, ~~annually~~ intervals not to exceed 12 months, and following a repair that affects the calibration. A licensee must:

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

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

4731.4612 TRAINING FOR INDIVIDUALS FUNCTIONING AS A NUCLEAR MEDICINE TECHNOLOGIST BEFORE JANUARY 1, 2011, WHO ARE NOT ACCREDITED.

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

Subp. 4. **Continuing education.** Individuals working as nuclear medicine technologists before January 1, 2011, who are not accredited must:

A. obtain 24 hours of continuing education ~~on nuclear medicine~~ every 24 months;

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

4731.6020 SPECIFIC LICENSE; APPROVAL.

The commissioner shall approve an application for a specific license for the use of licensed material in an irradiator if the applicant meets the general requirements under ~~part~~ parts 4731.3070, subpart 1, items A to D, and 4731.3070, subpart 2, and if the application includes:

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

4731.7020 SPECIFIC LICENSE; WELL LOGGING.

The commissioner shall approve an application for a specific license for the use of licensed material in well logging if the applicant:

A. satisfies the general licensing requirements under parts ~~4731.0595~~ 4731.0575 for special nuclear material, 4731.0765 for source material, and 4731.3070 for radioactive material, as appropriate, and any special requirements under parts 4731.7000 to 4731.7280;

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

4731.8000 APPLICABILITY; CATEGORY 1 OR CATEGORY 2 QUANTITIES OF RADIOACTIVE MATERIAL.

A. Parts 4731.8010 to 4731.8090 apply to any person who, under the regulations in this chapter, possesses or uses at any site, an aggregated category 1 or category 2 quantity of radioactive material.

B. Parts 4731.8100 to 4731.8125 apply to any person who, under the regulations of this chapter:

(1) transports or delivers to a carrier for transport in a single shipment, a category 1 or category 2 quantity of radioactive material; or

(2) imports or exports a category 1 or category 2 quantity of radioactive material; the provisions only apply to the domestic portion of the transport.

4731.8005 EXEMPTION FOR WASTE.

A licensee that possesses radioactive waste that contains category 1 or category 2 quantities of radioactive material is exempt from the requirements of parts 4731.8010 to 4731.8125. Except that any radioactive waste that contains discrete sources, ion-exchange resins, or activated material that weighs less than 2,000 kg (4.409 lbs) is not exempt from the requirements of this part. The licensee must implement the following requirements to secure the radioactive waste:

A. use continuous physical barriers that allow access to the radioactive waste only through established access control points;

B. use a locked door or gate with monitored alarm at the access control point;

C. assess and respond to each actual or attempted unauthorized access to determine whether an actual or attempted theft, sabotage, or diversion occurred; and

D. immediately notify the local law enforcement agency (LLEA) and request an armed response from the LLEA upon determination that there was an actual or attempted theft, sabotage, or diversion of the radioactive waste that contains category 1 or category 2 quantities of radioactive material.

4731.8010 PERSONNEL ACCESS AUTHORIZATION REQUIREMENTS FOR CATEGORY 1 OR CATEGORY 2 QUANTITIES OF RADIOACTIVE MATERIAL.

Subpart 1. **General.**

A. Each licensee that possesses an aggregated quantity of radioactive material at or above the category 2 threshold must establish, implement, and maintain its access authorization program in accordance with the requirements of this subpart.

B. An applicant for a new license and each licensee that is newly subject to the requirements of this subpart upon application for modification of its license must implement the requirements of parts 4731.8010 to 4731.8040, as appropriate, before taking possession of an aggregated category 1 or category 2 quantity of radioactive material.

C. Any licensee that has not previously implemented the Security Orders or been subject to the provisions of parts 4731.8010 to 4731.8040 must implement the provisions of parts 4731.8010 to 4731.8040 before aggregating radioactive material to a quantity that equals or exceeds the category 2 threshold.

Subp. 2. **General performance objective.** The licensee's access authorization program must ensure that the individuals specified in subpart 3, item A, are trustworthy and reliable.

Subp. 3. **Applicability.**

A. Licensees must subject the following individuals to an access authorization program:

(1) any individual whose assigned duties require unescorted access to category 1 or category 2 quantities of radioactive material or to any device that contains the radioactive material; and

(2) reviewing officials.

B. Licensees need not subject the categories of individuals listed in part 4731.8030, subpart 1, items A to M, to the investigation elements of the access authorization program.

C. Licensees must approve for unescorted access to category 1 or category 2 quantities of radioactive material only those individuals with job duties that require unescorted access to category 1 or category 2 quantities of radioactive material.

D. Licensees may include individuals needing access to safeguards information-modified handling under *Code of Federal Regulations*, title 10, part 73, in the access authorization program under parts 4731.8010 to 4731.8040.

4731.8015 ACCESS AUTHORIZATION PROGRAM REQUIREMENTS.

Subpart 1. **Granting unescorted access authorization.**

A. Licensees must implement the requirements of parts 4731.8010 to 4731.8040 for granting initial or reinstated unescorted access authorization.

B. Individuals who have been determined to be trustworthy and reliable must also complete the security training required by part

4731.8055, subpart 3, before being allowed unescorted access to category 1 or category 2 quantities of radioactive material.

Subp. 2. **Reviewing officials.**

A. Reviewing officials are the only individuals authorized to make trustworthiness and reliability determinations that allow individuals to have unescorted access to category 1 or category 2 quantities of radioactive materials possessed by the licensee.

B. Each licensee must name one or more individuals to be reviewing officials. After completing the background investigation on the reviewing official, the licensee must provide, under oath or affirmation, a certification that the reviewing official is deemed trustworthy and reliable by the licensee. The fingerprints of the named reviewing official must be taken by a law enforcement agency, federal or state agency that provides fingerprinting services to the public, or commercial fingerprinting services authorized by a state to take fingerprints. The licensee must recertify that the reviewing official is deemed trustworthy and reliable every ten years in accordance with part 4731.8020, subpart 3.

C. Reviewing officials must be permitted to have unescorted access to category 1 or category 2 quantities of radioactive materials or access to safeguards information or safeguards information-modified handling, if the licensee possesses safeguards information or safeguards information-modified handling.

D. Reviewing officials cannot approve other individuals to act as reviewing officials.

E. A reviewing official does not need to undergo a new background investigation before being named by the licensee as the reviewing official if:

(1) the individual has undergone a background investigation that included fingerprinting and an FBI criminal history records check and has been determined to be trustworthy and reliable by the licensee; or

(2) the individual is subject to a category listed in part 4731.8030, subpart 1.

Subp. 3. **Informed consent.**

A. Licensees must not initiate a background investigation without the informed and signed consent of the subject individual. This consent must include authorization to share personal information with other individuals or organizations as necessary to complete the background investigation. Before a final adverse determination, the licensee must provide the individual with an opportunity to correct any inaccurate or incomplete information that is developed during the background investigation. Licensees do not need to obtain signed consent from those individuals that meet the requirements of part 4731.8020, subpart 2. A signed consent must be obtained prior to any reinvestigation.

B. The subject individual may withdraw consent at any time. Licensees must inform the individual that:

(1) if an individual withdraws consent, the licensee may not initiate any elements of the background investigation that were not in progress at the time the individual withdrew consent; and

(2) the withdrawal of consent for the background investigation is sufficient cause for denial or termination of unescorted access authorization.

Subp. 4. **Personal history disclosure.** Any individual who is applying for unescorted access authorization must disclose the personal history information that is required by the licensee's access authorization program for the reviewing official to make a determination of the individual's trustworthiness and reliability. Refusal to provide, or the falsification of, any personal history information required by parts 4731.8010 to 4731.8040 is sufficient cause for denial or termination of unescorted access.

Subp. 5. **Determination basis.**

A. The reviewing official must determine whether to permit, deny, unfavorably terminate, maintain, or administratively withdraw an individual's unescorted access authorization based on an evaluation of all information collected to meet the requirements of parts 4731.8010 to 4731.8040.

B. The reviewing official must not permit any individual to have unescorted access until the reviewing official has evaluated all of the information collected to meet the requirements of parts 4731.8010 to 4731.8040 and determined that the individual is trustworthy and reliable. The reviewing official has authority to deny unescorted access to any individual based on information obtained at any time during the background investigation.

C. The licensee must document the basis for concluding whether or not there is reasonable assurance that an individual is trustworthy and reliable.

D. The reviewing official has authority to terminate or administratively withdraw an individual's unescorted access authorization based on information obtained after the background investigation has been completed and the individual granted unescorted access authorization.

E. Licensees must maintain a list of persons currently approved for unescorted access authorization. When a licensee determines that a person no longer requires unescorted access or meets the access authorization requirement, the licensee must remove the person from the approved list as soon as possible, but no later than seven working days, and take prompt measures to ensure that the individual is unable to have unescorted access to the material.

Subp. 6. **Procedures.** Licensees must develop, implement, and maintain written procedures for implementing the access authorization program. The procedures must include provisions for the notification of individuals who are denied unescorted access. The procedures must include provisions for the review, at the request of the affected individual, of a denial or termination of unescorted access authorization. The procedures must contain a provision to ensure that the individual is informed of the grounds for the denial or termination of unescorted access authorization and allow the individual an opportunity to provide additional relevant information.

Subp. 7. **Right to correct and complete information.**

A. Prior to any final adverse determination, licensees must provide each individual subject to this subpart with the right to complete, correct, and explain information obtained as a result of the licensee's background investigation. Confirmation of receipt by the individual of this notification must be maintained by the licensee for a period of one year from the date of the notification.

B. If, after reviewing a criminal history record, an individual believes that it is incorrect or incomplete in any respect and wishes to change, correct, update, or explain anything in the record, the individual may initiate challenge procedures. These procedures include direct application by the individual challenging the record to the law enforcement agency that contributed the questioned information or a direct challenge as to the accuracy or completeness of any entry on the criminal history record and must be sent to the Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Division, ATTN: SCU, Mod. D-2, 1000 Custer Hollow Road, Clarksburg, WV 26306, as specified in *Code of Federal Regulations*, title 28, sections 16.30 to 16.34. In the latter case, the Federal Bureau of Investigation (FBI) will forward the challenge to the agency that submitted the data, and will request that the agency verify or correct the challenged entry. Upon receipt of an official communication directly from the agency that contributed the original information, the FBI Identification Division makes any changes necessary according to the information supplied by that agency. Licensees must provide at least ten days for an individual to initiate action to challenge the results of an FBI criminal history records check after the individual has reviewed the criminal history record. The licensee shall make a final adverse determination based upon the criminal history records only after receipt of the FBI's confirmation or correction of the record.

Subp. 8. **Records.**

A. The licensee must retain documentation regarding the trustworthiness and reliability of individual employees for three years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material.

B. The licensee must retain a copy of the current access authorization program procedures as a record for three years after the procedure is no longer needed. If any portion of the procedure is superseded, the licensee must retain the superseded material for three years after the record is superseded.

C. The licensee must retain the list of persons approved for unescorted access authorization for three years after the list is superseded or replaced.

4731.8020 BACKGROUND INVESTIGATIONS.

Subpart 1. **Initial investigation.**

A. Before allowing an individual unescorted access to category 1 or category 2 quantities of radioactive material or to the devices that contain the material, licensees must complete a background investigation of the individual seeking unescorted access authorization. The scope of the investigation must encompass at least the seven years preceding the date of the background investigation or since the individual's 18th birthday, whichever is shorter. The background investigation must include, at a minimum:

(1) fingerprinting and an FBI identification and criminal history records check under part 4731.8025;

(2) verification of true identity. Licensees must verify the true identity of the individual who is applying for unescorted access authorization to ensure that the applicant is who he or she claims to be. A licensee must review official identification documents such as driver's license, passport, government identification, and certificate of birth issued by the state, province, or country of birth and compare the documents to personal information data provided by the individual to identify any discrepancy in the information. Licensees must document the type, expiration, and identification number of the identification document, or maintain a photocopy of identifying documents on file in accordance with part 4731.8035. Licensees must certify in writing that the identification was properly reviewed and must maintain the certification and all related documents for review upon inspection;

(3) employment history verification. Licensees must complete an employment history verification, including military history. Licensees must verify the individual's employment with each previous employer for the most recent seven years before the date of application;

(4) verification of education. Licensees must verify that the individual participated in the education process during the claimed period;

(5) character and reputation determination. Licensees must complete reference checks to determine the character and reputation of the individual who has applied for unescorted access authorization. Unless other references are not available, reference checks may not be conducted with any person who is known to be a close member of the individual's family including, but not limited to, the individual's spouse, parents, siblings, or children, or any individual who resides in the individual's permanent household. Reference checks under this subpart must be limited to whether the individual has been and continues to be trustworthy and reliable;

(6) the licensee must also, to the extent possible, obtain independent information to corroborate that provided by the individual, such as seeking references not supplied by the individual; and

B. If a previous employer, educational institution, or any other entity with which the individual claims to have been engaged fails to provide information or indicates an inability or unwillingness to provide information within a time frame deemed appropriate by the licensee, but at least after ten business days of the request, or if the licensee is unable to reach the entity, the licensee must document the refusal, unwillingness, or inability in the record of investigation; and attempt to obtain the information from an alternate source.

Subp. 2. **Grandfathering.**

A. Individuals who have been determined to be trustworthy and reliable for unescorted access to category 1 or category 2 quantities of radioactive material under a Fingerprint Order may continue to have unescorted access to category 1 and category 2 quantities of radioactive material without further investigation. These individuals must be subject to the reinvestigation requirement under subpart 3.

B. Individuals who have been determined to be trustworthy and reliable under the provisions of *Code of Federal Regulations*, title 10, part 73, or the security orders for access to safeguards information, safeguards information-modified handling, or risk-significant material may have unescorted access to category 1 and category 2 quantities of radioactive material without further investigation. The licensee must document that the individual was determined to be trustworthy and reliable under the provisions of *Code of Federal Regulations*, title 10, part 73, or a security order. Security order, in this context, refers to any order that was issued by the NRC that required fingerprints and an FBI criminal history records check for access to safeguards information, safeguards information-modified handling, or risk-significant material such as special nuclear material or large quantities of uranium hexafluoride. These individuals must be subject to the reinvestigation requirement under subpart 3.

Subp. 3. **Reinvestigations.** Licensees must conduct a reinvestigation every ten years for any individual with unescorted access to category 1 or category 2 quantities of radioactive material. The reinvestigation must consist of fingerprinting and an FBI identification and criminal history records check in accordance with part 4731.8025. The reinvestigations must be completed within ten years of the date on which these elements were last completed.

4731.8025 REQUIREMENTS FOR CRIMINAL HISTORY RECORDS CHECKS OF INDIVIDUALS GRANTED UNESCORTED ACCESS TO CATEGORY 1 OR CATEGORY 2 QUANTITIES OF RADIOACTIVE MATERIAL.

Subpart 1. **General performance objective and requirements.**

A. Except for those individuals listed in part 4731.8030 and those individuals grandfathered under part 4731.8020, subpart 2, each licensee subject to the provisions of this subpart must fingerprint each individual who is to be permitted unescorted access to category 1 or category 2 quantities of radioactive material. Licensees must transmit all collected fingerprints to the NRC for transmission to the FBI.

The licensee must use the information received from the FBI as part of the required background investigation to determine whether to grant or deny further unescorted access to category 1 or category 2 quantities of radioactive materials for that individual.

B. The licensee must notify each affected individual that fingerprints are used to secure a review of the individual's criminal history record, and must inform the individual of the procedures for revising the record or adding explanations to the record.

C. Fingerprinting is not required if a licensee is reinstating an individual's unescorted access authorization to category 1 or category 2 quantities of radioactive materials if:

(1) the individual returns to the same facility that granted unescorted access authorization within 365 days of the termination of the individual's unescorted access authorization; and

(2) the previous access was terminated under favorable conditions.

D. Fingerprints do not need to be taken if an individual who is an employee of a licensee, contractor, manufacturer, or supplier has been granted unescorted access to category 1 or category 2 quantities of radioactive material, access to safeguards information, or safeguards information-modified handling by another licensee, based upon a background investigation conducted under parts 4731.8010 to 4731.8040, the Fingerprint Orders, or *Code of Federal Regulations*, title 10, part 73. An existing criminal history records check file may be transferred to the licensee asked to grant unescorted access in accordance with the provisions of part 4731.8035, item C.

E. Licensees must use the information obtained as part of a criminal history records check solely for the purpose of determining an individual's suitability for unescorted access authorization to category 1 or category 2 quantities of radioactive materials, access to safeguards information, or safeguards information-modified handling.

Subp. 2. **Prohibitions.**

A. Licensees shall not base a final determination to deny an individual unescorted access authorization to category 1 or category 2 quantities of radioactive material solely on the basis of information received from the FBI involving:

(1) an arrest more than one year old for which there is no information of the disposition of the case; or

(2) an arrest that resulted in dismissal of the charge or an acquittal.

B. Licensees shall not use information received from a criminal history records check obtained under this subpart in a manner that would infringe upon the rights of any individual under the First Amendment to the Constitution of the United States, nor shall licensees use the information in any way that would discriminate among individuals on the basis of race, religion, national origin, gender, or age.

Subp. 3. **Procedures for processing of fingerprint checks.**

A. For the purpose of complying with this subpart, licensees must submit to the Office of Administration, Division of Facilities and Security, Mail Stop TWB-05 B32M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0012, one completed, legible standard fingerprint card (Form FD-258, ORIMDNRCOOOZ), electronic fingerprint scan or, where practicable, other fingerprint record for each individual requiring unescorted access to category 1 or category 2 quantities of radioactive material. Copies of these forms may be obtained by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, by calling (301) 415-7232, or by e-mail to ***FORMS.Resource@nrc.gov***. Guidance on submitting electronic fingerprints can be found at http://www.nrc.gov/site-help/e-submittals.html.

B. Fees for the processing of fingerprint checks are due upon application. Licensees must submit payment with the application for the processing of fingerprints through corporate check, certified check, cashier's check, money order, or electronic payment, made payable to "U.S. NRC." For guidance on making electronic payments, contact the Security Branch, Division of Facilities and Security at (301) 492-3531. Combined payment for multiple applications is acceptable. The commission publishes the amount of the fingerprint check application fee on the NRC public Web site. To find the current fee amount, go to the Electronic Submittals page at http://www.nrc.gov/site-help/e-submittals.html and see the link for the Criminal History Program under Electronic Submission Systems.

C. The commission must forward to the submitting licensee all data received from the FBI as a result of the licensee's applications for criminal history records checks.

4731.8030 RELIEF FROM FINGERPRINTING, IDENTIFICATION, AND CRIMINAL HISTORY RECORDS CHECKS AND OTHER ELEMENTS OF BACKGROUND INVESTIGATIONS.

Subpart 1. **Exemption to certain security checks.** Fingerprinting, and the identification and criminal history records checks required by section 149 of the Atomic Energy Act of 1954, as amended, and other elements of the background investigation are not required for the following individuals prior to granting unescorted access to category 1 or category 2 quantities of radioactive materials:

A. an employee of the commission or of the Executive Branch of the U.S. government who has undergone fingerprinting for a prior U.S. government criminal history records check;

B. a member of Congress;

C. an employee of a member of Congress or a congressional committee who has undergone fingerprinting for a prior U.S. government criminal history records check;

D. the governor of a state or the governor's designated state employee representative;

E. federal, state, or local law enforcement personnel;

F. state radiation control program directors and state homeland security advisors or their designated state employee representatives;

G. agreement state employees conducting security inspections on behalf of the NRC under an agreement executed under section 274.i. of the Atomic Energy Act;

H. representatives of the International Atomic Energy Agency (IAEA) engaged in activities associated with the U.S./IAEA Safeguards Agreement who have been certified by the NRC;

I. emergency response personnel who are responding to an emergency;

J. commercial vehicle drivers for road shipments of category 2 quantities of radioactive material;

K. package handlers at transportation facilities such as freight terminals and railroad yards;

L. any individual who has an active federal security clearance, provided that the individual makes available the appropriate documentation. Written confirmation from the agency/employer that granted the federal security clearance or reviewed the criminal history records check must be provided to the licensee. The licensee must retain this documentation for a period of three years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material; and

M. any individual employed by a service provider licensee for which the service provider licensee has conducted the background investigation for the individual and approved the individual for unescorted access to category 1 or category 2 quantities of radioactive material. Written verification from the service provider must be provided to the licensee. The licensee must retain the documentation for a period of three years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material.

Subp. 2. **Additional exemption.** Fingerprinting, and the identification and criminal history records checks required by section 149 of the Atomic Energy Act of 1954, as amended, are not required for an individual who has had a favorably adjudicated U.S. government criminal history records check within the last five years, under a comparable U.S. government program involving fingerprinting and an FBI identification and criminal history records check provided that the individual makes available the appropriate documentation. Written confirmation from the agency/employer that reviewed the criminal history records check must be provided to the licensee. The licensee must retain this documentation for a period of three years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material. These programs include, but are not limited to:

A. national agency check;

B. Transportation Worker Identification Credentials (TWIC) under *Code of Federal Regulations*, title 49, part 1572;

C. Bureau of Alcohol, Tobacco, Firearms, and Explosives background check and clearances under *Code of Federal Regulations*, title

27, part 555;

D. Health and Human Services security risk assessments for possession and use of select agents and toxins under *Code of Federal Regulations*, title 42, part 73;

E. hazardous material security threat assessment for hazardous material endorsement to commercial driver's license under *Code of Federal Regulations*, title 49, part 1572; and

F. Customs and Border Protection's Free and Secure Trade (FAST) Program.

4731.8035 PROTECTION OF INFORMATION.

A. Each licensee who obtains background information on an individual under parts 4731.8010 to 4731.8040 must establish and maintain a system of files and written procedures for protection of the record and the personal information from unauthorized disclosure.

B. The licensee shall not disclose the record or personal information collected and maintained to persons other than the subject individual, the individual's representative, or to those who have a need to have access to the information in performing assigned duties in the process of granting or denying unescorted access to category 1 or category 2 quantities of radioactive material, safeguards information, or safeguards information-modified handling. No individual authorized to have access to the information shall disseminate the information to any other individual who does not have a need to know.

C. The personal information obtained on an individual from a background investigation may be provided to another licensee:

(1) upon the individual's written request to the licensee holding the data to disseminate the information contained in the individual's file; and

(2) when the recipient licensee verifies information such as name, date of birth, Social Security number, gender, and other applicable physical characteristics.

D. The licensee must make background investigation records obtained under this subpart available for examination by an authorized representative of the commissioner to determine compliance with the regulations and laws.

E. The licensee must retain all fingerprint and criminal history records received from the FBI, including data indicating no record, or a copy of these records if the individual's file has been transferred, on an individual for three years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material.

4731.8040 ACCESS AUTHORIZATION PROGRAM REVIEW.

A. Each licensee must be responsible for the continuing effectiveness of the access authorization program. Each licensee must ensure that access authorization programs are reviewed to confirm compliance with the requirements of parts 4731.8010 to 4731.8040 and that comprehensive actions are taken to correct any noncompliance that is identified. The review program must evaluate all program performance objectives and requirements. Each licensee must at least annually review the access program content and implementation.

B. The results of the reviews, along with any recommendations, must be documented. Each review report must identify conditions that are adverse to the proper performance of the access authorization program, the cause of the conditions, and, when appropriate, recommend corrective actions, and corrective actions taken. The licensee must review the findings and take any additional corrective actions necessary to preclude repetition of the condition, including reassessment of the deficient areas where indicated.

C. Review records must be maintained for three years.

4731.8050 SECURITY PROGRAM.

Subpart 1. **Applicability.**

A. Each licensee that possesses an aggregated category 1 or category 2 quantity of radioactive material must establish, implement, and maintain a security program in accordance with the requirements of parts 4731.8050 to 4731.8090.

B. An applicant for a new license and each licensee that would become newly subject to the requirements of parts 4731.8050 to 4731.8090 upon application for modification of its license must implement the requirements of parts 4731.8050 to 4731.8090, as appropriate, before taking possession of an aggregated category 1 or category 2 quantity of radioactive material.

C. Any licensee that has not previously implemented the security orders or been subject to the provisions of parts 4731.8050 to 4731.8090 must provide written notification to the commissioner at least 90 days before aggregating radioactive material to a quantity that equals or exceeds the category 2 threshold.

Subp. 2. **General performance objective.** Each licensee must establish, implement, and maintain a security program that is designed to monitor and, without delay, detect, assess, and respond to an actual or attempted unauthorized access to category 1 or category 2 quantities of radioactive material.

Subp. 3. **Program features.** Each licensee's security program must include the program features, as appropriate, described in parts 4731.8055 to 4731.8085.

4731.8055 GENERAL SECURITY PROGRAM REQUIREMENTS.

Subpart 1. **Security plan.**

A. Each licensee identified in part 4731.8050 must develop a written security plan specific to its facilities and operations. The purpose of the security plan is to establish the licensee's overall security strategy to ensure the integrated and effective functioning of the security program required by parts 4731.8050 to 4731.8090. The security plan must, at a minimum:

(1) describe the measures and strategies used to implement the requirements of parts 4731.8050 to 4731.8090; and

(2) identify the security resources, equipment, and technology used to satisfy the requirements of parts 4731.8050 to 4731.8090.

B. The security plan must be reviewed and approved by the individual with overall responsibility for the security program.

C. A licensee must revise its security plan as necessary to ensure the effective implementation of commissioner requirements. The licensee must ensure that:

(1) the revision has been reviewed and approved by the individual with overall responsibility for the security program; and

(2) the affected individuals are instructed on the revised plan before the changes are implemented.

D. The licensee must retain a copy of the current security plan as a record for three years after the security plan is no longer required. If any portion of the plan is superseded, the licensee must retain the superseded material for three years after the record is superseded.

Subp. 2. **Implementing procedures.**

A. The licensee must develop and maintain written procedures that document how the requirements of parts 4731.8050 to 4731.8090 and the security plan will be met.

B. The implementing procedures and revisions to these procedures must be approved in writing by the individual with overall responsibility for the security program.

C. The licensee must retain a copy of the current procedure as a record for three years after the procedure is no longer needed. Superseded portions of the procedure must be retained for three years after the record is superseded.

Subp. 3. **Training.**

A. Each licensee must conduct training to ensure that those individuals implementing the security program possess and maintain the knowledge, skills, and abilities to carry out their assigned duties and responsibilities effectively. The training must include instruction in:

(1) the licensee's security program and procedures to secure category 1 or category 2 quantities of radioactive material, and in the purposes and functions of the security measures employed;

(2) the responsibility to report promptly to the licensee any condition that causes or may cause a violation of commissioner requirements;

(3) the responsibility of the licensee to report promptly to the local law enforcement agency and licensee any actual or attempted theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material; and

(4) the appropriate response to security alarms.

B. In determining those individuals who must be trained on the security program, the licensee must consider each individual's assigned activities during authorized use and response to potential situations involving actual or attempted theft, diversion, or sabotage of category 1 or category 2 quantities of radioactive material. The extent of the training must be commensurate with the individual's potential involvement in the security of category 1 or category 2 quantities of radioactive material.

C. Refresher training must be provided at a frequency not to exceed 12 months and when significant changes have been made to the security program. This training must include:

(1) review of the training requirements of this subpart and any changes made to the security program since the last training;

(2) reports on any relevant security issues, problems, and lessons learned;

(3) relevant results of commissioner inspections; and

(4) relevant results of the licensee's program review and testing and maintenance.

D. The licensee must maintain records of the initial and refresher training for three years from the date of the training. The training records must include dates of the training, topics covered, a list of licensee personnel in attendance, and related information.

Subp. 4. **Protection of information.**

A. Licensees authorized to possess category 1 or category 2 quantities of radioactive material must limit access to and unauthorized disclosure of their security plan, implementing procedures, and the list of individuals that have been approved for unescorted access.

B. Efforts to limit access must include the development, implementation, and maintenance of written policies and procedures for controlling access to, and for proper handling and protection against unauthorized disclosure of, the security plan and implementing procedures.

C. Before granting an individual access to the security plan or implementing procedures, licensees must:

(1) evaluate an individual's need to know the security plan or implementing procedures; and

(2) if the individual has not been authorized for unescorted access to category 1 or category 2 quantities of radioactive material, safeguards information, or safeguards information-modified handling, the licensee must complete a background investigation to determine the individual's trustworthiness and reliability. A trustworthiness and reliability determination must be conducted by the reviewing official and must include the background investigation elements contained in part 4731.8020, subpart 1, items B to G.

D. Licensees need not subject the following individuals to the background investigation elements for protection of information:

(1) the categories of individuals listed in part 4731.8030, subpart 1, items A to M; or

(2) security service provider employees, provided written verification that the employee has been determined to be trustworthy and reliable, by the required background investigation in part 4731.8020, subpart 1, items B to G, has been provided by the security service provider.

E. The licensee must document the basis for concluding that an individual is trustworthy and reliable in order to be granted access to the security plan or implementing procedures.

F. Licensees must maintain a list of persons currently approved for access to the security plan or implementing procedures. When a licensee determines that a person no longer needs access to the security plan or implementing procedures or no longer meets the access authorization requirements for access to the information, the licensee must remove the person from the approved list as soon as possible, but no later than seven working days, and take prompt measures to ensure that the individual is unable to obtain the security plan or implementing procedures.

G. When not in use, the licensee must store its security plan and implementing procedures in a manner to prevent unauthorized access. Information stored in nonremovable electronic form must be password protected.

H. The licensee must retain as a record for three years after the document is no longer needed:

(1) a copy of the information protection procedures; and

(2) the list of individuals approved for access to the security plan or implementing procedures.

4731.8060 LOCAL LAW ENFORCEMENT AGENCY (LLEA) COORDINATION.

A. A licensee subject to this subpart must coordinate, to the extent practicable, with an LLEA for responding to threats to the licensee's facility, including any necessary armed response. The information provided to the LLEA must include:

(1) a description of the facilities and the category 1 and category 2 quantities of radioactive materials along with a description of the licensee's security measures that have been implemented to comply with this subpart; and

(2) a notification that the licensee shall request a timely armed response by the LLEA to any actual or attempted theft, sabotage or diversion of category 1 or category 2 quantities of material.

B. The licensee must notify the commissioner within three business days if:

(1) the LLEA has not responded to the request for coordination within 60 days of the coordination request; or

(2) the LLEA notifies the licensee that the LLEA does not plan to participate in coordination activities.

C. The licensee must document its efforts to coordinate with the LLEA. The documentation must be kept for three years.

D. The licensee must coordinate with the LLEA at least every 12 months, or when changes to the facility design or operation adversely affect the potential vulnerability of the licensee's material to theft, sabotage, or diversion.

4731.8065SECURITY ZONES.

A. Licensees must ensure that all aggregated category 1 and category 2 quantities of radioactive material are used or stored within licensee-established security zones. Security zones may be permanent or temporary.

B. Temporary security zones must be established as necessary to meet the licensee's transitory or intermittent business activities, such as periods of maintenance, source delivery, and source replacement.

C. Security zones must, at a minimum, allow unescorted access only to approved individuals through:

(1) isolation of category 1 and category 2 quantities of radioactive materials by the use of continuous physical barriers that allow access to the security zone only through established access control points. A physical barrier is a natural or man-made structure or formation sufficient for the isolation of the category 1 or category 2 quantities of radioactive material within a security zone; or

(2) direct control of the security zone by approved individuals at all times; or

(3) a combination of continuous physical barriers and direct control.

D. For category 1 quantities of radioactive material during periods of maintenance, source receipt, preparation for shipment, installation, or source removal or exchange, the licensee must, at a minimum, provide sufficient individuals approved for unescorted access to maintain continuous surveillance of sources in temporary security zones and in any security zone in which physical barriers or intrusion detection systems have been disabled to allow such activities.

E. Individuals not approved for unescorted access to category 1 or category 2 quantities of radioactive material must be escorted by an approved individual when in a security zone.

4731.8070 MONITORING, DETECTION, AND ASSESSMENT.

Subpart 1. **Monitoring and detection.**

A. Licensees must establish and maintain the capability to continuously monitor and detect without delay all unauthorized entries into its security zones. Licensees must provide the means to maintain continuous monitoring and detection capability in the event of a loss of the primary power source, or provide for an alarm and response in the event of a loss of this capability to continuously monitor and detect unauthorized entries.

B. Monitoring and detection must be performed by:

(1) a monitored intrusion detection system that is linked to an on-site or off-site central monitoring facility;

(2) electronic devices for intrusion detection alarms that will alert nearby facility personnel;

(3) a monitored video surveillance system;

(4) direct visual surveillance by approved individuals located within the security zone; or

(5) direct visual surveillance by a licensee designated individual located outside the security zone.

C. A licensee subject to this subpart must also have a means to detect unauthorized removal of the radioactive material from the security zone. This detection capability must provide:

(1) for category 1 quantities of radioactive material, immediate detection of any attempted unauthorized removal of the radioactive material from the security zone. Such immediate detection capability must be provided by:

(a) electronic sensors linked to an alarm;

(b) continuous monitored video surveillance; or

(c) direct visual surveillance; or

(2) for category 2 quantities of radioactive material, weekly verification through physical checks, tamper-indicating devices, use, or other means to ensure that the radioactive material is present.

Subp. 2. **Assessment.** Licensees must immediately assess each actual or attempted unauthorized entry into the security zone to determine whether the unauthorized access was an actual or attempted theft, sabotage, or diversion.

Subp. 3. **Personnel communications and data transmission.** For personnel and automated or electronic systems supporting the licensee's monitoring, detection, and assessment systems, licensees must:

A. maintain continuous capability for personnel communication and electronic data transmission and processing among site security systems; and

B. provide an alternative communication capability for personnel, and an alternative data transmission and processing capability, in the event of a loss of the primary means of communication or data transmission and processing. Alternative communications and data transmission systems may not be subject to the same failure modes as the primary systems.

Subp. 4. **Response.** Licensees must immediately respond to any actual or attempted unauthorized access to the security zones, or actual or attempted theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material at licensee facilities or temporary job sites. For any unauthorized access involving an actual or attempted theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material, the licensee's response must include requesting, without delay, an armed response from the LLEA.

4731.8075 MAINTENANCE AND TESTING.

A. Each licensee subject to parts 4731.8050 to 4731.8090 must implement a maintenance and testing program to ensure that intrusion alarms, associated communication systems, and other physical components of the systems used to secure or detect unauthorized access to radioactive material are maintained in operable condition and are capable of performing their intended function when needed. The equipment relied on to meet the security requirements of this part must be inspected and tested for operability and performance at the

manufacturer's suggested frequency. If there is no suggested manufacturer's suggested frequency, the testing must be performed at least annually, not to exceed 12 months.

B. The licensee must maintain records on the maintenance and testing activities for three years.

4731.8080 REQUIREMENTS FOR MOBILE DEVICES.

Each licensee that possesses mobile devices containing category 1 or category 2 quantities of radioactive material must:

A. have two independent physical controls that form tangible barriers to secure the material from unauthorized removal when the device is not under direct control and constant surveillance by the licensee; and

B. for devices in or on a vehicle or trailer, unless the health and safety requirements for a site prohibit the disabling of the vehicle, the licensee must utilize a method to disable the vehicle or trailer when not under direct control and constant surveillance by the licensee. Licensees must not rely on the removal of an ignition key to meet this requirement.

4731.8085 SECURITY PROGRAM REVIEW.

A. Each licensee must be responsible for the continuing effectiveness of the security program. Each licensee must ensure that the security program is reviewed to confirm compliance with the requirements of this subpart and that comprehensive actions are taken to correct any noncompliance that is identified. The review must include the radioactive material security program content and implementation. Each licensee must, at least annually, review the security program content and implementation.

B. The results of the review, along with any recommendations, must be documented. Each review report must identify conditions that are adverse to the proper performance of the security program, the cause of the conditions, and, when appropriate, recommend corrective actions, and any corrective actions taken. The licensee must review the findings and take any additional corrective actions necessary to preclude repetition of the condition, including reassessment of the deficient areas where indicated.

C. The licensee must maintain the review documentation for three years.

4731.8090 REPORTING OF EVENTS.

A. The licensee must immediately notify the local law enforcement agency (LLEA) after determining that an unauthorized entry resulted in an actual or attempted theft, sabotage, or diversion of a category 1 or category 2 quantity of radioactive material. As soon as possible after initiating a response, but not at the expense of causing delay or interfering with the LLEA response to the event, the licensee must notify the commissioner. In no case shall the notification to the commissioner be later than four hours after the discovery of any attempted or actual theft, sabotage, or diversion.

B. The licensee must assess any suspicious activity related to possible theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material and notify the LLEA as appropriate. As soon as possible, but not later than four hours after notifying the LLEA, the licensee must notify the commissioner.

C. The initial telephone notification required by item A must be followed within 30 days by a written report submitted to the commissioner. The report must include sufficient information for commissioner analysis and evaluation, including identification of any necessary corrective actions to prevent future instances.

4731.8100 ADDITIONAL REQUIREMENTS FOR TRANSFER OF CATEGORY 1 AND CATEGORY 2 QUANTITIES OF RADIOACTIVE MATERIAL.

A licensee transferring a category 1 or category 2 quantity of radioactive material to a licensee of the commissioner, the NRC, or an agreement state must meet the license verification provisions of this part instead of those listed in part 4731.3105, subpart 3.

A. Any licensee transferring category 1 quantities of radioactive material to a licensee of the commission or an agreement state, prior to conducting such transfer, must verify with the NRC's license verification system or the license-issuing authority that the transferee's license authorizes the receipt of the type, form, and quantity of radioactive material to be transferred and that the licensee is authorized to

receive radioactive material at the location requested for delivery. If the verification is conducted by contacting the license-issuing authority, the transferor must document the verification. For transfers within the same organization, the licensee does not need to verify the transfer.

B. Any licensee transferring category 2 quantities of radioactive material to a licensee of the commissioner, the NRC, or an agreement state, prior to conducting such transfer, must verify with the NRC's license verification system or the license-issuing authority that the transferee's license authorizes the receipt of the type, form, and quantity of radioactive material to be transferred. If the verification is conducted by contacting the license-issuing authority, the transferor must document the verification. For transfers within the same organization, the licensee does not need to verify the transfer.

C. In an emergency where the licensee cannot reach the license-issuing authority and the license verification system is nonfunctional, the licensee may accept a written certification by the transferee that it is authorized by license to receive the type, form, and quantity of radioactive material to be transferred. The certification must include the license number, current revision number, issuing agency, expiration date, and, for a category 1 shipment, the authorized address. The licensee must keep a copy of the certification. The certification must be confirmed by use of the NRC's license verification system or by contacting the license-issuing authority by the end of the next business day.

D. The transferor must keep a copy of the verification documentation as a record for three years.

4731.8105 APPLICABILITY OF PHYSICAL PROTECTION OF CATEGORY 1 AND CATEGORY 2 QUANTITIES OF RADIOACTIVE MATERIAL DURING TRANSIT.

The shipping licensee must meet the requirements of parts 4731.8100 to 4731.8125 unless the receiving licensee has agreed in writing to arrange for the in-transit physical protection required under parts 4731.8100 to 4731.8125.

4731.8110 PREPLANNING AND COORDINATION OF SHIPMENT OF CATEGORY 1 OR CATEGORY 2 QUANTITIES OF RADIOACTIVE MATERIAL.

A. Each licensee that plans to transport, or deliver to a carrier for transport, licensed material that is a category 1 quantity of radioactive material outside the confines of the licensee's facility or other place of use or storage must:

(1) preplan and coordinate shipment arrival and departure times with the receiving licensee;

(2) preplan and coordinate shipment information with the governor or the governor's designee of any state through which the shipment will pass to:

(a) discuss the state's intention to provide law enforcement escorts; and

(b) identify safe havens; and

(3) document the preplanning and coordination activities.

B. Each licensee that plans to transport, or deliver to a carrier for transport, licensed material that is a category 2 quantity of radioactive material outside the confines of the licensee's facility or other place of use or storage must coordinate the shipment no-later-than arrival time and the expected shipment arrival with the receiving licensee. The licensee must document the coordination activities.

C. Each licensee who receives a shipment of a category 2 quantity of radioactive material must confirm receipt of the shipment with the originator. If the shipment has not arrived by the no-later-than arrival time, the receiving licensee must notify the originator.

D. Each licensee who transports or plans to transport a shipment of a category 2 quantity of radioactive material, and determines that the shipment will arrive after the no-later-than arrival time provided in item B must promptly notify the receiving licensee of the new no-later-than arrival time.

E. The licensee must retain a copy of the documentation for preplanning and coordination, and any revision thereof, as a record for three years.

4731.8115 ADVANCE NOTIFICATION OF SHIPMENT OF CATEGORY 1 QUANTITIES OF RADIOACTIVE MATERIAL.

Subpart 1. **Advanced notification required.** As specified in subparts 2 and 3, each licensee must provide advance notification to the commissioner and the governor of a state, or the governor's designee, of the shipment of licensed material in a category 1 quantity, through or across the boundary of the state, before the transport or delivery to a carrier for transport of the licensed material outside the confines of the licensee's facility or other place of use or storage.

Subp. 2. **Procedures for submitting advance notification.**

A. The notification must be made to the commissioner and to the office of each appropriate governor or governor's designee. The contact information, including telephone and mailing addresses, of governors and governors' designees, is available on the NRC Web site at http://nrc-stp.ornl.gov/special/designee.pdf. A list of the contact information is also available upon request from the Director, Division of Intergovernmental Liaison and Rulemaking, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Notifications to the commissioner must be to the Radioactive Materials Unit, Minnesota Department of Health, 625 Robert Street N, P.O. Box 64975, St. Paul, MN 55164-0975, or e-mail at health.ram@state.mn.us.

B. A notification delivered by mail must be postmarked at least seven days before transport of the shipment commences at the shipping facility.

C. A notification delivered by any means other than mail must reach the commissioner at least four days before the transport of the shipment commences and must reach the office of the governor or the governor's designee at least four days before transport of a shipment within or through the state.

Subp. 3. **Information to be furnished in advance notification of shipment.** Each advance notification of shipment of category 1 quantities of radioactive material must contain the following information, if available at the time of notification:

A. the name, address, and telephone number of the shipper, carrier, and receiver of the category 1 radioactive material;

B. the license numbers of the shipper and receiver;

C. a description of the radioactive material contained in the shipment, including the radionuclides and quantity;

D. the point of origin of the shipment and the estimated time and date that shipment will commence;

E. the estimated time and date that the shipment is expected to enter each state along the route;

F. the estimated time and date of arrival of the shipment at the destination; and

G. a point of contact, with a telephone number, for current shipment information.

Subp. 4. **Revision notice.**

A. The licensee must provide any information not previously available at the time of the initial notification, as soon as the information becomes available but not later than commencement of the shipment, to the governor of the state or the governor's designee and to the commissioner.

B. A licensee must promptly notify the governor of the state or the governor's designee of any changes to the information provided under item A and subpart 3. The licensee must also immediately notify the commissioner of any such changes.

Subp. 5. **Cancellation notice.** Each licensee who cancels a shipment for which advance notification has been sent must send a cancellation notice to the governor of each state or to the governor's designee previously notified and to the NRC's Director, Division of Security Policy, Office of Nuclear Security and Incident Response. The licensee must send the cancellation notice before the shipment would have commenced or as soon thereafter as possible. The licensee must state in the notice that it is a cancellation and identify the advance notification that is being canceled.

Subp. 6. **Records.** The licensee must retain a copy of the advance notification and any revision and cancellation notices as a record for three years.

4731.8120 PHYSICAL PROTECTION OF CATEGORY 1 AND CATEGORY 2 QUANTITIES OF RADIOACTIVE MATERIAL DURING SHIPMENT.

Subpart 1. **Shipments by road.**

A. Each licensee who transports, or delivers to a carrier for transport, in a single shipment, a category 1 quantity of radioactive material, must:

(1) ensure that movement control centers are established that maintain position information from a remote location. These control centers must monitor shipments 24 hours a day, seven days a week, and have the ability to communicate immediately, in an emergency, with the appropriate law enforcement agencies;

(2) ensure that redundant communications are established that allow the transport to contact the escort vehicle when used and movement control center at all times. Redundant communications may not be subject to the same interference factors as the primary communication;

(3) ensure that shipments are continuously and actively monitored by a telemetric position monitoring system or an alternative tracking system reporting to a movement control center. A movement control center must provide positive confirmation of the location, status, and control over the shipment. The movement control center must be prepared to promptly implement preplanned procedures in response to deviations from the authorized route or a notification of actual, attempted, or suspicious activities related to the theft, loss, or diversion of a shipment. These procedures shall include, but not be limited to, the identification of and contact information for the appropriate LLEA along the shipment route;

(4) provide an individual to accompany the driver for those highway shipments with a driving time period greater than the maximum number of allowable hours of service in a 24-hour duty day as established by the Department of Transportation Federal Motor Carrier Safety Administration. The accompanying individual may be another driver;

(5) develop written normal and contingency procedures to address:

(a) notifications to the communication center and law enforcement agencies;

(b) communication protocols that must include a strategy for the use of authentication codes and duress codes and provisions for refueling or other stops, detours, and locations where communication is expected to be temporarily lost;

(c) loss of communications; and

(d) responses to an actual or attempted theft or diversion of a shipment; and

(6) each licensee who makes arrangements for the shipment of category 1 quantities of radioactive material must ensure that drivers, accompanying personnel, and movement control center personnel have access to the normal and contingency procedures.

B. Each licensee who transports category 2 quantities of radioactive material must maintain constant control and/or surveillance during transit and have the capability for immediate communication to summon appropriate response or assistance.

C. Each licensee who delivers to a carrier for transport, in a single shipment, a category 2 quantity of radioactive material must:

(1) use carriers who have established package tracking systems. An established package tracking system is a documented, proven, and reliable system routinely used to transport objects of value. In order for a package tracking system to maintain constant control and/or surveillance, the package tracking system must allow the shipper or transporter to identify when and where the package was last and when it should arrive at the next point of control;

(2) use carriers who maintain constant control and/or surveillance during transit and have the capability for immediate communication to summon appropriate response or assistance; and

(3) use carriers who have established tracking systems that require an authorized signature prior to releasing the package for delivery or return.

Subp. 2. **Shipments by rail.**

A. Each licensee who transports, or delivers to a carrier for transport, in a single shipment a category 1 quantity of radioactive material must:

(1) ensure that rail shipments are monitored by a telemetric position monitoring system or an alternative tracking system reporting to the licensee, third-party, or railroad communications center. The communications center must provide positive confirmation of the location of the shipment and its status. The communications center must implement preplanned procedures in response to deviations from the authorized route or to a notification of actual, attempted, or suspicious activities related to the theft or diversion of a shipment. These procedures shall include, but not be limited to, the identification of and contact information for the appropriate LLEA along the shipment route; and

(2) ensure that periodic reports to the communications center are made at preset intervals.

B. Each licensee who transports, or delivers to a carrier for transport, in a single shipment a category 2 quantity of radioactive material must:

(1) use carriers who have established package tracking systems. An established package tracking system is a documented, proven, and reliable system routinely used to transport objects of value. In order for a package tracking system to maintain constant control and/or surveillance, the package tracking system must allow the shipper or transporter to identify when and where the package was last and when it should arrive at the next point of control;

(2) use carriers who maintain constant control and/or surveillance during transit and have the capability for immediate communication to summon appropriate response or assistance; and

(3) use carriers who have established tracking systems that require an authorized signature prior to releasing the package for delivery or return.

Subp. 3. **Investigations.** Each licensee who makes arrangements for the shipment of category 1 quantities of radioactive material must immediately conduct an investigation upon the discovery that a category 1 shipment is lost or missing. Each licensee who makes arrangements for the shipment of category 2 quantities of radioactive material must immediately conduct an investigation, in coordination with the receiving licensee, of any shipment that has not arrived by the designated no-later-than arrival time.

4731.8125 REPORTING OF EVENTS.

A. The shipping licensee must notify the appropriate local law enforcement agency (LLEA) and the commissioner within one hour of its determination that a shipment of category 1 quantities of radioactive material is lost or missing. The appropriate LLEA is the law enforcement agency in the area of the shipment's last confirmed location. During the investigation required by part 4731.8120, subpart 3, the shipping licensee must provide agreed upon updates to the commissioner on the status of the investigation.

B. The shipping licensee must notify the commissioner within four hours of its determination that a shipment of category 2 quantities of radioactive material is lost or missing. If, after 24 hours of its determination that the shipment is lost or missing, the radioactive material has not been located and secured, the licensee must immediately notify the commissioner.

C. The shipping licensee must notify the designated LLEA along the shipment route as soon as possible upon discovery of any actual or attempted theft or diversion of a shipment or suspicious activities related to the theft or diversion of a shipment of a category 1 quantity of radioactive material. As soon as possible after notifying the LLEA, the licensee must notify the commissioner upon discovery of any actual or attempted theft or diversion of a shipment, or any suspicious activity related to the shipment of category 1 radioactive material.

D. The shipping licensee must notify the commissioner as soon as possible upon discovery of any actual or attempted theft or diversion of a shipment, or any suspicious activity related to the shipment, of a category 2 quantity of radioactive material.

E. The shipping licensee must notify the commissioner and the LLEA as soon as possible upon recovery of any lost or missing category 1 quantities of radioactive material.

F. The shipping licensee must notify the commissioner as soon as possible upon recovery of any lost or missing category 2 quantities of radioactive material.

G. The initial telephone notification required by items A to D must be followed within a period of 30 days by a written report submitted to the commissioner. The report must include:

(1) a description of the licensed material involved, including kind, quantity, and chemical and physical form;

(2) a description of the circumstances under which the loss or theft occurred;

(3) a statement of disposition, or probable disposition, of the licensed material involved;

(4) actions that have been taken, or will be taken, to recover the material; and

(5) procedures or measures that have been, or will be, adopted to ensure against a recurrence of the loss or theft of licensed material.

H. Subsequent to filing the written report, the licensee must also report any additional substantive information on the loss or theft within 30 days after the licensee learns of such information.

4731.8130 FORM OF RECORDS.

Each record required by this part must be legible throughout the retention period specified by the applicable rule part. The record may be the original or a reproduced copy or a microform, provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of producing a clear copy throughout the required retention period. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, and specifications must include all pertinent information such as stamps, initials, and signatures. The licensee must maintain adequate safeguards against tampering with and loss of records.

4731.8135 RECORD RETENTION.

Licensees must maintain the records that are required by parts 4731.8000 to 4731.8140 for the period specified by the applicable rule. If a retention period is not otherwise specified, these records must be retained until the commissioner terminates the facility's license. All records related to parts 4731.8000 to 4731.8140 may be destroyed upon termination of the license.

4731.8140 CATEGORY 1 AND CATEGORY 2 RADIOACTIVE MATERIALS.

Subpart 1. **Table 1 - category 1 and category 2 threshold.** The terabecquerel (TBq) values are the regulatory standard. The curie (Ci) values specified are obtained by converting from the TBq value. The Ci values are provided for practical usefulness only.

Radioactive material	Category 1 (TBq)	Category 1 (Ci)	Category 2 (TBq)	Category 2 (Ci)
Americium-241	60	1,620	0.6	16.2
Americium-241/Be	60	1,620	0.6	16.2
Californium-252	20	540	0.2	5.40
Cobalt-60	30	810	0.3	8.10
Curium-244	50	1,350	0.5	13.5
Cesium-137	100	2,700	1	27.0
Gadolinium-153	1,000	27,000	10	270
Iridium-192	80	2,160	0.8	21.6
Plutonium-238	60	1,620	0.6	16.2
Plutonium-239/Be	60	1,620	0.6	16.2
Promethium-147	40,000	1,080,000	400	10,800
Radium-226	40	1,080	0.4	10.8
Selenium-75	200	5,400	2	54.0
Strontium-90	1,000	27,000	10	270
Thulium-170	20,000	540,000	200	5,400
Ytterbium-169	300	8,100	3	81.0

Subp. 2. **Calculations concerning multiple sources or multiple radionuclides.** The "sum of fractions" methodology for evaluating combinations of multiple sources or multiple radionuclides, described in items A and B, is to be used in determining whether a location meets or exceeds the threshold and is thus subject to the requirements of parts 4731.8000 to 4731.8140.

A. If multiple sources of the same radionuclide and/or multiple radionuclides are aggregated at a location, the sum of the ratios of the

total activity of each of the radionuclides must be determined to verify whether the activity at the location is less than the category 1 or category 2 thresholds of Table 1, as appropriate. If the calculated sum of the ratios, using the equation below, is greater than or equal to 1.0, then the applicable requirements of parts 4731.8000 to 4731.8140 apply.

B. First determine the total activity for each radionuclide from Table 1. This is done by adding the activity of each individual source, material in any device, and any loose or bulk material that contains the radionuclide. Then use the equation in this item to calculate the sum of the ratios by inserting the total activity of the applicable radionuclides from Table 1 in the numerator of the equation and the corresponding threshold activity from Table 1 in the denominator of the equation. Calculations must be performed in metric values (i.e., TBq) and the numerator and denominator values must be in the same units.

$$\sum_{1}^{n}\left[\frac{R1}{AR1}+\frac{R2}{AR2}+\frac{Rn}{ARn}\right]\geq 1.0$$

Where,

R1 = total activity for radionuclide 1
R2 = total activity for radionuclide 2
Rn = total activity for radionuclide n
AR1 = activity threshold for radionuclide 1
AR2 = activity threshold for radionuclide 2
ARn = activity threshold for radionuclide n

REPEALER. *Minnesota Rules*, parts 4731.0725, subpart 4; 4731.2650; 4731.3210; 4731.3405; 4731.3410; 4731.3415; and 4731.3420, are repealed.

Minnesota Pollution Control Agency (MPCA)

Environmental Analysis and Outcomes Division

Proposed Permanent Rules Relating to Wastewater Laboratory Certification

NOTICE OF INTENT TO ADOPT RULES WITHOUT A PUBLIC HEARING

Proposed Amendment of Rules Governing Wastewater Laboratory Certification and Certification Fees, *Minnesota Rules*, 7001.4310, 7001.4320, 7001.4330, 7001.4340, 7001.4350, 7001.4360, 7001.4370, 7001.4380, 7001.4390, 7002.0400, 7001.0410, 7002.0420 and 7002.0430; Revisor's ID Number 0429

Introduction. The Pollution Control Agency (MPCA) intends to adopt rules without a public hearing following the procedures in the rules of the Office of Administrative Hearings, *Minnesota Rules*, parts 1400.2300 to 1400.2310, and the Administrative Procedure Act, *Minnesota Statutes*, §§ 14.22 to 14.28. Until February 6, 2015 you may submit written comments on the proposed rules and may also submit a written request that a hearing be held on the rules.

MPCA Contact Person. You must submit comments or questions on the rules and written requests for a public hearing to the MPCA contact person. The contact person is Carol Nankivel, MPCA–RMAD, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194; **telephone:** (651) 757-2597 or 1-800-657-3864; **e-mail:** ***carol.nankivel@state.mn.us***. **TTY** users may call the MPCA at (651) 282-5332.

Subject of Rules and Statutory Authority. The MPCA is proposing new rules to govern the MPCA's wastewater laboratory certification program and to establish a formula for the calculation of fees applicable to laboratories certified by the MPCA. Participation in the MPCA's certification program is optional and limited to laboratories performing water or wastewater analytical work to determine compliance with National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) permits or in support of other regulatory documents issued by the MPCA.

The proposed amendments establish:

- The analytical procedures and protocols for operating a certified laboratory. The administrative requirements for obtaining and maintaining laboratory certification.

- The formula for calculating fees applicable to certified laboratories.

The statutory authority to adopt the rules is *Minnesota Statutes* §115.84. A copy of the proposed rules is published in the *State Register* and posted on the MPCA's website at ***http://www.pca.state.mn.us/xwrhffa***.

Comments. You have until 4:30 p.m. on February 6, 2015, 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 the contact person must receive it by the due date. The MPCA encourages your comment. 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. You must also make any comment about the legality of the proposed rules during this comment period. All comments received will be part of the rulemaking record and will be reviewed by the Office of Administrative Hearings.

Request for a Hearing. In addition to submitting comments, you may also request that the MPCA hold a hearing on the proposed rules. Your request must be in writing and the MPCA contact person must receive it by 4:30 p.m. on February 6, 2015. Your written request for a public hearing must:

- Include your name and address.
- Identify the portion of the proposed rules that you object to or state that you oppose the entire set of rules.

Any request that does not comply with these requirements is not valid, and the MPCA cannot count it when determining whether a public hearing must be held. You are 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 parties submit a valid written request for a hearing, the MPCA will choose to seek the withdrawal of those requests, hold a hearing, or withdraw the rulemaking. If a sufficient number withdraw their requests in writing to reduce the number below 25, the MPCA must give written notice of this to all parties who requested a hearing, explain the actions the MPCA took to effect the withdrawal, and ask for written comments on this action. If a public hearing is held the MPCA will follow the procedures in *Minnesota Statutes*, §§ 14.131 to 14.20.

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

Modifications. The MPCA may modify the proposed rules as a result of public comment. The modifications must be supported by comments and information submitted to the MPCA, and the adopted rules may not be substantially different from these proposed rules, unless the MPCA follows the procedure under *Minnesota Rules*, part 1400.2110. If the proposed rules affect you in any way, the MPCA encourages you to participate in the rulemaking process.

Statement of Need and Reasonableness. The statement of need and reasonableness 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. It is available for viewing at ***http://www.pca.state.mn.us/xwrhffa***. You may also obtain copies from the MPCA contact person.

Lobbyist Registration. *Minnesota Statutes*, chapter 10A, requires each lobbyist to register with the State Campaign Finance and Public Disclosure Board. You should direct questions about this requirement to the Campaign Finance and Public Disclosure Board at: Suite 190, Centennial Building, 658 Cedar Street, St. Paul, Minnesota 55155, telephone: (651) 296-5148 or 1-800-657-3889.

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

http://public.govdelivery.com/accounts/MNPCA/subscriber/new

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

Dated: 12 December 2014

John Linc Stine, Commissioner
Minnesota Pollution Control Agency

7001.4310 SCOPE.

Subpart 1. **Applicability.** Parts 7001.4310 to 7001.4390 apply to laboratories required to be certified under *Minnesota Statutes*, section 115.84, except as excluded in subpart 2.

Subp. 2. **Exclusions.** Certification under parts 7001.4310 to 7001.4390 does not apply to:

A. laboratories that are private and for-profit;

B. laboratories that perform drinking water analyses;

C. laboratories that perform analyses for agency programs under Minnesota Statutes, chapters 115B and 115C; or

D. laboratories that are certified under another similar program, such as that of the Minnesota Department of Health.

7001.4320 DEFINITIONS.

Subpart 1. **Scope.** The terms used in parts 7001.4310 to 7001.4390 have the meanings given them in this part.

Subp. 2. **Agency.** "Agency" means the Minnesota Pollution Control Agency.

Subp. 3. **Agency program.** "Agency program" means a program or rule administered by the agency that requires submission of water data from a certified laboratory, such as the watershed program.

Subp. 4. **Analyte.** "Analyte" means the chemical substance, physical property, or organism analyzed in a sample.

Subp. 5. **Analyte group.** "Analyte group" means a set of analytes that can be determined using the same method or technology.

Subp. 6. **Certified laboratory.** "Certified laboratory" means a laboratory that has:

A. met the requirements of parts 7001.4310 to 7001.4390;

B. received a notice of certification from the agency;

C. not voluntarily discontinued certification; and

D. not been notified by the agency that certification is suspended or revoked.

Subp. 7. **Client.** "Client" means an entity that has arranged with a laboratory to perform tests and analyses to meet the requirements of an NPDES or SDS permit or other agency program or regulatory requirement.

Subp. 8. **Initial application.** "Initial application" means an application submitted by a laboratory that either has never had certification or has not met the requirements for either a renewal or revised application under part 7001.4360.

Subp. 9. **Laboratory.** "Laboratory" means a facility that performs analyses on water or wastewater to support demonstrations of compliance with agency program or regulatory requirements.

Subp. 10. **Method.** "Method" means a published scientific technique for performing a specific measurement. Method includes instructions for sample preparation, sample preservation, and sample analysis.

Subp. 11. **National pollutant discharge elimination system or NPDES.** "National pollutant discharge elimination system" or "NPDES" means the federal program authorized under subchapters III and IV of the Clean Water Act, United States Code, title 33.

Subp. 12. **Parameter.** "Parameter" means the chemical substance, physical property, or organism being measured.

Subp. 13. **Proficiency test.** "Proficiency test" means a test performed by a laboratory for a specific analyte or analyte group to determine the ability of a laboratory to employ applicable analytic methods and to produce an accurate measurement of the concentration of the analyte or analyte group in the sample.

Subp. 14. **Renewal application.** "Renewal application" means an application submitted by a laboratory to renew an existing certification.

Subp. 15. **Reporting limit.** "Reporting limit" means the lowest level of an analyte that can be accurately recovered from the matrix of interest, for example, the level of quantitation.

Subp. 16. **Revised application.** "Revised application" means an application that is submitted to make changes to an existing certification as specified in part 7001.4360, subpart 6.

Subp. 17. **State disposal system permit or SDS.** "State disposal system permit" or "SDS" means a state-only permit issued by the agency for the construction, installation, or operation of a disposal system that does not discharge a pollutant into the waters of the state from a point source.

7001.4330 CERTIFICATION REQUIRED.

A laboratory that performs tests and analyses, the results of which must be reported to the agency to meet permit conditions or other agency program or regulatory requirements, must be certified for the parameters or methods required by the permit or agency program, unless the permit or agency program specifically exempts the parameters or methods from certification requirements.

7001.4340 REQUIRED METHODS.

Subpart 1. **General requirements.**

A. The laboratory's analytical methods, sample collection, and preservation procedures must meet the requirements specified by the NPDES/SDS permit or agency program. The analytical methods, sample collection, and preservation procedures used to analyze samples for programs required by a federal agency must meet the requirements specified in the relevant parts of *Code of Federal Regulations*.

B. Laboratories must conduct analyses according to the methods in subparts 2 to 4.

Subp. 2. **Clean water methods.** For analysis of water or wastewater samples required by state and federal clean water rules and regulations, laboratories must use the methods and test procedures in *Code of Federal Regulations*, title 40, part 136, as amended.

Subp. 3. **Biosolids methods.** For analysis of sewage sludge samples required by state rules and federal regulations, laboratories must use the methods and test procedures in *Code of Federal Regulations*, title 40, part 503, as amended, and "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods," Publication SW-846, United States Environmental Protection Agency (2007 and as subsequently amended and as published as final). Publication SW-846 is incorporated by reference, is not subject to frequent change, and is available at ***http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm***.

Subp. 4. **MPCA Laboratory Certification Program Manual.** The MPCA Laboratory Certification Program Manual, Minnesota Pollution Control Agency (2014 and as subsequently amended), is incorporated by reference, is not subject to frequent change, and is available at ***http://www.pca.state.mn.us/4p44whk***.

7001.4350 CERTIFICATION QUALIFICATION.

Subpart 1. **Personnel.** A laboratory must have staff with the education, training, or experience to meet the requirements of certification. At least one staff person must be identified as the laboratory administrator and that person's contact information must be provided with the certification application. The laboratory administrator must notify the agency when there are changes in contact information for the laboratory administrator no later than 30 days after the change occurs.

Subp. 2. **Quality system.** The laboratory must have a quality assurance and quality control program that meets the criteria specified in the agency's Laboratory Certification Program Manual, incorporated by reference under part 7011.4340, subpart 4, that includes:

A. a quality assurance manual;

B. standard operating procedures; and

C. traceability, documentation, record keeping, and reporting.

Subp. 3. **Access to premises.** The laboratory must allow the agency and its members, employees, and agents access to the laboratory

for inspection and evaluation purposes and must produce such information and records as the agency requests to determine compliance with this part.

Subp. 4. **Access to records.** The laboratory must maintain all records used to demonstrate the laboratory's compliance with certification requirements. If a laboratory analyzes samples from a client, records that support the client's test results must be made available to the client. Upon request, records must be made available to the agency.

Subp. 5. **Proficiency testing.** A laboratory must conduct proficiency testing as required under part 7001.4390.

Subp. 6. **Subcontracting.** A laboratory that has samples analyzed by another laboratory must use laboratories that have valid agency certification or similar certification.

Subp. 7. **Cease reporting.** A laboratory must not report analytical results after its certification has expired or been discontinued, suspended, or revoked.

Subp. 8. **Fees.** A laboratory must pay the fees required in part 7002.0430 within 30 days of receiving the invoice.

Subp. 9. **Response.** A laboratory must respond in writing to any written communication from the agency.

7001.4360 APPLICATION FOR CERTIFICATION.

Subpart 1. **Application contents.** To apply for initial or renewal of certification, a laboratory's application must include the following information on a form provided by the agency:

A. identifying information:

(1) the name of the laboratory;

(2) the physical location and postal mailing address of the laboratory;

(3) the owner or legally responsible party of the laboratory;

(4) the name, telephone number, and electronic mailing address of the laboratory administrator; and

(5) the name of at least one managing agent and the agent's signature attested by a notarial officer ;

B. the parameters and methods for which the laboratory seeks certification. A laboratory must apply for at least one parameter or method;

C. a quality assurance manual meeting the standards of the agency's Laboratory Certification Program Manual. For a certification renewal, if the quality assurance manual was revised during the current certification year, the most recent version must be submitted;

D. laboratory standard operating procedures for each parameter or method that meet the standards of the agency's Laboratory Certification Program Manual. For a certification renewal, if the standard operating procedures were revised during the current certification year, the revised version must be submitted;

E. if the application is an initial request for certification, the most recent proficiency testing result for each parameter or method for which the laboratory is requesting certification. The proficiency testing must have been completed no more than 12 months prior to the date that the application is received by the agency and must meet the requirements of part 7001.4390;

F. if the application is an initial request for certification, a list of the laboratory's detection limits and reporting limits for each parameter or method for which the laboratory is requesting certification; and

G. any other additional information requested by the agency as necessary to determine compliance with parts 7001.4310 to 7001.4390.

Subp. 2. **Multiple locations.** The owner of laboratory facilities with multiple locations must submit a separate application for each laboratory location.

Subp. 3. **Change of address.** The laboratory administrator must notify the agency of changes in address no later than 30 days before the change occurs.

Subp. 4. **Application period.**

A. Initial applications and revised applications may be submitted to the agency at any time.

B. Renewal applications must be submitted between November 1 and November 30. If a certified laboratory fails to submit a renewal application by November 30, the certification expires on December 31.

Subp. 5. **Initial application.** An initial application must be submitted by a laboratory:

A. that has never been certified under parts 7001.4310 to 7001.4390;

B. that has had its certification revoked in total;

C. with a certification that has expired for more than one year; and

D. that has submitted an application that has remained incomplete for more than one year.

Subp. 6. **Revised application.** A laboratory with a valid certification must submit a revised application, including the information required in subpart 1, items D to F, to the agency to:

A. add a category for which the laboratory does not currently have certification; or

B. add a test method in a category for which the laboratory is already certified.

Subp. 7. **Conditions for reapplication.** A laboratory involved in an active enforcement action or with a suspended or revoked certification is not eligible to seek or renew certification for the affected parameters or methods until the laboratory receives confirmation from the agency that the corrective action associated with the enforcement action, suspension, or revocation is complete.

Subp. 8. **Alternate methods.** A laboratory must request approval for alternate methods by following the instructions provided in "Alternate Test Procedure Guidance" (document # p-eao2-12), Minnesota Pollution Control Agency (October 2014 and as subsequently amended). The guidance document is incorporated by reference, is not subject to frequent change, and is available at ***http://www.pca.state.mn.us/index.php/view-document.html?gid=16155.*** The agency's approval or denial of the request must be based on the requirements of the guidance document.

7001.4370 GRANTING CERTIFICATION.

Subpart 1. **Term of certification.** Certifications are effective on the date of issuance and are valid through December 31 of the year issued unless suspended, revoked, or voluntarily discontinued.

Subp. 2. **Certification documents.** A laboratory must not alter or modify certification documents and must make them available upon the request of a client or regulatory agency.

Subp. 3. **Limit of certification.** Certification of a laboratory is not an endorsement by the agency of the quality or validity of the data generated by a laboratory. Certification does not guarantee the usability of data generated by a laboratory for an intended purpose. The users of laboratory results are responsible for determining whether to accept or reject analytical data from a certified laboratory.

7001.4380 VOLUNTARY WITHDRAWAL OR DISCONTINUATION OF CERTIFICATION.

Subpart 1. **Agency notification.** If a laboratory chooses to withdraw its application for certification or discontinue its current certification, in total or in part, the laboratory must notify the agency in writing and specify the effective date of withdrawal or discontinuation and the parameters or methods for which certification is being withdrawn or discontinued. The laboratory must submit notification at least 30 days before the effective date of withdrawal or discontinuation.

Subp. 2. **Cease reporting.** After the effective date specified in subpart 1, the laboratory must not provide analytical results for compliance reporting or any agency program for the parameters and methods for which certification has been withdrawn or discontinued.

Subp. 3. **Client notification required.** At least 30 days before the effective date of the laboratory's discontinuation of certification, the laboratory must notify clients and affected regulatory agencies in writing of the discontinuation date and which parameters and methods will be affected. The laboratory must submit a copy of each client notification to the agency at the same time that the notification is sent under subpart 1.

Subp. 4. **No fee refund.** The agency does not refund fees if a laboratory voluntarily withdraws or discontinues its current certification.

Subp. 5. **Recertification.** To be recertified after voluntary discontinuation of certification, a laboratory must submit an application meeting the requirements for:

A. a revised application under part 7001.4360, subpart 6, if reapplying within one year of the date that certification was discontinued; or

B. an initial application under part 7001.4360, subpart 1, if certification has been discontinued for more than one year.

7001.4390 PROFICIENCY TESTING.

Subpart 1. **Requirements.**

A. A laboratory must successfully complete at least one proficiency test for each parameter or method for which it applies for certification. The laboratory must complete the proficiency test no more than 12 months prior to submitting the application. If no proficiency test sample is available for an analyte, the laboratory is exempted from the requirements of this part only for that analyte.

B. Proficiency tests results must be included with the initial or revised certification application required under part 7001.4360.

C. Proficiency test samples that are analyzed as a part of a discharge monitoring report-quality assurance study required under federal regulations must meet the requirements of item A.

Subp. 2. **Laboratory testing of proficiency test study samples.** To ensure valid proficiency test results, the laboratory must:

A. obtain all proficiency test study samples as unknowns from a nationally recognized accreditation program approved vendor;

B. manage, analyze, report, and otherwise handle all proficiency test samples in the same manner as routine samples, including the same staff, procedures, equipment, and facilities used for routine analysis for the tested parameter or method;

C. employ the same calibration, quality control, acceptance criteria, sequence of analytical steps, number of replicates, and other standard operating procedures for proficiency test samples as used when analyzing routine samples; and

D. follow sample preparation steps for the proficiency test sample as instructed by the proficiency test sample provider.

Subp. 3. **Reporting results.**

A. A laboratory must submit the results of all proficiency tests to the agency no later than 30 days after the laboratory receives the results from the proficiency test sample provider.

B. A laboratory conducting proficiency testing as part of an initial or revised application must submit the results of proficiency testing as part of the application.

C. A laboratory must either provide a copy of the original results to the agency or authorize the proficiency test sample provider to provide all results directly to the agency.

D. Proficiency testing samples analyzed or reported to the proficiency test sample provider after the provider's study closing date are not valid for compliance with the proficiency testing requirements under this part.

Subp. 4. **Restrictions on exchanging information.** Prior to the time the results of the proficiency test are submitted to the agency:

A. a laboratory must not communicate proficiency test results to another laboratory, including intercompany communication; and

B. a laboratory must not attempt to obtain the assigned value of any proficiency test sample from a proficiency test sample provider or another laboratory.

Subp. 5. **Evaluation of results.**

A. A laboratory must demonstrate passing performance to the agency, as determined by the proficiency test sample provider, for each parameter or method reported.

B. A laboratory may use one proficiency test sample for multiple methods.

C. A laboratory must not request a revised report from the proficiency test sample provider when the requested revisions are the result of error on the part of the laboratory.

Subp. 6. **Repeat proficiency tests.**

A. A laboratory may repeat proficiency tests after obtaining unacceptable results as follows:

(1) if the first proficiency test result is unacceptable, the laboratory must resolve the suspected cause and complete a second proficiency test within 30 days of receiving the unacceptable result;

(2) if the second proficiency test result is unacceptable, the laboratory must:

(a) resolve the suspected cause and submit a corrective action report to the agency within 30 days of receiving the second unacceptable result; and

(b) order and complete a third proficiency test within 30 days of receiving the unacceptable result of the second proficiency test;

(3) if the third proficiency test result is unacceptable, the laboratory may not provide analytical results for compliance reporting or any agency program for the parameters and methods for which the laboratory failed to demonstrate acceptable proficiency test results. The laboratory may resume providing analytical results when the laboratory passes two proficiency tests in a row. These proficiency tests must be conducted at least 15 days apart. The laboratory must submit a corrective action report to the agency within 30 days of passing the second of the two proficiency tests.

B. The Laboratory Certification Program Manual, incorporated by reference in part 7001.4340, subpart 4, governs when a portion of a multiple analyte group proficiency test is unacceptable.

C. The agency may request additional information necessary to validate sample results generated during the testing period covered under this subpart.

7002.0400 SCOPE; DEFINITIONS.

Subpart 1. **Scope.** Parts 7002.0400 to 7002.0430 apply to laboratories required to be certified according to parts 7001.4310 to 7001.4390.

Subp. 2. **Definitions.** The terms used in parts 7002.0400 to 7002.0430 have the meanings given under part 7001.4310.

7002.0410 FEE DETERMINATION.

A. Certification fees under parts 7002.0410 to 7002.0430 are based on the number, type, and complexity of analytical methods that a laboratory is certified to perform.

B. The fee formula is designed to collect revenue equal to the certification program's expenses by using a system of points to equitably distribute the fees among all laboratories certified by the agency. Each fee item is assigned a point value under part 7002.0430. Once the dollar per point value is determined under part 7002.0420, it is multiplied by the total number of points for each application.

C. The agency must annually establish the fee target in an amount necessary to cover costs of reviewing applications, issuing certifications, conducting laboratory evaluations, training, collecting fees, and providing compliance assistance and other anticipated costs of administering the certification program. After the first year of the program, the fee target must be based on the actual costs to administer the certification program in the previous calendar year, with any necessary adjustments to cover costs according to this item.

7002.0420 COMPUTATION OF DOLLAR PER POINT VALUE.

The agency computes the dollar per point value for each year as follows:

$ per point = T/B

where: $ per point is the dollar amount applied to each point; T is the fee target calculated according to part 7002.0410, item C; and B is the sum of all points for participating laboratories during the previous calendar year.

7002.0430 LABORATORY CERTIFICATION APPLICATION FEES.

Subpart 1. **Payment of fees.**

A. Certification for a calendar year is provisional until the laboratory's certification application is paid.

B. Fees are nonrefundable once an invoice has been issued.

Subp. 2. **Application points.** The points assessed for certification application or category types designated in this subpart are multiplied by the dollar per point value determined under part 7002.0420 to calculate the appropriate fee.

	Application or category type	Points
A.	Initial application	6
B.	Renewal application	4
C.	Voluntary field tests	0
D.	Oxygen utilization	1
E.	Nitrogen	1
F.	Phosphorus	1
G.	Physical	1
H.	Microbiology	1
I.	General I	1
J.	General II	2
K.	General III	4
L.	Metals	4
M.	Organics, purgeable, Gas Chromatograph, and Gas Chromatograph Mass Spectrometer	4
N.	Organics, semivolatile, Gas Chromatograph Mass Spectrometer	4
O.	Organics, organochlorine compounds	4

Subp. 2. **Revised applications.**

A. A laboratory submitting a revised application to add a new test category to the laboratory's certification must pay:

(1) the full category fee if the application is submitted to the agency on or before July 1; or

(2) 50 percent of the category fee if the application is submitted to the agency after July 1.

B. A laboratory submitting a revised application to add a test method for a parameter in a category for which the laboratory is already certified must pay 25 percent of the total category fee for the parameter.

Minnesota Public Utilities Commission (PUC)

Proposed Permanent Rules Relating to Cogeneration and Small Power Production

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; Revisor's ID Number R-04214

Proposed Amendment to Rules Governing Cogeneration and Small Power Production, *Minnesota Rules*, Chapter 7835, Including Repeal of Minn. R. parts 7835.2300; 7835.2500; 7835.2700; 7835.2900; 7835.4800; 7835.4900; 7835.5000; 7835.5100; 7835.5200; 7835.5300; 7835.5400; 7835.5500; 7835.5600; 7835.5700; and 7835.5800

Introduction. The Public Utilities Commission intends to adopt rules without a public hearing following the procedures in the rules of

the Office of Administrative Hearings, *Minnesota Rules*, parts 1400.2300 to 1400.2310, and the Administrative Procedure Act, *Minnesota Statutes*, sections 14.22 to 14.28. If, however, 25 or more persons submit a written request for a hearing on the rules by 4:30 p.m. on February 4, 2015, the Commission will hold a public hearing in the Large Hearing Room, Suite 350, 121 Seventh Place East, Saint Paul, Minnesota 55101, starting at 10:00 a.m. on Wednesday, February 25, 2015. To find out whether the Commission will adopt the rules without a hearing or if it will hold the hearing, you should contact the agency contact person after February 4, 2015 and before February 25, 2015.

Agency Contact Person. Submit any comments or questions on the rules or written requests for a public hearing to the agency contact person. The agency contact person is: Kate Kahlert, Public Utilities Commission, 121 Seventh Place East, Suite 350, Saint Paul, Minnesota 55101; **phone:** (651) 201-2239; **fax:** (651) 297-7073; and **e-mail** at: ***kate.kahlert@state.mn.us***.

Subject of Rules and Statutory Authority. The proposed rules govern Cogeneration and Small Power Production. The following rule parts will be repealed: *Minnesota Rules* parts 7835.2300; 7835.2500; 7835.2700; 7835.2900; 7835.4800; 7835.4900; 7835.5000; 7835.5100; 7835.5200; 7835.5300; 7835.5400; 7835.5500; 7835.5600; 7835.5700; and 7835.5800.

The proposed rules incorporate recent statutory changes to *Minnesota Statutes* § 216B.164, which governs interconnections between utilities and cogeneration or small power producer facilities (qualifying facilities). Specifically, the proposed rule amendments increase the capacity limit on qualifying facilities interconnected with a public utility to *less than 1,000 kilowatt capacity* from less than *40 kilowatt capacity*.

The proposed rules also incorporate statutory changes that affect: standby charges on facilities under 100 kW; billing compensation rates for facilities; limits on cumulative generation; requirements for aggregating customers' meters; capacity limits on wind, solar, and other distributed generation facilities; and the uniform statewide contract. The proposed rules also repeal rules governing interconnection guidelines and include housekeeping changes to increase clarity.

The statutory authority to adopt the rules is *Minnesota Statutes*, sections 216A.05, 216B.08, and 216B.164. A copy of the proposed rules is published in the *State Register* and attached to this notice as mailed.

Comments. You have until 4:30 p.m. on Wednesday, February 4, 2015, 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 that you desire. Any comments that you have about the legality of the proposed rules must also be made during this comment period. Please refer to Docket No. E-999/R-13-729 in your comments. You may also electronically file your comments using the Commission's electronic filing system located at:

https://www.edockets.state.mn.us/EFiling.

Request for a Hearing. In addition to submitting comments, you may also request that the Commission hold a hearing on the rules. You must make your request for a public hearing in writing, which the agency contact person must receive by 4:30 p.m. on February 4, 2015. You must include your name and address in your written request. In addition, you must identify the portion of the proposed rules that you object to or state that you oppose the entire set of rules. Any request that does not comply with these requirements is not valid and the agency cannot count it when determining whether it must hold a public hearing. 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 valid written request for a hearing, the Commission will hold a public hearing unless a sufficient number of persons 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 information can be made available in an alternative format, such as large print, braille, or audio. 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 Commission might modify the proposed rules, either as a result of public comment or as a result of the rule hearing process. It must support modifications by data and views submitted to the agency or presented at the hearing. The adopted rules may not

be substantially different than these proposed rules unless the Commission follows the procedure under *Minnesota Rules*, part 1400.2110. If the proposed rules affect you in any way, the Commission encourages you to participate in the rulemaking process.

Cancellation of Hearing. The Commission will cancel the hearing scheduled for February 25, 2015, if the agency does not receive requests for a hearing from 25 or more persons. If you requested a public hearing, the agency will notify you before the scheduled hearing whether the hearing will be held. You may also call the agency contact person at 651-201-2239 after February 4, 2015 to find out whether the hearing will be held. On the scheduled day, you may check for whether the hearing will be held by calling 651-201-2239 or going on-line at: ***http://mn.gov/puc/index.html***.

Notice of Hearing. If 25 or more persons submit valid written requests for a public hearing on the rules, the Commission will hold a hearing following the procedures in *Minnesota Statutes*, sections 14.131 to 14.20. The Commission will hold the hearing 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 James Mortenson is assigned to conduct the hearing. Judge Mortenson's Legal Assistant Denise Collins can be reached at the Office of Administrative Hearings, 600 North Robert Street, P.O. Box 64620, Saint Paul, Minnesota 55164-0620, **telephone:** (651) 361-7900, and **fax:** (651) 361-7936.

Hearing Procedure. If the Commission holds a hearing, 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 hearing record closes. 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. At the hearing the Administrative Law Judge may order that this five-day comment period is extended for a longer period but not more than 20 calendar days. Following the comment period, there is a five-working-day rebuttal period when the agency and any interested person may respond in writing to any new information submitted. No one may submit additional evidence during the five-day rebuttal period. The Office of Administrative Hearings must receive all comments and responses submitted to the Administrative Law Judge 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. You may direct questions about the procedure to the Administrative Law Judge.

The agency requests that any person submitting written views or data to the Administrative Law Judge before the hearing or during the comment or rebuttal 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. The statement of need and reasonableness summarizes 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. It is now available from the agency contact person. You may review or obtain copies for the cost of reproduction by contacting the agency contact person or on the Commission website at: ***http://mn.gov/puc/index.html***.

Lobbyist Registration. *Minnesota Statutes*, chapter 10A, requires each lobbyist to register with the State Campaign Finance and Public Disclosure Board. Ask any questions about this requirement of the Campaign Finance and Public Disclosure Board at: Suite #190, Centennial Building, 658 Cedar Street, St. Paul, Minnesota 55155, **telephone:** (651) 539-1180 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 Commission will submit the rules and supporting documents to the Office of Administrative Hearings for a legal review. You may ask to be notified of the date the rules are submitted to the office. If you want either to receive notice of this, to receive a copy of the adopted rules, or 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 that 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 that the agency adopts the rules and the rules are filed with the Secretary of State by requesting this at the hearing or by 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: 18 December 2014

Burl W. Haar, Executive Secretary
Public Utilities Commission

7835.0100 DEFINITIONS.

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

Subp. 4. **Capacity.** "Capacity" means the capability to produce, transmit, or deliver electric energy, and is measured by the number of megawatts alternating current at the point of common coupling between a qualifying facility and a utility's electric system.

Subp. 5. **Capacity costs.** "Capacity costs" means the costs associated with providing the capability to deliver energy. ~~They consist of~~ The utility capital costs consist of facilities used to generate, transmit, and distribute electricity and the fixed operating and maintenance costs of these facilities.

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

Subp. 6a. **Customer.** "Customer" means the person named on the utility electric bill for the premises.

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

Subp. 15a. **Net metered facility.** "Net metered facility" means an electric generation facility constructed for the purpose of offsetting energy use through the use of renewable energy or high-efficiency distributed generation sources.

[For text of subps 16 and 17, see M.R.]

Subp. 17a. **Public utility.** "Public utility" has the meaning given in Minnesota Statutes, section 216B.02, subdivision 4.

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

Subp. 19. **Qualifying facility.** "Qualifying facility" means a cogeneration or small power production facility which satisfies the conditions established in Code of Federal Regulations, title 18, ~~section 292.101 (b) (1), (1981), as applied when interpreted in accordance with the amendments to Code of Federal Regulations, title 18, sections 292.201 to 292.207 adopted through Federal Register, volume 46, pages 33025-33027, (1981)~~ part 292. The initial operation date or initial installation date of a cogeneration or small power production facility must not prevent the facility from being considered a qualifying facility for the purposes of this chapter if it otherwise satisfies all stated conditions.

[For text of subp 20, see M.R.]

Subp. 20a. **Standby charge.** "Standby charge" means the rate or fee a utility charges for standby service or standby power.

Subp. 20b. **Standby service.** "Standby service" means:

A. for public utilities, service or power that includes backup, maintenance, and related services necessary to make electricity service available to the facility, as described in the public utility's commission-approved standby tariff; and

B. for a utility not subject to the commission's rate authority, the service associated with the applicable tariff in effect under Minnesota Statutes, section 216B.1611, subdivision 3, clause (2).

[For text of subps 21 to 24, see M.R.]

7835.0200 SCOPE AND PURPOSE.

The purpose of this chapter is to implement certain provisions of *Minnesota Statutes*, section 216B.164; the Public Utility Regulatory Policies Act of 1978, *United States Code*, title 16, section 824a-3 ~~(Supplement III, 1979)~~; and the Federal Energy Regulatory Commission regulations, *Code of Federal Regulations*, title 18, ~~sections 292.101 to 292.602 (1981)~~ part 292. Nothing in this chapter excuses any utility from carrying out its responsibilities under these provisions of state and federal law. This chapter must at all times be applied in accordance with its intent to give the maximum possible encouragement to cogeneration and small power production consistent with protection of the ratepayers and the public.

7835.0400 FILING OPTION.

If, after the ~~initial~~ January 1, 2015, filing, schedule C is the only change in the cogeneration and small power production tariff to be filed in a subsequent year, the utility may notify the commission in writing, by the date the tariff is due, that there is no other change in the tariff. This notification and new schedule C will serve as a substitute for the refiling of the complete tariff in that year.

7835.0800 SCHEDULE E.

Schedule E must contain the utility's safety standards, required operating procedures for interconnected operations, and the functions to be performed by any control and protective apparatus. ~~These standards and procedures must not be more restrictive than the interconnection guidelines listed in parts 7835.4800 to 7835.5800.~~ The utility may include in schedule E suggested types of equipment to perform the specified functions. No standard or procedure may be established to discourage cogeneration or small power production.

7835.1200 AVAILABILITY OF FILINGS.

All filings required by parts 7835.0300 to 7835.1100 must be ~~made with~~ filed in the ~~commission~~ commission's electronic filing system and be maintained at the utility's general office and any other offices of the utility where rate case filings are kept. These filings must be available for public inspection at the commission and at the utility offices during normal business hours.

7835.1300 GENERAL REPORTING REQUIREMENTS.

Each utility interconnected with a qualifying facility must provide the commission with the information in parts 7835.1400 to 7835.1800 annually on or before ~~November~~ March 1, ~~1984, and annually thereafter,~~ and in such form as the commission may require.

7835.2100 ELECTRICAL CODE COMPLIANCE ~~WITH NATIONAL ELECTRICAL SAFETY CODE~~.

Subpart 1. **Compliance; standards.** The interconnection between the qualifying facility and the utility must comply with the requirements of the National Electrical Safety Code~~, 1981 edition,~~ issued by the Institute of Electrical and Electronics Engineers ~~as American National Standards Institute Standard C2 (New York, 1980)~~. The interconnection is subject to subparts 2 and 3.

Subp. 2. **Interconnection.** The interconnection customer is responsible for complying with all applicable local, state, and federal codes, including building codes, the National Electric Code (NEC), the National Electric Safety Code (NESC), and noise and emissions standards. The Area Electric Power System will require proof of complying with the NEC before the interconnection is made. The interconnection customer must obtain installation approval from an electrical inspector recognized by the Minnesota State Board of Electricity.

Subp. 3. **Generation system.** The interconnection customer's generation system and installation must comply with the American National Standards Institute/Institute of Electrical and Electronics Engineers (ANSI/IEEE) standards applicable to the installation.

7835.2600 TYPES OF POWER TO BE OFFERED; STANDBY SERVICE.

Subpart 1. **Service to be offered.** The utility must offer maintenance, interruptible, supplementary, and backup power to the qualifying facility upon request.

Subp. 2. **Standby service; public utility.** A public utility may not impose a standby charge for standby service on a qualifying facility having 100 kilowatt capacity or less. A utility imposing rates on a qualifying facility having more than 100 kilowatt capacity must comply with an order of the commission establishing allowable costs.

Subp. 3. **Standby service; cooperative or municipality.** A cooperative electric association or municipal utility must offer a qualifying facility standby power or service consistent with its applicable tariff for such service adopted under *Minnesota Statutes*, section 216B.1611, subdivision 3, clause (2).

7835.3000 RATES FOR UTILITY SALES TO A QUALIFYING FACILITY TO BE GOVERNED BY TARIFF.

Except as otherwise provided in part 7835.3100, rates for sales to a qualifying facility must be governed by the applicable tariff for the class of electric utility customers to which the qualifying facility belongs or would belong were it not a qualifying facility.

7835.3150 INTERCONNECTION WITH COOPERATIVE ELECTRIC ASSOCIATION OR MUNICIPAL UTILITY.

Parts 7835.3200 to 7835.4000 apply to interconnections between a qualifying facility and a cooperative electric association or municipal utility.

7835.3200 STANDARD RATES FOR PURCHASES ~~IN GENERAL~~ BY COOPERATIVE ELECTRIC ASSOCIATIONS AND MUNICIPAL UTILITIES FROM QUALIFYING FACILITIES.

Subpart 1. **Qualifying facilities with 100 kilowatt capacity or less.** For qualifying facilities with capacity of 100 kilowatts or less, standard purchase rates apply. ~~Qualifying facilities with capacity of more than 100 kilowatts may negotiate contracts with the utility or may be compensated under standard rates if they make commitments to provide firm power.~~ The utility must make available three types

of standard rates, described in parts 7835.3300, 7835.3400, and 7835.3500. The qualifying facility with a capacity of 100 kilowatts or less must choose interconnection under one of these rates, and must specify its choice in the written contract required in part 7835.2000. Any net credit to the qualifying facility must, at its option, be credited to its account with the utility or returned by check within 15 days of the billing date. The option chosen must be specified in the written contract required in part 7835.2000. Qualifying facilities remain responsible for any monthly service charges and demand charges specified in the tariff under which they consume electricity from the utility.

Subp. 2. **Qualifying facilities over 100 kilowatt capacity.** A qualifying facility with more than 100 kilowatt capacity has the option to negotiate a contract with a utility or, if it commits to provide firm power, be compensated under standard rates.

7835.4010 INTERCONNECTION WITH PUBLIC UTILITY.

Parts 7835.4011 to 7835.4023 apply to interconnections between a qualifying facility and a public utility.

7835.4011 STANDARD RATES FOR PURCHASES BY PUBLIC UTILITIES FROM QUALIFYING FACILITIES.

Subpart 1. **Standard rates.** For qualifying facilities with less than 1,000 kilowatt capacity, standard rates apply. The utility must make available the types of standard rates described in parts 7835.4012 to 7835.4015. Qualifying facilities remain responsible for any monthly service charges and demand charges specified in the tariff under which they consume electricity from the utility.

Subp. 2. **Negotiated rates.** A qualifying facility with 1,000 kilowatt capacity or more has the option to negotiate a contract with a utility or, if it commits to provide firm power, be compensated under standard rates.

7835.4012 COMPENSATION.

Subpart 1. **Facilities with less than 40 kilowatt capacity.** A qualifying facility with less than 40 kilowatt capacity has the option to be compensated at the net energy billing rate, the simultaneous purchase and sale billing rate, or the time-of-day billing rate.

Subp. 2. **Facilities with at least 40 kilowatt capacity but less than 1,000 kilowatt capacity.** A qualifying facility with at least 40 kilowatt capacity but less than 1,000 kilowatt capacity has the option to be billed at the simultaneous purchase and sale billing rate, or at the time-of-day billing rate.

7835.4013 AVERAGE RETAIL ENERGY RATE.

Subpart 1. **Method of billing.** The utility must bill the qualifying facility for the energy supplied by the utility that exceeds the amount of energy supplied by the qualifying facility during each billing period according to the utility's applicable retail rate schedule.

Subp. 2. **Additional calculations for billing.** When the energy generated by the qualifying facility exceeds that supplied by the utility during a billing period, the utility must compensate the qualifying facility for the excess energy at the average retail utility energy rate.

7835.4014 SIMULTANEOUS PURCHASE AND SALE BILLING RATE.

Subpart 1. **Method of billing.** The qualifying facility must be billed for all energy and capacity it consumes during a billing period according to the utility's applicable retail rate schedule.

Subp. 2. **Compensation to qualifying facility.** The utility must purchase all energy and capacity which is made available to it by the qualifying facility. At the option of the qualifying facility, its entire generation must be deemed to be made available to the utility. Compensation to the qualifying facility must be the sum of items A and B.

A. The energy component must be the appropriate system average incremental energy costs shown on schedule A; or if the generating utility has not filed schedule A, the energy component must be the energy rate of the retail rate schedule applicable to the qualifying facility, filed in lieu of schedules A and B; or if the nongenerating utility has not filed schedule A, the energy component must be the energy rate shown on schedule H.

B. If the qualifying facility provides firm power to the utility, the capacity component must be the utility's net annual avoided capacity cost per kilowatt-hour averaged over all hours shown on schedule B; or if the generating utility has not filed schedule B, the capacity component must be the demand charge per kilowatt, if any, of the retail rate schedule applicable to the qualifying facility, filed in lieu of schedules A and B, divided by the number of hours in the billing period; or if the nongenerating utility has not filed schedule B, the capacity component must be the capacity cost per kilowatt shown on schedule H, divided by the number of hours in the billing period. If the qualifying facility does not provide firm power to the utility, no capacity component may be included in the compensation paid to the qualifying facility.

7835.4015 TIME-OF-DAY PURCHASE RATES.

Subpart 1. **Method of billing.** The qualifying facility must be billed for all energy and capacity it consumes during each billing period according to the utility's applicable retail rate schedule. Any utility rate-regulated by the commission may propose time-of-day retail rate tariffs which require qualifying facilities that choose to sell power on a time-of-day basis to also purchase power on a time-of-day basis.

Subp. 2. **Compensation to qualifying facility.** The utility must purchase all energy and capacity which is made available to it by the qualifying facility. Compensation to the qualifying facility must be the sum of items A and B.

A. The energy component must be the appropriate on-peak and off-peak system incremental costs shown on schedule A; or if the generating utility has not filed schedule A, the energy component must be the energy rate of the retail rate schedule applicable to the qualifying facility, filed in lieu of schedules A and B; or if the nongenerating utility has not filed schedule A, the energy component must be the energy rate shown on schedule H.

B. If the qualifying facility provides firm power to the utility, the capacity component must be the utility's net annual avoided capacity cost per kilowatt-hour averaged over the on-peak hours as shown on schedule B; or if the generating utility has not filed schedule B, the capacity component must be the demand charge per kilowatt, if any, of the retail rate schedule applicable to the qualifying facility, filed in lieu of schedules A and B, divided by the number of on-peak hours in the billing period; or if the nongenerating utility has not filed schedule B, the capacity component must be the capacity cost per kilowatt shown on schedule H, divided by the number of on-peak hours in the billing period. The capacity component applies only to deliveries during on-peak hours. If the qualifying facility does not provide firm power to the utility, no capacity component may be included in the compensation paid to the qualifying facility.

7835.4016 INDIVIDUAL SYSTEM CAPACITY LIMITS.

Subpart 1. **Applicability.** Individual system capacity limits are subject to the requirements in *Minnesota Statutes*, section 216B.164, subdivision 4c.

Subp. 2. **Usage history.** A facility subject to capacity limits with less than 12 calendar months of actual electric usage or no demand metering available is subject to limits based on data for similarly situated customers combined with any actual data for the facility.

7835.4017 NET METERED FACILITY; BILL CREDITS.

Subpart 1. **Kilowatt-hour credit.** A customer with a net metered facility can elect to be compensated for net input into the utility's system in the form of a kilowatt-hour credit on the customer's bill, subject to *Minnesota Statutes*, section 216B.164, subdivision 3a, and the following conditions:

A. the customer is not receiving a value of solar rate under *Minnesota Statutes*, section 216B.164, subdivision 10;

B. the customer is interconnected with a public utility; and

C. the net metered facility has a capacity of at least 40 kilowatt capacity but less than 1,000 kilowatt capacity.

Subp. 2. **Notification to customer.** A public utility must notify the customer of the option to be compensated for net input in the form of a kilowatt-hour credit under subpart 1. The public utility must inform the customer that if the customer does not elect to be compensated for net input in the form of a kilowatt-hour credit on the bill, the customer will be compensated for the net input at the utility's avoided cost rate, as described in the utility's tariff for that customer class.

Subp. 3. **End-of-year net input.** A public utility must compensate the customer, in the form of a payment, for any net input remaining at the end of the calendar year at the utility's avoided cost rate, as described in the utility's tariff for that class of customer.

7835.4018 AGGREGATION OF METERS.

A public utility must aggregate meters at the request of a customer as described in *Minnesota Statutes*, section 216B.164, subdivision 4a.

7835.4019 QUALIFYING FACILITIES OF 1,000 KILOWATT CAPACITY OR MORE.

A qualifying facility with capacity of 1,000 kilowatt capacity or more must negotiate a contract with the utility to set the applicable rates for payments to the customer of avoided capacity and energy costs. Nothing in parts 7835.4010 to 7835.4015 prevents a utility from connecting qualifying facilities of greater than 1,000 kilowatt capacity under its avoided cost rates.

7835.4020 AMOUNT OF CAPACITY PAYMENTS; CONSIDERATIONS.

The qualifying facility which negotiates a contract under part 7835.4019 must be entitled to the full avoided capacity costs of the

utility. The amount of capacity payments must be determined through consideration of:

A. the capacity factor of the qualifying facility;

B. the cost of the utility's avoidable capacity;

C. the length of the contract term;

D. reasonable scheduling of maintenance;

E. the willingness and ability of the qualifying facility to provide firm power during system emergencies;

F. the willingness and ability of the qualifying facility to allow the utility to dispatch its generated energy;

G. the willingness and ability of the qualifying facility to provide firm capacity during system peaks;

H. the sanctions for noncompliance with any contract term; and

I. the smaller capacity increments and the shorter lead times available when capacity is added from qualifying facilities.

7835.4021 UTILITY TREATMENT OF COSTS.

All purchases from qualifying facilities with capacity of less than 40 kilowatts and purchases of energy from qualifying facilities with capacity of 40 kilowatts or more must be considered an energy cost in calculating a utility's fuel adjustment clause.

7835.4022 LIMITING CUMULATIVE GENERATION.

A public utility requesting that the commission limit cumulative generation of net metered facilities under *Minnesota Statutes*, section 216B.164, subdivision 4b, must file its request with the commission under chapter 7829.

7835.4023 ALTERNATIVE TARIFF FOR VALUE OF SOLAR.

If a public utility has received commission approval of an alternative tariff for the value of solar under *Minnesota Statutes*, section 216B.164, subdivision 10, the tariff applies to new solar photovoltaic interconnections effective after the tariff approval date.

7835.4750 INTERCONNECTION STANDARDS.

Prior to signing the uniform statewide contract, a utility must distribute to each customer a copy of, or electronic link to, the commission's order establishing interconnection standards dated September 28, 2004, in docket number E-999/CI-01-1023. The utility must provide each customer a copy of, or electronic link to, subsequent changes made by the commission to any of those standards.

7835.5900 EXISTING CONTRACTS.

Any existing interconnection ~~contracts~~ contract executed between a utility and a qualifying facility with ~~installed~~ capacity of less than 40 kilowatts ~~before November 13, 1984, may be canceled and replaced with the uniform statewide contract at the option of either party by either party giving the other written notice~~ remains in force until terminated by mutual agreement of the parties. ~~The notice is effective upon the shortest period permitted under the existing contract for termination, but not less than ten nor more than 30 days.~~

7835.5950 RENEWABLE ENERGY CREDIT; OWNERSHIP.

A qualifying facility owns all renewable energy credits unless other ownership is expressly provided for in the contract between the qualifying facility and a utility under part 7835.9910.

7835.9910 UNIFORM STATEWIDE CONTRACT; FORM.

The form for the uniform statewide contract ~~for use~~ must be applied to all new and existing interconnections between a utility and cogeneration and small power production facilities having less than ~~40~~ 1,000 kilowatts of capacity ~~is as follows:~~, except as described in part 7835.5900.

UNIFORM STATEWIDE CONTRACT FOR COGENERATION
AND SMALL POWER PRODUCTION FACILITIES

THIS CONTRACT is entered into _____, ____, by _____ (hereafter called "Utility") and _____ _____ (hereafter called "QF").

RECITALS

The QF has installed electric generating facilities, consisting of _____ _____ _____ (Description of facilities), rated at ~~less than 40~~_____ kilowatts of electricity, on property located at _____.

The QF is prepared to generate electricity in parallel with the Utility.

The QF's electric generating facilities meet the requirements of the Minnesota Public Utilities Commission (hereafter called "Commission") rules on Cogeneration and Small Power Production and any technical standards for interconnection the Utility has established that are authorized by those rules.

The Utility is obligated under federal and Minnesota law to interconnect with the QF and to purchase electricity offered for sale by the QF.

A contract between the QF and the Utility is required by the Commission's rules.

AGREEMENTS

The QF and the Utility agree:

1. The Utility will sell electricity to the QF under the rate schedule in force for the class of customer to which the QF belongs.

2. The Utility will buy electricity from the QF under the current rate schedule filed with the Commission. The QF ~~has elected~~ elects the rate schedule category hereinafter indicated ~~(select one)~~:

____ a. Net energy billing rate under part 7835.3300.

____ b. Simultaneous purchase and sale billing rate under part 7835.3400.

____ c. Time-of-day purchase rates under part 7835.3500.

A copy of the presently filed rate schedule is attached to this contract.

3. The Utility will buy electricity from the QF under the current rate schedule filed with the Commission. If the QF has less than 40 kilowatts capacity, the QF elects the rate schedule category hereinafter indicated:

____ a. Net energy billing rate under part 7835.4013.

____ b. Simultaneous purchase and sale billing rate under part 7835.4014.

____ c. Time-of-day purchase rates under part 7835.4015.

A copy of the presently filed rate schedule is attached to this contract.

4. The Utility will buy electricity from the QF under the current rate schedule filed with the Commission. If the QF has at least 40 kilowatts capacity but less than 1,000 kilowatt capacity, the QF elects the rate schedule category hereinafter indicated:

____ a. Simultaneous purchase and sale billing rate under part 7835.4014.

____ b. Time-of-day purchase rates under part 7835.4015.

A copy of the presently filed rate schedule is attached to this contract.

~~3~~ 5. The rates for sales and purchases of electricity may change over the time this contract is in force, due to actions of the Utility or of the Commission, and the QF and the Utility agree that sales and purchases will be made under the rates in effect each month during the time this contract is in force.

~~4~~ 6. The Utility will compute the charges and payments for purchases and sales for each billing period. Any net credit to the QF will be made under one of the following options as chosen by the QF:

____ 1. Credit to the QF's account with the Utility.

____ 2. Paid by check to the QF within 15 days of the billing date.

7. Renewable energy credits associated with generation from the facility are owned by:

_____

~~5~~ 8. The QF must operate its electric generating facilities within any rules, regulations, and policies adopted by the Utility not prohibited by the Commission's rules on Cogeneration and Small Power Production which provide reasonable technical connection and

operating specifications for the QF. This agreement does not waive the QF's right to bring a dispute before the Commission as authorized by Minnesota Rules, ~~parts 7835.4800, 7835.5800, and~~ part 7835.4500, and any other provision of the Commission's rules on Cogeneration and Small Power Production authorizing Commission resolution of a dispute.

~~6~~ 9. The Utility's rules, regulations, and policies must conform to the Commission's rules on Cogeneration and Small Power Production.

~~7~~ 10. The QF will operate its electric generating facilities so that they conform to the national, state, and local electric and safety codes, and will be responsible for the costs of conformance.

~~8~~ 11. The QF is responsible for the actual, reasonable costs of interconnection which are estimated to be $_____. The QF will pay the Utility in this way: _____ _____.

~~9~~ 12. The QF will give the Utility reasonable access to its property and electric generating facilities if the configuration of those facilities does not permit disconnection or testing from the Utility's side of the interconnection. If the Utility enters the QF's property, the Utility will remain responsible for its personnel.

~~10~~ 13. The Utility may stop providing electricity to the QF during a system emergency. The Utility will not discriminate against the QF when it stops providing electricity or when it resumes providing electricity.

~~11~~ 14. The Utility may stop purchasing electricity from the QF when necessary for the Utility to construct, install, maintain, repair, replace, remove, investigate, or inspect any equipment or facilities within its electric system. The Utility will notify the QF before it stops purchasing electricity in this way: _____ _____.

~~12~~ 15. The QF will keep in force liability insurance against personal or property damage due to the installation, interconnection, and operation of its electric generating facilities. The amount of insurance coverage will be $_____ (The ~~utility may not require an amount greater than $300,000~~ amount must be consistent with the Commission's interconnection standards under Minnesota Rules, part 7835.4750).

~~13~~ 16. This contract becomes effective as soon as it is signed by the QF and the Utility. This contract will remain in force until either the QF or the Utility gives written notice to the other that the contract is canceled. This contract will be canceled 30 days after notice is given.

~~14~~ 17. This contract contains all the agreements made between the QF and the Utility except that this contract shall at all times be subject to all rules and orders issued by the Public Utilities Commission or other government agency having jurisdiction over the subject matter of this contract. The QF and the Utility are not responsible for any agreements other than those stated in this contract.

THE QF AND THE UTILITY HAVE READ THIS CONTRACT AND AGREE TO BE BOUND BY ITS TERMS. AS EVIDENCE OF THEIR AGREEMENT, THEY HAVE EACH SIGNED THIS CONTRACT BELOW ON THE DATE WRITTEN AT THE BEGINNING OF THIS CONTRACT.

_____ QF By:_____

UTILITY By:_____ (Title)

7835.9920 NONSTANDARD PROVISIONS.

A utility intending to implement provisions other than those included in the uniform statewide form of contract must file a request for authorization with the commission. The filing must conform with chapter 7829 and must identify all provisions the utility intends to use in the contract with a qualifying facility.

REPEALER. *Minnesota Rules*, parts 7835.2300; 7835.2500; 7835.2700; 7835.2900; 7835.4800; 7835.4900; 7835.5000; 7835.5100; 7835.5200; 7835.5300; 7835.5400; 7835.5500; 7835.5600; 7835.5700; and 7835.5800, are repealed.

Exempt Rules

Exempt rules are excluded from the normal rulemaking procedures (*Minnesota Statutes* §§ 14.386 and 14.388). They are most often of two kinds. One kind is specifically exempted by the Legislature from rulemaking procedures, but approved for form by the Revisor of Statutes, reviewed for legality by the Office of Administrative Hearings, and then published in the *State Register*. These exempt rules are effective for two years only.

The second kind of exempt rule is one adopted where an agency for good cause finds that the rulemaking provisions of *Minnesota Statutes*, Chapter 14 are unnecessary, impracticable, or contrary to the public interest. This exemption can be used only where the rules:

(1) address a serious and immediate threat to the public health, safety, or welfare, or

(2) comply with a court order or a requirement in federal law in a manner that does not allow for compliance with *Minnesota Statutes* Sections 14.14-14.28, or

(3) incorporate specific changes set forth in applicable statutes when no interpretation of law is required, or

(4) make changes that do not alter the sense, meaning, or effect of the rules.

These exempt rules are also reviewed for form by the Revisor of Statutes, for legality by the Office of Administrative Hearings and then published in the *State Register*. In addition, the Office of Administrative Hearings must determine whether the agency has provided adequate justification for the use of this exemption. Rules adopted under clauses (1) or (2) above are effective for two years only. The Legislature may also exempt an agency from the normal rulemaking procedures and establish other procedural and substantive requirements unique to that exemption.

KEY: Proposed Rules - Underlining indicates additions to existing rule language. ~~Strikeouts~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." **Adopted Rules** - Underlining indicates additions to proposed rule language. ~~Strikeout~~ indicates deletions from proposed rule language.

Minnesota Department of Labor and Industry (DLI)

Adopted Exempt Permanent Rules Updating the Standard Industrial Classification List for Workplace Accident and Injury ReductionPrograms

The rules proposed and published at *State Register*, Volume 39, Number 16,pages 563-582, October 27, 2014 (39 SR 563); and Volume 39, Number 18, pages 603-622, November 3, 2014 (39 SR 603), are adopted as proposed.

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.

Minnesota Department of Agriculture (MDA)

Plant Protection Division

REQUEST FOR COMMENTS on Possible Amendments to Rules Governing Administration of the Minnesota Seed Law, *Minnesota Rules*, 1510.0010 to 1510.0360; Revisor's ID Number R-04304

Subject of Rules. The Minnesota Department of Agriculture requests comments on its possible amendments to rules governing administration of the Minnesota Seed Law (*Minnesota Statutes*, section 21.80 to 21.92). The Department is considering rule amendments that revise tolerances for label claims for germination, dormant or hard seed, purity factors, and noxious weed seeds to be consistent with current Federal Seed Act Regulations and modern seed testing standards; clarify requirements for labeling of bulk bins, sale of small grains seed for cover crops, and recordkeeping; and eliminate obsolete and unnecessary rules.

Persons Affected. The amendment to the rules would likely affect firms who label seed for sale in Minnesota and Minnesota firms who label seed for sale in other states. The department does not contemplate appointing a new advisory committee to comment on the planned rules. A Seed Program Advisory Committee already exists.

Statutory Authority. *Minnesota Statutes*, section 21.85. subdivision 11, authorizes the Department to adopt rules for the administration of the Minnesota Seed Law.

Public Comment. Interested persons or groups may submit comments or information on these possible rules in writing until 4:30 p.m. on February 27, 2015. The Department does not plan to appoint a new advisory committee to comment on the possible rules because one already exists.

Rules Drafts. The Department has drafted the possible rules amendments

Agency Contact Person. Written comments, questions, requests to receive a draft of the rules, and requests for more information on these possible rules should be directed to: Dr. Steve Malone at Minnesota Department of Agriculture, 625 Robert St. N, **phone:** (651) 201-6531, **fax:** (651) 201-6108, **e-mail:** ***stephen.malone@state.mn.us*** **.**

Alternative Format. Upon request, this information can be made available in an alternative format, such as large print, braille, or audio. To make such a request, please contact the agency contact person at the address or telephone number 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 if and when a proceeding to adopt rules is started. The agency is required to submit to the judge only those written comments received in response to the rules after they are proposed. If you submitted comments during the development of the rules and you want to ensure that the Administrative Law Judge reviews the comments, you should resubmit the comments after the rules are formally proposed.

Minnesota Department of Health (MDH)

Division of Health Policy

Limited Exception from Minnesota's Requirements for the Standard, Electronic Exchange of Eligibility (270/271) Transactions for Payers Not Subject to HIPAA Is Continued for 2015

Minnesota Statutes, section 62J.536 requires that health care providers, clearinghouses, and group purchasers (payers) exchange specified administrative transactions electronically, using a standard data content and format adopted in rule. The statute also authorizes the Commissioner of Health to exempt group purchasers not subject to federal HIPAA administrative transactions and code sets regulations from one or more of the state's data exchange requirements if the Commissioner determines that:

- a transaction is incapable of exchanging data that are currently being exchanged on paper and is necessary to accomplish the purpose of the transaction; or
- another national electronic transaction standard would be more appropriate and effective to accomplish the purpose of the transaction.

Group purchasers not subject to HIPAA regulations include workers' compensation, auto, and property and casualty carriers.

MDH consults annually with the Minnesota Administrative Uniformity Committee (AUC) to determine whether to grant the exemptions described above. Based on these consultations, MDH previously granted very narrowly targeted, annually renewable exceptions to the rules adopted pursuant to *Minnesota Statutes* §62J.536 as described above for the years 2009 through 2014. The exceptions were limited to only group purchasers not subject to HIPAA regulations, who were exempted from the data exchange requirements for only the ASC X12/005010X279A1 Health Care Eligibility Benefit Inquiry and Response (270/271) transaction because it did not meet their business needs.

MDH consulted with the AUC in November 2014 regarding the continued need for the targeted exemption described above. MDH determined through the review process that **the current limited exception to Minnesota's health care administrative data exchange rules will continue through 2015. This exception applies only to exchanges of the ASC X12/005010X279A1 Health Care Eligibility Benefit Inquiry and Response (270/271) transaction with health care group purchasers that are not subject to federal HIPAA transactions and code sets regulations, and only for calendar year 2015.**

The next annual review of this exception to rules adopted pursuant to *Minnesota Statutes* §62J.536 is scheduled for November 2015, to determine whether the exception will be continued through 2016.

For questions or additional information, please contact:

David K. Haugen, Director,
Center for Health Care Purchasing Improvement
Phone: (651) 201-3573
E-mail: ***david.haugen@state.mn.us***

December 29, 2014

Edward P. Ehlinger, MD, MSPH, Commissioner
Minnesota Department of Health
P.O. Box 64975
St. Paul, MN 55164-0975

Minnesota Housing Finance Agency (MHFA)

Notice of Hearing on Bond Issues for Qualified Mortgage Bonds

NOTICE IS HEREBY GIVEN that the Minnesota Housing Finance Agency (the "Agency") will hold a public hearing at 10:30 a.m. on Tuesday, January 13, 2015 at the Minnesota Housing Finance Agency, 400 Sibley Street, Suite 300, St. Paul, Minnesota 55101, for the purposes of taking public testimony regarding the issuance of qualified mortgage bonds, comprising one or more series, in an aggregate

principal amount not exceeding $500,000,000.

The bonds will be issued as qualified mortgage bonds subject to the mortgage eligibility requirements of Section 143 of the Internal Revenue Code of 1986, as amended, and will provide funds for the purchase by the Agency of mortgage loans of certain low and moderate income, first-time homebuyers of single family owner-occupied residences located throughout the State of Minnesota, which homebuyers qualify under the Agency's bond financed single family mortgage program (the "Program") and applicable federal tax law. The Agency's Program is further described in the MHFA Start Up Program Procedural Manual, as updated from time to time, a copy of which may be obtained from the Agency. Said bonds may be issued either as refunding bonds to refund certain outstanding bonds of the Agency or as "new money" bonds using a portion of the Agency's state bond volume allocation, and may be issued either as short-term bonds, subject to refunding or remarketing at a subsequent date on a long-term, fixed or variable rate basis, or as long-term, fixed or variable rate bonds on original issuance. The bonds covered by this hearing notice, up to an aggregate principal amount not exceeding $500,000,000, are anticipated to be issued periodically to fund the Program during calendar years 2015 and 2016, until fully utilized.

Parties wishing to comment on the financing for the Program may appear in person at the hearing or may submit written comments to the undersigned prior to the hearing, which comments will be considered at the hearing. Parties desiring additional information should contact Ms. Suzanne Best of the Agency (651-297-3131).

Mary Tingerthal, Commissioner
Minnesota Housing Finance Agency

Minnesota Department of Human Services (DHS)

Disability Services Division

NOTICE OF HEARING on Proposed Adoption of Rules Governing Positive Support Strategies, Person-Centered Planning, Limits on Use of Restrictive Interventions and Emergency Use of Manual Restraint, and Repeal of Rules Governing Aversive and Deprivation Procedures in *Minnesota Rules*, 9525.2700 to 9525.2810; Revisor's ID No. R-04213

Public Hearing. The Department of Human Services intends to adopt rules after a public hearing following the procedures in the rules of the Office of Administrative Hearings, *Minnesota Rules*, parts 1400.2200 to 1400.2240, and the Administrative Procedure Act, *Minnesota Statutes*, sections 14.131 to 14.20. The agency will hold a public hearing on the above-named rules in the second floor conference rooms designated 2370 and 2380, Elmer L. Anderson Human Services Building, 540 Cedar Street, St. Paul, Minnesota 55155, starting at 9:00 a.m. on Monday, February 23, 2015, and continuing until the hearing is completed. The agency will schedule additional days of hearing if necessary. All interested or affected persons will have an opportunity to participate by submitting either oral or written data, statements, or arguments. Statements may be submitted without appearing at the hearing.

Administrative Law Judge. Administrative Law Judge Eric L. Lipman will conduct the hearing. Judge Lipman's Legal Assistant Denise Collins can be reached at the Office of Administrative Hearings, 600 North Robert Street, P.O. Box 64620, Saint Paul, Minnesota 55164-0620, **telephone:** (651) 361-7900 and **fax:** (651) 539-0300 or **e-mail:** ***denise.collins@state.mn.us***. The rule hearing procedure is governed by *Minnesota Statutes*, sections 14.131 to 14.20, and by the rules of the Office of Administrative Hearings, *Minnesota Rules*, parts 1400.2000 to 1400.2240. You should direct questions about the rule hearing procedure to the administrative law judge.

Subject of Rules, Statutory Authority, and Agency Contact Person. The proposed rules are about the use of positive support strategies and person-centered planning techniques, establishing a process to phase out the use of restrictive interventions for the rare situation when such use may be temporarily and briefly authorized, and governing the emergency use of manual restraint. The new rules will apply to all facilities and services, including the home and community-based services licensed under *Minnesota Statutes*, Chapter 245D that are provided to persons with a disability or persons age 65 and older, and to all Department-licensed facilities and licensed services serving persons with a developmental disability or a related condition.

The Department also intends to repeal *Minnesota Rules*, 9525.2700 to 9525.2810, Use Of Aversive And Deprivation Procedures In Licensed Facilities Serving Persons With Developmental Disabilities. These rule parts govern the use of aversive and deprivation procedures now prohibited by *Minnesota Statutes*, Chapter 245D.

The proposed rules are authorized by *Minnesota Statutes*, section 245.8251, subdivisions 1 and 3.

A copy of the proposed rules will be published in the *State Register* on Monday, December 29, 2014, and is available online at ***http://www.dhs.state.mn.us/dhs16_189734.pdf*** .

A free copy of the rules is available upon request from the agency contact person.

The agency contact person is: Karen E. Sullivan Hook at Minnesota Department of Human Services, Management and Policy Division, P.O. Box 64238, St. Paul, MN 55155-0238, **phone:** (651) 431-5771, **fax:** (651) 431-7488, **e-mail:** ***dhsrulecomments@state.mn.us***. **TTY** users may call MN Relay at 711 or 1-800-627-3529

Statement of Need and Reasonableness. The statement of need and reasonableness 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. It is now available from the agency contact person. You may review or obtain copies for the cost of reproduction by contacting the agency contact person.

Public Comment. You and all interested or affected persons, including representatives of associations and other interested groups, will have an opportunity to participate. *The administrative law judge will accept your view*s either orally at the hearing or in writing at any time before the close of the hearing record. Submit written comments *to the administrative law judge at the address above or to* ***rulecomments@state.mn.us***. All evidence that you present 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. At the hearing the administrative law judge may order this five-day comment period extended for a longer period but for no more than 20 calendar days. Following the comment period, there is a five-working-day rebuttal period during which the agency and any interested person may respond in writing to any new information submitted. No one may submit additional evidence during the five-day rebuttal period. The Office of Administrative Hearings must receive all comments and responses submitted to the administrative law judge no later than 4:30 p.m. on the due date. All comments or responses received are public and will be available for review at the Office of Administrative Hearings.

The agency requests that any person submitting written views or data to the administrative law judge before the hearing or during the comment or rebuttal period also submit a copy of the written views or data to the agency contact person at the address stated above.

Alternative Format/Accommodation. Upon request, this information can be made available in an alternative format, such as large print, braille, or audio. 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 agency may modify the proposed rules as a result of the rule hearing process. It must support modifications by data and views presented during the rule hearing process. The adopted rules may not be substantially different than these proposed rules, unless the agency follows the procedure under *Minnesota Rules*, part 1400.2110. If the proposed rules affect you in any way, the agency encourages you to participate.

Adoption Procedure after the Hearing. 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 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 that the agency adopts the rules and files them with the Secretary of State, or ask to register with the agency to receive notice of future rule proceedings. You may make these requests at the hearing or in writing to the agency contact person stated above.

Lobbyist Registration. *Minnesota Statutes*, chapter 10A, requires each lobbyist to register with the State Campaign Finance and Public Disclosure Board. You should direct questions regarding this requirement to the Campaign Finance and Public Disclosure Board at: Suite #190, Centennial Building, 658 Cedar Street, St. Paul, Minnesota 55155, **telephone:** (651) 539-1180 or 1-800-657-3889.

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

Dated: 15 December 2014

Lucinda Jesson, Commissioner
Minnesota Department of Human Services

Official Notices

Minnesota Department of Human Services (DHS)

Health Care Administration

Public Notice Regarding Changes to Payment Rates and Methodologies, and Services under the Medical Assistance Program and the MinnesotaCare Program

This notice is published pursuant to *Code of Federal Regulations*, title 42, part 447, section 205 (42 C.F.R. § 447.205), which requires publication of a notice when there is any significant proposed change in the methods and standards for setting payment rates for Medicaid services.

Effective for services delivered on or after January 1, 2015, the Department shall reimburse early intensive developmental and behavioral intervention (EIDBI) services provided to children in an amount equal to the lesser of the submitted charge and the resource based relative value scale (RBRVS) calculated amount. If an RBRVS amount is not available, the following state agency established rates:

- Comprehensive multi-disciplinary evaluation conducted by a doctoral prepared professional: $285.38 (if the service is provided by a masters level trained provider: $228.30) per evaluation.

For the following services, the agency established rate is based on the service being provided by a qualified supervising professional or ABA or DBI development/behavioral professional; the agency established rate is reduced 20% when provide by an ABA or DBI development/behavioral practitioner; the agency established rate is reduced 50% when provided by a development/behavioral support specialist.

- Individual treatment plan development: $20.61 per 15 minute unit.
- Coordinated care conference: $97.98 per encounter.
- Applied behavioral analysis (ABA) intervention: $17.54 per 15 minute unit.
- Group ABA: $5.84 per 15 minute unit.
- Developmental/behavioral intervention (DBI): $17.54 per 15 minute unit.
- Group DBI: $5.84 per 15 minute unit.
- Supervision of ABA or DBI intervention: $17.54 per 15 minute unit.
- Family/caregiver training and counseling: $17.54 per 15 minute unit.
- Group family/caregiver training and counseling: $5.84 per 15 minute unit.

Necessary travel time to provide EIDBI services will be reimbursed at the lesser of the submitted charge and $.45 per minute.

Effective for services delivered on or after January 1, 2015, the Department shall reimburse adult rehabilitative mental health services at the lesser of the submitted charge and the following state established rates:

- Functional assessment: $20.61 per 15 minute unit.
- Creation of an individualized treatment plan: $20.61 per 15 minute unit.
- Basic living & social skills provided by a mental health professional or practitioner: $17.17 per 15 minute unit.
- Basic living & social skills provided by a mental health rehabilitation worker: $12.87 per 15 minute unit.
- Basic living & social skills provided in a group setting, regardless of the provider: $7.55 per 15 minute unit.
- Community intervention provided by a mental health professional or practitioner: $48.68 per session.
- Community intervention provided by a mental health rehabilitation worker: $36.51 per session.
- Medication education: $16.98 per 15 minute unit.
- Medication education provided in a group setting: $11.04 per 15 minute unit.
- Level I certified peer specialist services: $15.02 per 15 minute unit.
- Level II certified peer specialist services: $17.17 per 15 minute unit.
- Certified peer specialist services in a group setting: $7.55 per 15 minute unit.

Effective for services delivered on or after January 1, 2015, the Department will shall reimburse the following components of children's therapeutic services and supports (CTSS) at the lesser of the submitted charge and the following state established rates:

- Mental health service plan development: $19.81 per 15 minute unit.
- Functional assessment: $19.81 per 15 minute unit.

Effective for services delivered on or after January 1, 2015, the Department shall make a supplemental payment to certain dental

providers affiliated with Hennepin County Medical Center and Regions Hospital. The supplemental payment is equal to the difference between the average commercial payment rate for dental services delivered by providers affiliated with Hennepin County Medical Center and Regions Hospital, and the rate paid to those providers under Medical Assistance.

For more information, please contact Liz Backe at **phone:** (651) 431-2481 or **e-mail:** ***liz.backe@state.mn.us*** **.**

Minnesota Department of Human Services (DHS)

Health Care Purchasing and Delivery Systems Division

Health Care Administration

Public Notice of Maximum Allowable Costs of Medical Assistance Outpatient Prescribed Drugs

NOTICE IS HEREBY GIVEN to recipients, providers of services, and to the public of additions to the state Medical Assistance maximum allowable cost (state MAC) list for certain outpatient prescribed drugs.

At least once each calendar year, the United States Department of Health and Human Services, Centers for Medicare & Medicaid Services, publishes a federal upper limit (FUL) payment schedule for many commonly prescribed multiple-source drugs. The federal upper limit is set at a rate equal to 150 percent of the published price for the least costly therapeutic equivalent that can be purchased by pharmacists. This FUL payment schedule constitutes the federal MAC list. For many multiple-source drugs that are not on the federal MAC list, the Department establishes a state MAC list. Additionally, the Department imposes a state MAC for many multiple-source drugs that are on the federal MAC list, as long as the aggregate savings are at least as much as the savings would be using the federal MAC list.

The Department requires Medical Assistance pharmacy providers to submit their usual and customary costs. Pharmacy providers are reimbursed at the lower of: 1) the state MAC or the estimated acquisition cost determined using wholesale acquisition cost, plus a dispensing fee; or 2) the submitted usual and customary charge to the general public.

No earlier than December 29, 2014 the Department may add the following outpatient prescribed drugs to the state MAC list:

Drug Name
CELECOXIB

These additions are made to bring Medical Assistance reimbursement to pharmacists more closely in line with the actual acquisition cost of the drugs listed above. The Department estimates that there will be a state savings of $30, 000.00 for State Fiscal Year 2015 (July 1, 2014 through June 30, 2015).

This notice is published pursuant to *Code of Federal Regulations*, Title 42, section 447.205, which requires publication of a notice when there is a rate change in the methods and standards for setting payment rates for Medical Assistance services.

Written comments and requests for information may be sent to Pharmacy Program Manager Sara Drake R.Ph., Health Services and Medical Management Division, Health Care Administration, Minnesota Department of Human Services, P.O. Box 64984, St. Paul, Minnesota 55164-0984.

Official Notices

Minnesota Pollution Control Agency (MPCA)

Public Notice of Draft / Proposed Air Emission Facility Part 70 Low-emitting Facility General Permit

NOTICE IS HEREBY GIVEN, that the Commissioner of the Minnesota Pollution Control Agency (MPCA) proposes to issue a federal general permit governing certain low-emitting coating, combustion and manufacturing sources located in Minnesota which initiated construction or construction and operation of their facilities prior to obtaining an air emissions permit. The issuance of this general permit is authorized by Minn. R. 7007.1100, subp. 1, which allows the MPCA to issue a general permit if "numerous and similar stationary sources are subject to substantially similar regulatory requirements." The general permit is designed for existing facilities which did not obtain an air emissions permit prior to initiating construction or construction and operation of their facility; however it is available to both new and existing sources.

The stationary sources eligible for the proposed general permit are major sources as defined in *Minnesota Rules* 7007.0200. The general permit covers stationary sources required to obtain permits under *Minnesota Rules* 7007.0250. The proposed general permit contains federally-enforceable Best Available Control Technology (BACT)- equivalent conditions which include limiting the Potential-To-Emit (PTE) of Particulate Matter (PM), Particulate Matter less than 10 microns (PM_{10}), Particulate Matter less than 2.5 microns ($PM_{2.5}$), and Ozone (VOC-Volatile Organic Compounds) from material usage operations to 25 tpy or less; Carbon Monoxide (CO) and Nitrogen Oxides (NOx), from combustion operations to 25 tpy or less; Single Hazardous Air Pollutant (HAP) from material usage operations to 5 tons per year (tpy) or less; and Total Hazardous Air Pollutant (HAP) from material usage operations to 12.5 tons per year (tpy) or less. Sulfur Dioxide (SO_2) emissions will be restricted by compliance with a 15 ppm fuel sulfur limitation. Each stationary source covered by this general permit will be a non major source as defined in 40 CFR § 52.21 Prevention of Significant Deterioration (*Minnesota Rules* 7007.3000). Also, each stationary source will be a non major source as defined in 40 CFR § 52.24 (*Minnesota Rules* 7007.4000) for all pollutants. There are also Best Management Practices (BMPs) specified for combustion operations, coating operations, and blasting operations.

Each stationary source eligible for the proposed general permit may include the following types of equipment and activities for which a permit is required by *Minnesota Rules* 7007.0150: Abrasive blasting, adhesive, bag houses, boilers, burn-off ovens, casting, catalytic or thermal afterburners, cleaning (including acid cleaning, degreasers, general cleanup with solvents), dip tanks, fabric filters, fuel storage, furnaces, injection molding, internal combustion engines (generators), lamination, mixing, molding, ovens, resin and gel coating, sanding, screen printing, space heaters, spraying and coating activities, stenciling, storage tanks, wall/panel filters, water wash paint booths, and/or any of the insignificant activities listed in *Minnesota Rules* 7007.1300 and/or conditionally insignificant activities listed in *Minnesota Rules* 7008.

A stationary source is not eligible for the proposed general permit, or ceases to be eligible for the proposed general permit, if any of the following are true:

1. The stationary source has an emission unit other than those described above;
2. The stationary source has an emission unit subject to a Standard of Performance for: New Stationary Sources in 40 CFR pt. 60 already adopted other than:
   - Subp. Kb for Liquid Petroleum and Volatile Organic Liquid (VOL) Storage Vessels
   - Subp. EE for Surface Coating of Metal Furniture
   - Subp. IIIII Compression Ignition Internal Combustion Engines
   - Subp. JJJJ for Stationary Spark Ignition Internal Combustion Engines
3. The stationary source is affected by a 40 CFR pt. 63 National Emission Standard for Hazardous Air Pollutants (NESHAP) already adopted other than:
   - Subp. T for Halogenated Solvent Cleaning Machines
   - Subp. JJ for Surface Coating of Metal Furniture (JJ)
   - Subp. MMMM for Surface Coating of Miscellaneous Metals Parts and Products
   - Subp. NNNN for Surface Coating of Large Appliances (NNNN)
   - Subp. PPPP for Surface Coating of Plastic Parts and Products (PPPP)
   - Subp. QQQQ for Surface Coating of Wood Building Products (QQQQ)
   - Subp. RRRR for Surface Coating of Metal Furniture (RRRR)
   - Subp. WWWW for Reinforced Plastic Composites Production (WWWW)
   - Subp. ZZZZ for Reciprocating Internal Combustion Engines (ZZZZ)

- Subp. DDDDD for Industrial/Commercial/Institutional Boilers and Process Heaters
- Subp. HHHHHH for Paint stripping and misc. surface coating operations
- Subp. JJJJJJ for Industrial/Commercial/Institutional Boilers and Process Heaters

4. The stationary source is located in or comes to be located in a PM_{10} maintenance area;
5. The stationary source includes a type of control equipment not covered in the proposed general permit;
6. The stationary source emits at any time a 12-month rolling sum of more than 25 tons of PM, PM_{10}, $PM_{2.5}$,CO, or NO_x, ;
7. The stationary source emits at any time a 12-month rolling sum of more than 5 tons of any single HAP; or
8. The stationary source emits at any time a 12-month rolling sum of more than 12.5 tons of total HAPs.

Criteria pollutants are emitted from processes at cleaning, painting/coating, cutting, grinding, blasting, fuel combustion, and general fiberglass stationary sources; with or without pollution control equipment. A summary of the highest expected allowable PTE rates in tpy for each stationary source described in the proposed general permit are as follows:

Sources	**PM/PM_{10}/ $PM_{2.5}$**	**SO_2**	**NO_x**	**VOC**	**CO**	**Pb**	**HAP**	**GHG**
Material Usage Operations including: Spraying and Coating Operations, Cleaning, Mixing, Molding, Casting, Lamination, Resin and gel coaters, Abrasive blasting	25	0	0	25	0	0.2	5 / 12.5	0
Fuel combustion	3	<1	25	3	25	Neg.	Neg.	62,000
Storage tanks	0	0	0	1	0	0	Neg	0
Insignificant Activities	5	5	5	5	5	Neg.	Neg.	Neg.
Total Facility PTE (tpy)	33	5	30	36	30	0.2	12.5	62,000

*Neg. = negligible emissions

As allowed by *Minnesota Rules* 7007.1100, subp. 5, the MPCA has developed a source-specific permit application that does not include all the required information given in *Minnesota Rules* 7007.0100 to 7007.1850. The differences between the application requirements and this general permit application are discussed in the Technical Support Document. The MPCA has developed application forms tailored to this general permit which the MPCA plans to use. The application forms and worksheets will be updated periodically, but will continue to contain the elements discussed in the Technical Support Document needed to determine eligibility for the general permit.

The overall general permit contains each applicable requirement that could apply to eligible stationary sources. Based upon the information in the permit application, the Permittee need only comply with those requirements which are applicable to their facility. The Permittee is also allowed to construct allowable additional emission units at the source under this general permit without a permit amendment.

The preliminary determination to issue the air emission general permit is tentative. There are four formal procedures for public participation in the MPCA's consideration of the general permit. Interested persons may (1) submit written comments on the proposed generalpermit; (2) request that the MPCA hold a public information meeting; (3) request the MPCA hold a contested case hearing; and/or (4) submit a petition to the Commissioner requesting that the MPCA Board consider the permit matter.

The decision whether to issue the permit and, if so, under what terms, will be presented to the MPCA Board for decision if: (1) the Commissioner grants the petition requesting the matter be presented to the MPCA Board; (2) an MPCA Board member requests to hear the matter prior to the time the Commissioner makes a final decision on the permit; or (3) a request for a contested case hearing is pending. Otherwise, the Commissioner will make the decision.

Persons who submit comments or petitions to the MPCA must state (1) their interest in the general permit application or the draft permit; (2) the action they wish the MPCA to take, including specific references to the section of the draft permit they believe should be changed; and (3) the reasons supporting their position, stated with sufficient specificity as to allow the MPCA to investigate the merits of the position.

As described in *Minnesota Rules* 7000.1800, persons who submit requests for a contested case hearing must also state the issues they propose to address in a contested case hearing, the specific relief requested or resolution of the matter, and the reasons (which may be in the form of proposed findings) supporting an MPCA decision to hold a contested case hearing. Failure to comply with these rules exactly may result in a denial of the request. The decision whether to hold a contested case hearing will be made under *Minnesota Rules* 7000.1900. Most public libraries throughout the state have copies of the current *Minnesota Rules*. They are also available on the Internet at ***www.revisor.leg.state.mn.us***.

Public Comment: The public comment period commences December 30, 2014 and terminates January 28, 2015. Interested persons or groups may submit comments in writing to the MPCA, St. Paul Office until 4:30 p.m. on January 28, 2015. Evidence of timely receipt includes a date/time stamp imprinted on the first page of the written comments by the first floor information and reception area of the MPCA or by the Industrial Division support staff, or receipt by fax: (651) 296-8717 or e-mail.

Comments, requests and petitions should be mailed to:

Bonnie Nelson, PE, Air Permit Engineer
Air Quality Permits Section, Industrial Division
Minnesota Pollution Control Agency
520 Lafayette Road North, St. Paul, Minnesota 55155
Phone: (651) 757-2600
Fax: (651) 296-8717
E-mail: ***bonnie.nelson@state.mn.us***

A copy of the draft/proposed general permit, Technical Support Document, and proposed Application Forms will be available on the MPCA's website at ***http://www.pca.state.mn.us/news/data/index.cfm?PN=1***, or will be mailed or emailed to any interested person upon the MPCA's receipt of a written request. These materials are also available upon request for inspection at the Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155, **phone:** (651) 757-2667, and at the MPCA's Regional Division Offices at the addresses and phone numbers listed below, by appointment between the hours of 8:30 a.m. and 4:30 p.m., Monday through Friday.

All MPCA offices may be reached by calling 1-800-657-3864.

MPCA Regional Division:

1. **Duluth Office**
525 Lake Avenue South, Suite 400
Duluth, MN 55802
Phone: (218) 723-4660
Fax: (218) 723-4727

2. **Brainerd Office**
7678 College Road, Suite 105
Baxter, MN 56425
Phone: (218) 828-2492
Fax: (218) 828-2594

3. **Detroit Lakes Office**
714 Lake Avenue, Suite 220
Detroit Lakes, MN 56501
Phone: (218) 847-1519
Fax: (218) 846-0719

4. **Mankato Office**
12 Civic Center Plaza, Suite 2165
Mankato, MN 56001
Phone: (507) 389-5977
Fax: (507) 389-5422

5. **Rochester Office**
18 Wood Lake Drive Southeast
Rochester, MN 55904
Phone (507) 285-7343
Fax: (507) 280-5513

6. **Willmar Office**
1601 Highway 12 East, Suite 1
Willmar, MN 56201
Phone: (320) 214-3786
Fax: (320) 214-3787

7. **Marshall Office**
504 Fairgrounds Road, Suite 200
Marshall, MN 56258
Phone: 507-537-7146
Fax: 507-537-6001

DATED: December 22, 2014

John Linc Stine, Commissioner
Minnesota Pollution Control Agency

Minnesota Department of Transportation (Mn/DOT)

Notice to Bidders: Suspensions/Debarments as of September 17, 2014

NOTICE OF SUSPENSION

NOTICE IS HEREBY GIVEN that MnDOT has ordered that the following vendors be suspended effective July 8, 2014:

- Marlin Dahl, Granada, MN
- Dahl Trucking, Elmore, MN
- Elmore Truck and Trailer, Inc., Elmore, MN

NOTICE OF DEBARMENT

NOTICE IS HEREBY GIVEN that MnDOT has ordered that the following vendors be debarred for a period of three (3) years, effective May 6, 2013 until May 6, 2016:

- Gary Francis Bauerly and his affiliates, Rice, MN
- Gary Bauerly, LLC and its affiliates, Rice, MN
- Watab Hauling Co. and its affiliates, Rice, MN

NOTICE IS HEREBY GIVEN that MnDOT has ordered that the following vendors be debarred for a period of three (3) years, effective September 17, 2014 until September 17, 2017:

- Jeffrey Plzak and his affiliates, Loretto, MN
- Laurie Plzak and her affiliates, Loretto, MN
- Honda Electric Incorporated and its affiliates, Loretto, MN
- Jeffrey and Laurie Plzak doing business as Honda Electric Logistics, and its affiliates, Loretto, MN

Minnesota Statute section 161.315 prohibits the Commissioner, counties, towns, or home rule or statutory cities from awarding or approving the award of a contract for goods or services to a person who is suspended or debarred, including:

1) any contract under which a debarred or suspended person will serve as a subcontractor or material supplier,
2) any business or affiliate which the debarred or suspended person exercises substantial influence or control, and
3) any business or entity, which is sold or transferred by a debarred person to a relative or any other party over whose actions the debarred person exercises substantial influence or control, remains ineligible during the duration of the seller's or transfer's debarment.

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.

SEE ALSO: Office of Grants Management (OGM) at: *http://www.grants.state.mn.us/public/*

Minnesota Department of Administration (Admin)

Governor's Council on Developmental Disabilities

Notice of Cosponsorship Funds for Leadership Training Conferences

The Governor's Council on Developmental Disabilities (GCDD) is pleased to announce the availability of a total of $20,000 in cosponsorship funds for training conferences held in Minnesota and supporting the participation of Minnesota residents. Conferences should focus on providing best practices information in the field of developmental disabilities and leadership skills training. The primary audience for these conferences must be people with developmental disabilities and their families.

Conferences must be held no later than September 15, 2015. **Eligible applicants are** Minnesota associations/organizations that provide services to individuals with developmental disabilities and their families, advocates, providers, or professionals; Minnesota chapters of national organizations; or national organizations that are holding a conference in Minnesota. **Application deadline is Tuesday, January 20, 2015 at 3:00 p.m**. Please note: The GCDD reserves the right to award less than the maximum of $2,000 to an applicant, refuse to cosponsor a conference, or withdraw the availability of funds with or without notice.

For additional information or to request an application form, please contact:

Mary Jo Nichols
Governor's Council on Developmental Disabilities
370 Centennial Office Building
658 Cedar Street
St. Paul, Minnesota 55155
Phone: (651) 282-2899
Toll free: (877) 348-0505
Minnesota Relay Service: (800) 627-3529 **OR** 711
E-mail: ***admin.dd@state.mn.us***

The application is also available at: ***http://mn.gov/mnddc*** Go to "The Council" and then "RFPs and Grants."

Minnesota Department of Commerce

Notice of Availability of Automobile Theft Prevention Program Grants

The Minnesota Department of Commerce Fraud Bureau announces the availability of grant funding for the Minnesota Automobile Theft Prevention Grant Program, which is authorized by Minnesota Statutes, section 65B.84. The Department is requesting proposals from eligible applicants, including Minnesota state and local law enforcement agencies, county attorney's offices, the judiciary, community-based organizations and business organizations.

Request for Proposals (RFP)

A copy of the RFP can be obtained **by e-mail** from: ***autotheftgrant@state.mn.us***

Application Deadline

Proposals must be submitted by **Friday, February 13, 2015**, 4:00 p.m. CST to: ***autotheftgrant@state.mn.us*** Attention: Brandon Johnson.

Late proposals will not be considered.

Contact

For more information, contact Brandon Johnson at ***brandon.johnson@state.mn.us*** or (651) 539-1611.

This request does not obligate the Department of Commerce to complete the work contemplated in this notice. The Department of Commerce reserves the right to cancel this solicitation. All expenses incurred in responding to this notice are solely the responsibility of the responder.

Minnesota Department of Human Services (DHS)

Child Safety and Permanency Division

Youth At Risk of Homelessness Planning Grant

Request for Information:

Soliciting Information and Interest in Partnering with the Minnesota Department of Human Services on an Implementation grant proposal to Prevent Homelessness for Current and Former Foster Youth

I. Overview

The Minnesota Department of Human Services (DHS) is seeking information and soliciting interest in partnering on a federal grant opportunity to prevent homelessness for current and former foster youth. County/tribal social service agencies, private foster care and non-profits organizations serving homeless youth with a history of foster care experience are encouraged to respond to this request.

DHS received the Youth At Risk of Homelessness (YARH) federal planning grant from the Children's Bureau in October 2013. Beginning in January 2014, the YARH Planning Team was formed to advise DHS on three populations of foster youth, identified below, along four outcome domains. A critical aspect of this work was to conduct an analysis of the characteristics of foster youth in Minnesota associated with homelessness (see section VIII. YARH data summary).

Additionally, the Planning Team identified evidence-based and/or evidence-informed interventions designed to mitigate homelessness for foster youth and young adults who experienced foster care.

According to a recent federal forecast, the application for implementation funding will be issued in March 2015, with a due date in June 2015. The forecast projects an award ceiling of up to $625,000 each year for three years. Projects are expected to build the capacity of child welfare systems to prevent homelessness among the most at-risk foster youth/young adults with child welfare involvement.

II. Background

DHS is one of 18 grantees that received a planning grant from the federal Department of Health and Human Services Children's Bureau. The YARH grant is designed to allow grantees time to analyze data on the intersection of foster care and homelessness, identify those characteristics of foster youth that indicate a strong likelihood of future homelessness, and plan interventions using evidence-based/informed tools and programs.

The grant requires that planning efforts consider three youth populations and points of intervention, as follows:

Population One - Adolescents in foster care between the ages of 14 to 18
Population Two - Young adults ages 18 to 21 transitioning out of foster care
Population Three - Homeless youth/young adults with foster care histories up to age 21.

The YARH planning grant has provided DHS with resources to fund a process of identifying youth with child welfare involvement who are most at-risk of homelessness and to determine effective services and interventions that will be implemented to achieve the following core outcomes:

- Stable housing
- Permanent connections
- Education and employment, and
- Social and emotional well-being.

Response to this Request for Information (RFI) is completely voluntary. The state is seeking information in conjunction with requirements of the federal YARH discretionary grant which mandates the completion of a readiness assessment in preparation for an implementation funding request.

This RFI, and responses to it, does not in any way obligate the state to award a contract or complete any project, including this one. The state reserves the right to cancel this RFI if it is considered to be in its best interest. All costs incurred in responding to this RFI will be borne solely by the responder. Additionally, responses to this RFI will not provide any advantage to respondents in any potential future Requests for Proposals.

III. Domains of Interest

Seven domains of interest will guide the YARH Planning Team's selection of potential partners. Top-rated interventions fall into the following domains: education, training for foster parents, home visiting, transition planning, parenting (that includes fathers), trauma-informed screening/assessment and/or therapy.

The domains of interest were identified through the following steps:

- Articulating multiple Theories of Change based on data from DHS, Wilder Research, and the planning committee members' knowledge.
- Researching evidence-based interventions that lead to outcomes included in the Theories of Change, and identified by youth focus group participants and key-informant interviews.
- Rating the feasibility and likability (based on quality of evidence and types of outcomes) of the interventions.
- Reaching consensus on the most likable and feasible interventions.

IV. Information Requested:

DHS is seeking information and soliciting interest in partnership on a federal grant opportunity that is forecasted to be available in March 2015. This RFI will assist DHS in developing a readiness assessment, a requirement of the federal grant. As such, DHS is seeking responses from agencies that have a vision compatible with that of the YARH Planning Team, and the capacity to address the issues and barriers faced by current and former foster youth who are likely to experience homelessness. Respondents should address the following:

1. Briefly describe the ways in which your organization currently provides services to mitigate the risk of homelessness under the domains of interest listed below. Describe work under all domains that apply.
   - Education
   - Training for foster parents
   - Home Visiting
   - Transition Planning
   - Parenting (that includes fathers)
   - Trauma-informed screening/assessment and/or therapy

2. Indicate the domains of interest your organization is best suited to partner with DHS on and why.

3. Describe existing partnerships that contribute to your organization's work under the domains of interest you have identified.

4. Considering the three youth populations listed below, which do you currently serve? Indicate how your service array coincides with the domains of interest listed above for each youth population served.

   Population One - Adolescents in foster care between the ages of 14 to 18
   Population Two - Young adults ages 18 to 21 transitioning out of foster care
   Population Three - Homeless youth/young adults with foster care histories up to age 21.

5. In what ways does your organization have the capacity to serve current and former foster youth that are at risk of homelessness?

6. Describe conditions that would contribute to or inhibit your organizations' willingness to partner with DHS on a federal implementation grant application.

To the extent possible, responses to the above questions should incorporate data and/or specific examples.

V. Request for Information Schedule

State Register Posting:	Dec. 29, 2014
Deadline for emailed questions:	Jan. 14, 2015
Deadline for emailed responses:	Jan. 21, 2015
Final submission date:	Jan. 30, 2015

An email response will be sent to all parties submitting questions by e-mail.

VI. Response Content

Information provided in response to the RFI must include detailed responses to the questions listed in section IV of this document titled "Information Requested".

All responses to this RFI are public, according to Minnesota Statutes § 13.03, unless otherwise defined by Minn. Stat., section 13.37, as "Trade Secrets." If the responder submits information that it believes to be trade secret/confidential materials, the responder must clearly mark every page of trade secret materials in its response at the time the response is submitted with the words "Trade Secret" or "Confidential," and must justify the trade secret designation for each item in its response (Be specific, do not make general statements of confidentiality. Include reference to specific facts, licenses, trademarks, etc., and any relevant statutes or other law, such as how the data meets the requirements of Minn. Stat. §13.37, subd. 1(b)).

Any decision by the State to disclose information designated by the responder as trade secret/confidential will be made consistent with the Minnesota Government Data Practices Act and other relevant laws and regulations.

VII. Procedures and Instructions

Responses: Provide six copies of your response in hard copy. Include a name, title, address, telephone number and email address of whom to contact in the event there are questions regarding your submission. Sessions may be scheduled for all or some of the responders to permit further questions for selected responses. Responses are requested to be submitted by Jan. 30, 2015.

Respondents are responsible for all costs associated with the preparation and submission of responses to this RFI. All submissions, questions, concerns or communication regarding this RFI should be addressed to or emailed to:

Steve Vonderharr, Planning Director
Minnesota Department of Human Services
Mailing Address: P.O. Box 64943, Saint Paul, MN 55164-0943
Delivery Address: 444 Lafayette Rd. N., Saint Paul, MN 55155
E-mail: steve.vonderharr@state.mn.us

VIII. YARH data summary

A. Data before YARH

Before the YARH planning grant, the triennial study on homelessness conducted by Wilder Research provided nearly all of the data Minnesota had about the intersection of homelessness and foster care. Wilder Research's "2012 Statewide Homeless Study in Minnesota," identified a total of 1,151 Minnesota youth (ages 12-21) who were homeless on the one-day count in October 2012. Of these youth, 58 percent had experienced a placement in settings such as foster care, group homes, detention facility or treatment centers. Thirty-five percent of homeless youth stated that they were in a foster home at one point in their life. The Wilder Research data included information about these youth related to placement type, health status, history of maltreatment, and several issues related to housing stability.

B. YARH data on youth in foster care

The YARH planning grant has built upon this knowledge for youth ages 14 to 21 in foster care (populations One and Two referenced above) by matching the Social Service Information System (SSIS) records of more than 5,000 foster youth ages 14 to 21 (with at least 30 consecutive days in foster care) with Minnesota's Homeless Management Information System (HMIS). See Attachment A for full report.

In brief, the results indicate a statewide rate of homelessness for foster youth of 20 percent. This rate is viewed as an undercount since many shelters and homeless programs do not report data in HMIS. The analysis does include the non-HMIS reporting shelters in Hennepin County. Regression analysis indicated a greater proportion of youth with the following characteristics experienced homelessness as compared to their counterparts:

- Youth who were members of families receiving financial support.
- Youth placed in out-of-home care initially due to neglect.
- MFIP applicants.
- Youth who did not achieve permanency (e.g., reunified with parents, adopted).
- African American and American Indian (in comparison to Caucasian youth).
- Female youth.
- Youth with many placement moves. Homeless youth had a higher average number of placement moves (M = 9.3 locations), compared to non-homeless youth (M = 5.9).

Regression analysis also indicated:

- The greater proportion of females experiencing homelessness was much more prominent among African American and American Indian youth than Caucasian youth.
- Male youth experienced a slightly greater average number of homeless episodes compared to female youth, and were more likely to enter emergency shelters. In contrast, females experience more chronic episodes of homelessness; female youth's total average time spent homeless and the average length of their homeless episodes were much longer than male youth. Twice as many female youth than male youth experienced homelessness for more than six months.

C. YARH/Wilder Research data on homeless youth with a history of foster care

For youth in population Three, Wilder Research staff analyzed survey data to determine the attributes of homeless youth with a history of foster care in comparison to homeless youth who had not experienced foster care. This analysis found many statistically significant differences between the two groups. These findings indicate that homeless youth with a history of foster care, in comparison to homeless youth without foster care experience, were:

- Less likely to have grown up living (mainly) with biological parents or blended family (0-16)
- Less likely to have their children with them if they were parents
- More likely to have had an IEP or received special education when in school
- More likely to have a serious mental health issue, substance abuse disorder, or chronic physical health condition
- More likely to have experienced neglect, physical or sexual abuse as a child
- More likely to have a criminal history, or experienced incarceration
- More likely to have been homeless as a minor (<18).

D. YARH data from Key Informants and Youth Focus Groups

The YARH planning team conducted five youth focus groups with a total of 30 youth as well as 15 key informant interviews. The purpose of this qualitative research was to deepen the YARH Planning Team's understanding of youth at risk of homelessness and homeless youth. See Attachment B for draft report.

Findings illuminate several similarities and differences among the perspectives of key informants and youth focus group participants. Firstly, youth participants and key informants both highlighted how difficult it is for youth at-risk of homelessness to engage in trusting, long-term relationships (permanent connections). Secondly, youth believe a main cause of youth homelessness is youth not having support from adults, whereas key informants most frequently named trauma, mental health and youth having trouble creating permanent connections as the causes. Thirdly, key informants did not mention foster parents' role in youth moving frequently from placement to placement, whereas youth saw quality foster care as a main factor. Lastly, youth and key informants agreed that youth who move frequently are likely to have challenging behaviors and difficulty forming relationships.

DRAFT - Youth At-Risk for Homelessness: Key Informant and Youth Focus Group Summary 2014

Introduction

The Improve Group is an independent research, evaluation and planning firm located in St. Paul, Minnesota with the mission to help organizations deliver effective services. The Improve Group was commissioned to conduct a portion of the needs assessment, which includes both key informant interviews and focus groups, to assist in the planning for the Youth at Risk for Homelessness (YARH) grant.

Perspectives from homeless youth and youth at risk of homelessness

Who did we reach? Five focus groups were conducted through organizations working with youth at risk of homelessness and homeless

youth. Two were conducted in Minneapolis, MN, one in Duluth, MN, one in Willmar, MN, and one in Rochester, MN. A total of thirty youth participated. Their demographic information is below.

Total Youth Focus Group Participants = 30

Gender		**Age**		**Race**		**Sexual Orientation**	
Female	21	16-18	15	Mixed Race	11	Straight	17
Male	8	19-21	11	African American/Black	7	Bisexual	8
		22-24	4	Caucasian/White	7	Gay	2
						Other	1

83 percnt of the youth participants had been diagnosed with mental health needs. Of the youth with a mental health diagnosis, nearly all said they had depression, many had anxiety and nine had PTSD. Additionally, 83 percent said they did not have a tendency to overuse substances, and seven participants said they had a criminal history.

> I feel like we are looking for that love we didn't get from our parents.
> -Focus group participant 1
> I disagree with that! My whole thing was going back to my mom's house. That was the great dream.
> -Focus group participant 2

Youth believe the main culprits of homelessness are a lack of support from adults and youth not taking advantage of resources. Youth focus group participants named the lack of supportive relationships with adults (15)[1] as a main cause of homelessness. The type of relationship they said was lacking varied. Some said it was not having a supportive case manager (3) and others said it was not having a "caring" foster parent or biological parent (2). Participants also think youth not taking advantage of services is a main cause of homelessness (15). They explained that youth who are less likely to experience homelessness are those who use resources and vice versa. They said some youth are not open to receiving supports (5) and others simply do not know about available services (3). Additional frequently mentioned causes of homelessness were: a lack of county resources, like housing (4), other peoples' behaviors, like substance abuse, as well as trauma and trust issues (3).

Youth move from placement to placement because of the youths' behavior, the comfort youth find in a "life on the move", and sometimes their perceived low quality of foster care. Research shows youth who have many placements are more likely to be homeless.[2] Partici-

> You get comfortable with having to adapt, just waiting for something bad to happen.
> You keep your bags packed and under the bed.
> -Focus group participant

pants in the focus groups acknowledged youths' role in moving frequently (14). One common explanation was youths' troublesome behaviors (5). Participants explained that some youth "sabotage" relationships with foster parents, do not want to follow the rules of the house, and test people to see how much they will put up with (2). Youth indicated another main reason for moving often is that some prefer to constantly be on the move (5). They explained it is a familiar pattern and they fear staying in one place too long.

Additionally, focus group participants state that the quality of foster care is another reason for frequent moves (12). They explained that they believe some foster parents are only in it for money (3), or are abusive (2) or that their relationships with them are not very positive (3). Additional critiques of foster care quality included foster parents not being well-trained, not loving them, not being comfortable with them, not treating them fairly, and not caring about them.

Youth who are regularly on the move lose relationships and many lose trust in people altogether. Focus group participants discussed the consequences of moving frequently, and cited the loss of relationships with friends and family as a negative result of following this path (4). They also identified losing trust in people as a key negative consequence of moving (7). Some youth said they simply "lose trust" while others elaborated, stating their walls got bigger, they felt scared people would hurt them, and that they did not know how to trust. Youth get some positive things out of moving too – they said their network of support expands and they develop the ability to adapt to their surroundings.

[1] Number of mentions across focus groups

[1] Minnesota Department of Human Services

3 and 4 Wilder Research, 2012 Statewide Homeless Study in Minnesota

Some youth find stable, long-term homes while in foster care (called "reaching permanency") but later experience homelessness.[3] Youth explained it is often likely due to a learned mindset that they finding comfort in moving around (6). They also linked being homeless to not having enough money (5) or a rental history (2), and unaddressed, ongoing problems in the home of their biological parents (4).

Case management, family members, and peer support groups are the supports most helpful in preventing homelessness. When asked which supports are most helpful in preventing homelessness, ten participants selected case management, 8 said family members, 6 chose peer support groups, and five said supports in school, life skills training, therapy, and employment services.

Youth have mixed opinions on the effectiveness of extended foster care. Youth said extended foster care supports independence and contributes to stability (7), as it helps prevent eviction, creates opportunity to accrue savings, and familiarizes youth with being in a stable living environment. Youth also shared many ways extended foster care should be improved (8). Ideas ranged from increasing its publicity, since many people do not know about it, to changing the name to something less off-putting, to combining the program with therapy (2). Two people stated it is not for everyone, as some people are less ready for that level of independence than others.

Most homeless youth have an adult in their lives that they trust.[4] When asked to describe the kinds of adults in their lives, the responses were wide-ranging; teachers (3), county social workers (3), older siblings, and school counselors (2) are examples.

Perspectives from providers, program staff and policy-makers

Who did we reach? Key informants came from a wide variety of backgrounds focused on preventing and reducing youth homelessness. Seventeen key informants contributed their perspectives; ten from the nonprofit sector, five from the government sector, and two from the Twin Cities public schools. Some work in Minnesota state policy, others are program managers and directors at nonprofit organizations. Many had experience providing direct services to homeless youth or youth at-risk of homelessness. Interviewees were selected based on their ability to speak to the topic areas that our project has explored – Social-Emotional Wellbeing, Stable Housing, Education and Employment, and Permanent Connections.

Youth currently experiencing homelessness is largely compromised of those who have experienced trauma and/or mental health issues, as well as parenting youth. Each of these characteristics was identified by three different key informants as being common among the homeless youth population. Informants go on to explain that youth commonly have a background of instability, creating their experience with trauma and mental health issues.

> **When we replace relationships with people with a system, we perpetuate their homelessness.**
> - Co-Executive Officer of a local nonprofit organization

Youth experiencing homelessness have had experiences that limit their ability to access and create permanent connections. Mental health issues create an environment in which youth are unable to build healthy relationships, creating a lack of connections. Three out of five of the key informants who discussed this issue stated that traumatic experiences and mental health issues have led to this inability to form relationships. High mobility was also identified as a condition that leads to mental health issues[5] and lack of education (4).

Within the current foster care system, those most at-risk of homelessness are parenting youth and African Americans. Parenting youth experience unsafe shelters and long waiting lists for housing, while African Americans (5) are largely overrepresented in the homeless youth population. Males, specifically LGBTQ males or males that have been sexually exploited, are also a subpopulation of specific concern. Other demographic areas that were identified were youth in poverty and youth without access to or a lack of education (3).

> **There is a lot of fear. Being committed to a kid and saying "no matter where they go, I am going to follow." It takes one caring, stable adult, period.**
> - CEO of a local nonprofit organization

[5] Number of key informants

A high number of placements can lead to youths' inability to build relationships, trauma, and acting out. Six key informants stated that high numbers of placements lead to an inability to build relationships, often as a result of trauma experienced by the youth. Four key informants stated that youth act out due to the trauma they have experienced, leading to behavior that some foster parents are unable to handle.

Intervention strategies to reduce homelessness should use a multi-service approach to address the many aspects of youth's lives. A total of six key informants identified a multi-service approach as key, two stating that education services should be linked with housing services. Having a continuum of services that youth can move across was brought up by one key informant, while another suggested that education services be linked to employment services.

Key barriers to implementation are the requirements for program funding and the lack of coordination across entities. Because funding is limited, five key informants identified competition between organizations as a barrier to program implementation and coordination across entities.

Structural racism is seen as a contributor to programmatic and systematic flaws and gaps. Five key informants stated that structural racism has played a role in youth homelessness. Informants said that programs are often designed and staffed by "white people" (3). Others spoke of generational poverty, communities of color having higher poverty rates, and racial barriers between providers and participants.

Youth are currently unable to practice self-determination, contributing to their lack of success after exiting the system. Four key informants explained that youth are commonly kept out of decision making processes and have little control over their futures. The inability to practice self-determination leads youth to exiting the system without independent living skills and capabilities.

Similarities and differences: perspectives

Youth are removed from their parents care

Youth focus group participants and key informants alike highlighted how difficult it is for youth at-risk of homelessness to engage in trusting, long-term relationships (permanent connections).

Trauma is experienced during removal

Key informants were more likely to connect this difficulty directly to trauma and other mental health needs (6), whereas youth discussed the idea through the lens of lacking trust for others (7) and fear staying in one place for too long or finding comfort in a life on the move (11). Additionally, very few youth saw the difficulty in creating permanent connections as a factor contributing to homelessness when asked directly about causes at the onset of the focus groups. The idea did not fully emerge until participants discussed why people move from placement to placement later during the focus group.

Youth act out due to their trauma

Youth believe a main cause of youth homelessness is youth not having support from adults, whereas informants most frequently named trauma, mental health and youth having trouble creating permanent connections as the causes.

Behavior leads to multiple placement \ settings

Youth named the lack of support from adults as a main cause of homelessness (15). They gave examples such as not having a supportive case manager (3), and not having a "caring" foster parent or biological parent (2). These two causes were not identified by informants, who were more likely to attribute homelessness to the youth's mental state. This discrepancy illuminates the tendency many people have of putting the onus on "the other. "

Multiple placements and trauma create mental health needs

Informants did not mention foster parents' role in youth moving frequently from placement to placement, whereas youth saw quality foster care as a main contributing factor. Youth and informants agreed that youth who move frequently are likely to have challenging behaviors and difficulty forming relationships.

Youth are unable to build healthy relationships

Just as informants did not mention the role of the adult above, informants did not touch on foster parents playing a part in youth moving frequently. Youth explained that some foster parents are in it for the money and that their relationships are lacking (3). They also shared that some foster parents are not well-trained, do not love or care about them, and they do not treat them fairly. Youth (5) and informants (4) agreed that youths' behaviors contribute to frequent moves.

Youth and informants agree that fostering self-determination of youth is an important part of successful interventions. Fifteen youth said that youth who do not use services are more likely to be homeless than those who do. Although dependence on services is not a sustainable long-term solution, it is clear youth at-risk of homelessness need to use services to build a strong foundation. Five youth said that life skills training is one of the most helpful supports in preventing homelessness. Additionally, youth in one focus group agreed the most effective programs are those that teach youth how to be independent. However, there is work to be done in this area, as four key informants explained that currently youth are often kept out of decision making processes and have little control over their futures.

Conclusion

Key findings from interviews with informants and focus groups with youth provide context and depth around the risk factors that were identified from Wilder Research and Department of Human Services data. Additionally, interviews and focus groups highlighted the characteristics of interventions that would be effective in reducing youth homelessness. Interviews were especially useful in providing cutting edge research on Minnesota-based strategies for preventing and reducing youth homelessness. Focus groups provided a perspective that was otherwise missing from key informant data on the importance of targeting adults, in addition to youth, in interventions for youth at-risk of homelessness. The findings from this report, combined with other needs assessment data, will ensure the selection of a feasible and effective evidence-based (or evidence informed) homelessness prevention strategy for the State of Minnesota.

Child welfare youth with subsequent homeless experiences Analysis of a 2006 cohort of youth with social service placements

The Minnesota Department of Human Services, Child Safety and Permanency Division, which oversees services for child placements and for youth in foster care, is working to eliminate homelessness among foster youth. As one of 18 grantees receiving a two-year planning grant from the U.S. Department of Health and Human Services, Minnesota will leverage its expertise and history of innovative programs to improve outcomes for youth in foster care. Phase One of the planning process includes conducting research on child welfare youth and their experiences with homelessness.

To examine the first population, a cohort of youth ages 14 through 17 who were in social service placements of 30 days or more in Minnesota during 2006 was selected. Child welfare data, including demographics, foster care experiences, and maltreatment histories were obtained from the Social Service Information System (SSIS). Subsequent homeless experiences were determined by matching SSIS data with Minnesota's Homeless Management Information System (HMIS) and Hennepin County's homeless database for the years 2006-2012.

Research Question and Analyses

The primary research question concerned determining what factors are related to experiencing homelessness, including:

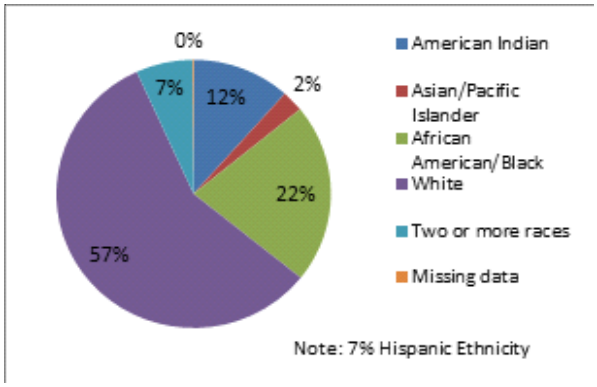
- **Demographics:** Race, gender, and receipt of financial support (e.g., Minnesota Family Investment Program, Medical Assistance).
- **Placements**: Age at entry, length of foster care experiences, number of placement moves, foster care settings, and extended foster care.
- **Youth's history**: Maltreatment, juvenile justice involvement and running away
- **Permanency status**: Achieved permanency upon exiting foster care.

Analysis involved a logistic regression with the above factors as the predictors and homelessness as the outcome.

Sample

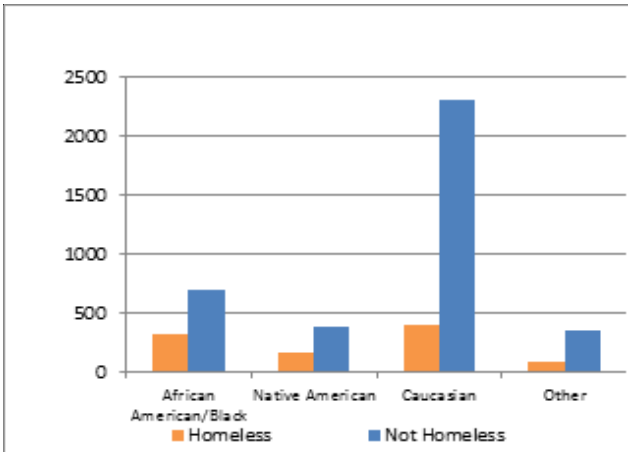
A total of 4,721 youth ages 14 -17 in foster care in 2006 were included in the sample. Of these youth, 965 matched HMIS and Hennepin County homeless data between 2006 and 2012, through age 21.

Fifty-six percent of the sample was male. Although the youth are predominantly White, African American and American Indian youth are disproportionately represented in the sample, compared to the Minnesota child population as a whole.

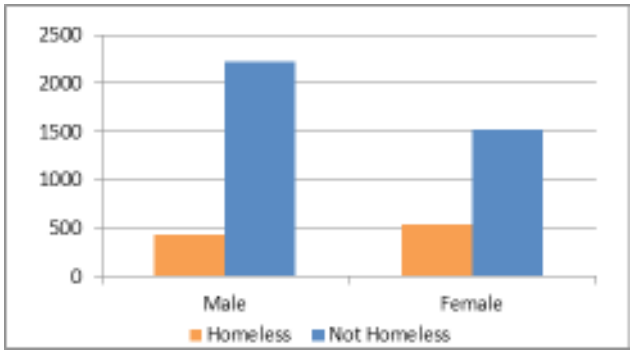


Results: Demographics/Background

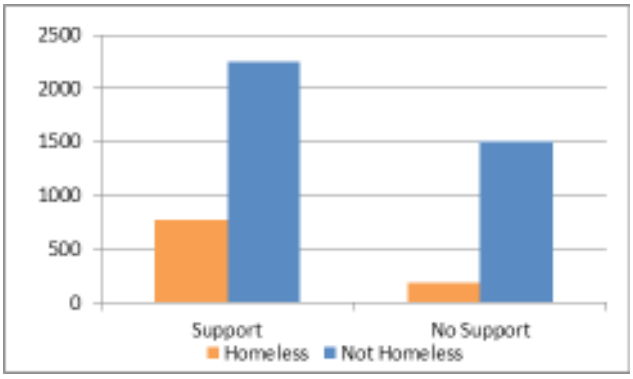
Experiencing homelessness significantly differed by race, gender and receipt of financial support. Overall, a greater proportion of African American and American Indian youth experienced homelessness in comparison to Caucasian youth.



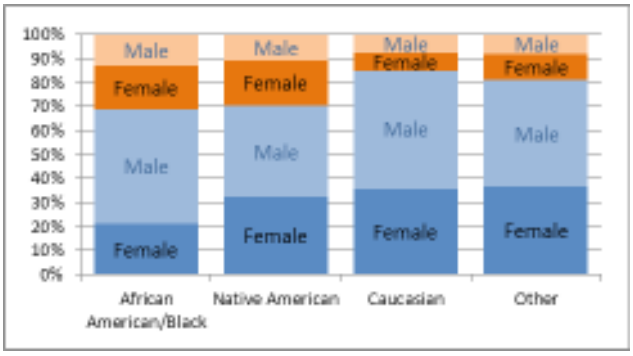
A greater proportion of female youth experienced homelessness in comparison to male youth.



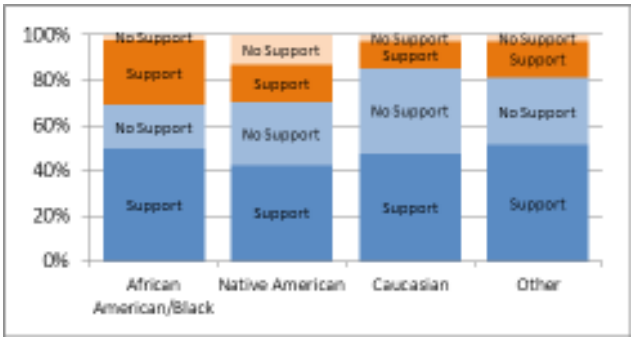
A greater proportion of youth receiving financial support experienced homelessness in comparison to youth who did not receive financial support.



However, both gender and financial support significantly interacted with race: The greater proportion of females experiencing homelessness was much more prominent among African American and American Indian youth than Caucasian youth.

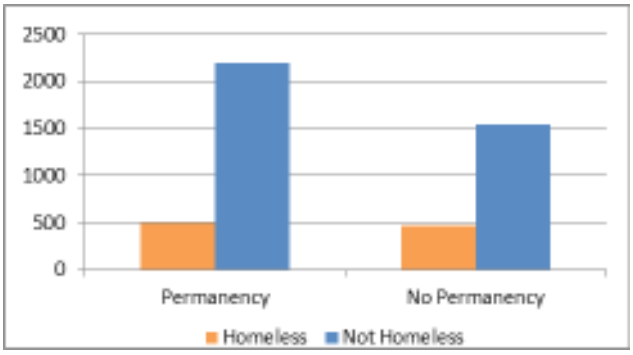


In contrast, the greater proportion of youth receiving financial support and experiencing homelessness was *not* observed among American Indian youth.



Placements, Youth's History and Permanency Status

Regarding youths' maltreatment, juvenile justice, running away histories, out-of-home placement experiences, and their permanency status, only two factors emerged as being significantly different among homeless and non-homeless youth: The number of placement locations ('settings') and whether youth achieved permanency. Homeless youth had a higher average number of placement moves ($M = 9.3$ locations), compared to non-homeless youth ($M = 5.9$). Significantly *fewer* youth who achieved permanency when exiting foster care (e.g., re-unified with parents, adopted) experienced homelessness compared to youth who did not achieve permanency (e.g., left care at age 18).



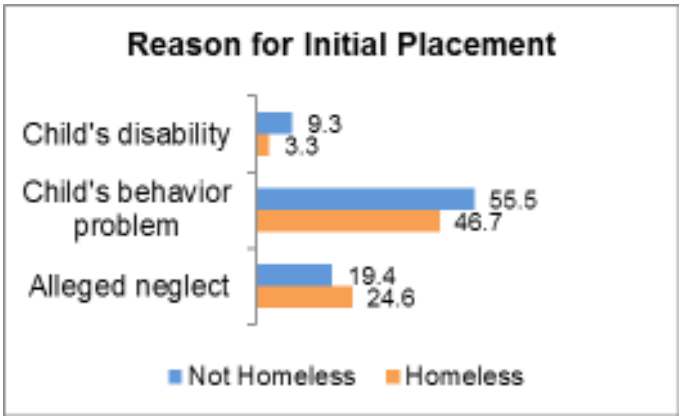
Although youths' maltreatment history and juvenile justice involvement were not significantly related to whether they experienced homelessness, it is of interest that, overall, for this sample of older foster youth, only about half had maltreatment histories, and about a third had histories of corrections placements. Surprisingly, extended foster care did not emerge as a potential protective factor for avoiding homelessness, as about the same percentage of youth with foster care beyond their 18th birthday experienced homelessness as those without extended foster care (22 percent versus 20 percent), respectively.

Additional Analyses

In response to feedback from the YARH Phase I Planning Team Subcommittees, additional exploratory analyses were conducted to examine in greater detail factors relating to youth's placement and homeless experiences.

As previously mentioned, youth experiencing homelessness had a higher average number of placement moves compared to youth not experiencing homelessness. Characteristics of their placement experiences were explored further to identify differences that might relate to whether they experienced homelessness.

Across groups, the most common reason for the initial placement in out-of-home care was child behavioral problems. This reason was more common among the non-homeless group compared to the homeless group. In contrast, homeless youth were more likely to have been placed in out-of-home care initially due to neglect than non-homeless youth.



Not surprisingly, achieving permanency was associated with much fewer placement moves than not achieving permanency, for both the homeless and non-homeless youth.

Reasons for leaving a placement location were also explored. The vast majority left placement because they left out-of-home care. As homeless youth experienced more changes in placements overall, it is not surprising that these youth experienced a greater percentage of reasons other than reunification.

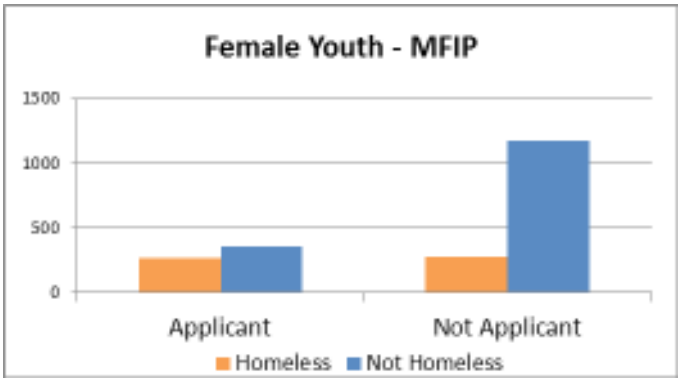
Percent of Group Who Experienced Reason for Move		
Top 5 Reasons for Moves	**Homeless**	**Not Homeless**
Left out-of-home care	90.6	91.1
Needs less restrictive	52.8	39.4
Needs more structure	48.0	35.8
Provider request	46.2	29.3
Runaway	33.3	18.6

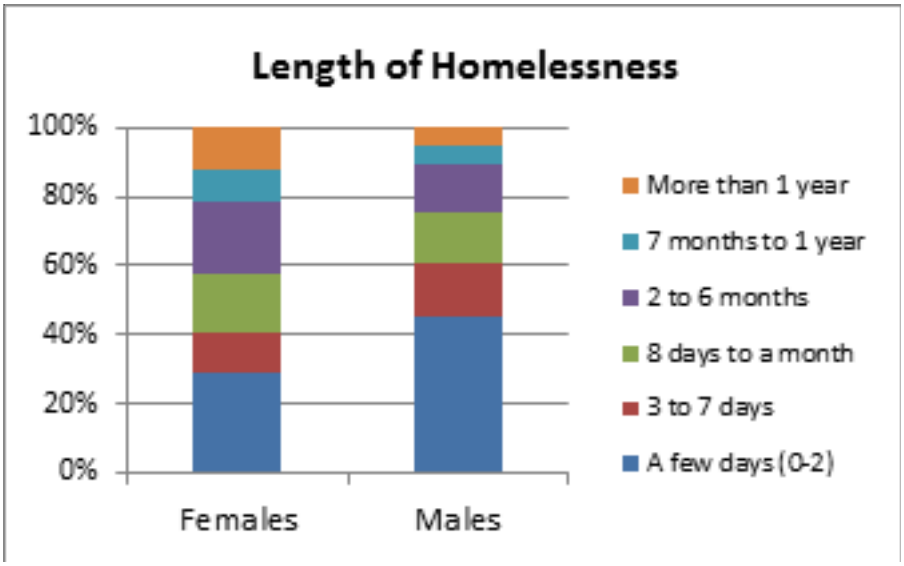
Surprisingly, youth with homeless experiences were in foster care past their 18th birthday for a longer average number of days than youth without homeless experiences. Caution is warranted in interpreting this finding; it is quite likely that additional factors contribute to the relationship between homelessness and extended foster care experience.

Notably, the last placement location youth exited from, including a corrections placement, and whether a youth was under state guardianship, were not related to experiencing homelessness.

Although data was not available regarding youths' parenting status, it was possible to examine whether a youth applied for Minnesota Family Investment Program (MFIP). Among female youth, those who were MFIP applicants were much more likely to have homeless experiences compared to females who were not MFIP applicants.

Regarding youth's homeless experiences, male youth experienced a slightly larger average number of homeless episodes compared to female youth, and were more likely to enter emergency shelters. In contrast, females experience more chronic episodes of homelessness: female youth's total average time spent homeless and the average length of their homeless episodes were much longer than for male youth. Twice as many female youth than male youth experienced homelessness for more than six months.





State Contracts

In addition to the following listing of state contracts, readers are advised to check the Statewide Integrated Financial Tools (SWIFT) Supplier Portal at: *http://supplier.swift.state.mn.us as well as the Office of Grants Management (OGM) at: http://www.grants.state.mn.us/public/*

Informal Solicitations: Informal soliciations for professional/technical (consultant) contracts valued at over $5,000 through $50,000, may either be advertised in the Supplier Portal (see link above) or posted on the Department of Administration, Materials Management Division's (MMD) Web site at: *http://www.mmd.admin.state.mn.us/solicitations.htm*.

Formal Solicitations: Department of Administration procedures require that formal soliciations (announcements for contracts with an estimated value over $50,000) for professional/technical contracts must be advertised in the SWIFT Supplier Portal or alternatively, in the *Minnesota State Register* if the procuments is not being conducted in the SWFT system.

Minnesota State Colleges and Universities (MnSCU)

Anoka-Ramsey Community College

Request Proposals for Printing and Mail Preparation for the Web Site Redesign

NOTICE IS HEARBY GIVEN that Anoka-Ramsey Community College will receive proposals for redesigning the college Website.

Specifications are available on the website ***http://www.anokaramsey.edu/it/proposal.cfm*** . Copies of the specifications can also be obtained from Mirela Gluhic at **phone:** (763) 433-1338, or **e--mail:** ***mirela.gluhic@anokaramsey.edu***.

Sealed proposals must be received by the Business Office of Anoka-Ramsey Community College, 11200 Mississippi Blvd., Coon Rapids, MN 55433 by 3:00 p.m. on January 19, 2015.

Bid openings will be in the Mississippi Room of Anoka-Ramsey Community College at 3 p.m. on January 19, 2015.

Anoka-Ramsey Community College reserves the right to reject any or all proposals, or portions thereof, or to waive any irregularities or informalities, in proposals received.

Minnesota State Colleges and Universities (MnSCU)

Board of Trustees

Notice of Request for Qualifications (RFQ) for Job Order Contracting Construction Master List of Contractors

The State of Minnesota, acting through it's Board of Trustees of the Minnesota State Colleges and Universities ("MnSCU"), requests qualifications of Minnesota registered contractors providing commercial general contracting, plumbing, HVAC, fire suppression, electrical work or low voltage services to assist MnSCU in construction projects as needed for up to a five-year period. Projects will vary in scope and may involve new construction or renovations, which includes, but is not limited to buildings, infrastructure, utilities and site work.

The Request for Qualifications (RFQ) and associated documents can be found on line at:
http://www.finance.mnscu.edu/facilities/design-construction/index.html, click on "Announcements."

Any questions should be addressed in the manner as noted in the RFQ to:

Barry Schaub
Minnesota State Colleges and Universities
Phone: (651) 201- 1787, or
E-mail: ***barry.schaub@so.mnscu.edu***

This is the only person to answer questions by potential responders regarding this RFQ.

Submittals must be received NOT later than January 20, 2015, by 12:00 Noon, Central time. Late responses will NOT be considered. Faxed or e-mailed submittals will NOT be considered.

MnSCU reserves the right to cancel this solicitation. The RFQ is not a guarantee of work and does not obligate MnSCU to award any contracts. MnSCU reserves the right to discontinue the use or cancel all or any part of this Job Order Contracting Construction Services Program if it is determined to be in its best interest. All expenses incurred in responding to this notice are solely the responsibility of the responder.

Minnesota State Colleges and Universities (MnSCU)

Board of Trustees

Request for Qualifications (RFQ) for Construction Manager at Risk (Cm@R) Services for Winona State University's Education Village Project, Winona, Minnesota

NOTICE IS HEREBY GIVEN that the State of Minnesota, acting through its Board of Trustees of the Minnesota State Colleges and Universities, on behalf of Winona State University (WSU), is soliciting applications for Construction Manager at Risk (Cm@R) Services for the design and construction of the Education Village Project. The services will proceed through all phases of design (schematic design, design development and construction documentation) and will proceed with construction phase. Construction cost is anticipated to be approximately $22,000,000.

To review the complete RFQ documents see: ***http://finance.mnscu.edu/facilities/design-construction/announcements/***

There will be a Mandatory Information Meeting/Site Visit on Friday, January 9, 2015 at 9 am CST in the New Center West conference room A & B, Winona State University, 263 West Mark Street, Winona, MN 55987.

A question and answer period is specified and answers will be posted by addendum. Questions must be e-mailed only to Mike Pieper, e-mail: ***mpieper@winona.edu*** no later than 4:00 pm CST on Friday, January 9, 2015. Answers will be posted via Addendum no later than 4:00 pm CST on Tuesday, January 13, 2015.

Responses must be received in the building and at the room as noted in the RFQ document no later than Tuesday, January 20, 2015 at 3:00 pm CST.

Minnesota State Colleges and Universities (MnSCU)

Request for Proposals for System Office Federal and State Legislative Services

NOTICE IS HEREBY GIVEN that the Minnesota State Colleges and Universities is seeking proposals from eligible parties to award one (1) contract of a minimum of 180 calendar days to provide Federal and State legislative services.

The RFP can be viewed by visiting the Minnesota State Colleges and Universities Facilities web site, copy and paste this link:
http://www.finance.mnscu.edu/contracts-purchasing/purchasing/rfp-rfb-rfi/index.html

The contact for this proposal is:

Bernie Omann
Minnesota State Colleges and Universities
E-mail: ***Bernie.omann@so.mnscu.edu***

This is the only person designated to answer questions by potential responders regarding this request.

All questions must be in writing. The deadline for submittals is no later than 12:00 p.m., Central Time, January 12, 2015. Late proposals will NOT be considered.

This request does not obligate the State to complete the work contemplated in this notice. The State reserves the right to cancel this solicitation. All expenses incurred in responding to this notice are solely the responsibility of the responder.

Minnesota State Colleges and Universities (MnSCU)

Minnesota State University Moorhead

Notice of Request for Qualifications for Artist Selection for the Livingston Lord Library and Technology Center, Art Installation

NOTICE IS HEREBY GIVEN that the State of Minnesota, acting through its Board of Trustees of the Minnesota State Colleges and Universities, on behalf of Minnesota State University Moorhead (MSUM), through the MSUM Library and Information Technologies departments, is soliciting proposals from interested, qualified artists for the above referenced project.

A full Request for Qualifications is available on the Minnesota State Colleges and Universities website,
http://www.finance.mnscu.edu/facilities/index.html.

Click on "Announcements." For any questions, contact Brittney Goodman, Executive Director, Library Services at **phone:** (218) 477-2923, or **e-mail:** ***brittney.goodman@mnstate.edu***.

Qualifications as outlined in the full RFQ must be submitted to the following **e-mail** address: ***libraryart@mnstate.edu*** not later than 5:00 pm February 6, 2015. Late responses will not be considered.

Minnesota State Colleges and Universities is not obligated to complete the proposed project and reserves the right to cancel the solicitation if it is considered to be in its best interest.

Minnesota Department of Transportation (Mn/DOT)

Engineering Services Division

Notice of Potential Availability of Contracting Opportunities for a Variety of Highway Related Technical Activities ("Consultant Pre-Qualification Program")

This document is available in alternative formats for persons with disabilities by calling Kelly Arneson at (651) 366-4774; for persons who are hearing or speech impaired by calling Minnesota Relay Service at (800) 627-3529.

Mn/DOT, worked in conjunction with the Consultant Reform Committee, the American Council of Engineering Companies of Minnesota (ACEC/MN), and the Department of Administration, to develop the Consultant Pre-Qualification Program as a new method of consultant selection. The ultimate goal of the Pre-Qualification Program is to streamline the process of contracting for highway related professional/technical services. Mn/DOT awards most of its consultant contracts for highway-related technical activities using this method, however, Mn/DOT also reserves the right to use Request for Proposal (RFP) or other selection processes for particular projects.

Nothing in this solicitation requires Mn/DOT to use the Consultant Pre-Qualification Program.

Mn/DOT is currently requesting applications from consultants. Refer to Mn/DOT's Consultant Services web site, indicated below, to expenses are incurred in responding to this notice will be borne by the responder. Response to this notice becomes public information under the Minnesota Government Data Practices.

State Contracts

Consultant Pre-Qualification Program information, application requirements and applications forms are available on Mn/DOT's Consultant Services web site at: ***http://www.dot.state.mn.us/consult.***

Send completed application material to:

Kelly Arneson
Consultant Services
Office of Technical Support
Minnesota Department of Transportation
395 John Ireland Blvd. - Mail Stop 680
St. Paul, MN 55155

Minnesota Department of Transportation (Mn/DOT)

Engineering Services Division

Notice Concerning Professional/Technical Contract Opportunities and Taxpayers' Transportation Accountability Act Notices

NOTICE TO ALL: The Minnesota Department of Transportation (Mn/DOT) is now placing additional public notices for professional/technical contract opportunities on Mn/DOT's Consultant Services **website** at: ***www.dot.state.mn.us/consult***

New Public notices may be added to the website on a daily basis and be available for the time period as indicated within the public notice. Mn/DOT is also posting notices as required by the Taxpayers' Transportation Accountability Act on the above referenced website.

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 *State 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 commodity, project or tasks; 4) cost estimate; and 5) final submission date of completed contract proposal. Allow at least three weeks from publication date (four weeks from the date article is submitted for publication). Surveys show that subscribers are interested in hearing about contracts for estimates as low as $1,000. Contact editor for futher details.

Besides the following listing, readers are advised to check: *http://www.mmd.admin.state.mn.us/solicitations.htm* as well as the Office of Grants Management (OGM) at: *http://www.grants.state.mn.us/public/.*

Bassett Creek Watershed Management Commission

Request for Letters of Interest Proposals—Professional Services for Legal, Engineering and Technical Consulting Services

NOTICE IS HEREBY GIVEN that pursuant to *Minnesota Statues Annotated* 103B.227, Subd. 5, the Bassett Creek Watershed Management Commission (BCWMC) hereby solicits Letters of Interest Proposals for legal, engineering and technical consulting services

for fiscal years 2015 and 2016. The BCWMC's 2015 operating budget is $626,700 and its annual capital projects budget is approximately $1,000,000.

Letters should include a brief description of the company and the experience of the individual(s) proposing to perform services for the Commission. The Commission will review the letters and reserves to itself the right to take such action as it deems in its best interests. All Letters of Interest Proposals shall be submitted electronically on or before January 30, 2015, to:

Administrator Laura Jester
Subject: BCWMC – Letter of Interest Proposal
E-mail: ***Laura.jester@keystonewaters.com***
(NO CALLS)

Metropolitan Airports Commission (MAC)

Minneapolis-Saint Paul International Airport

Notice of Call for Bids for Parking Ramp Railing Refinishing 2015 (P1)

MAC Contract No.: **106-3-504**
Bids Close At: **2:00 p.m., Tuesday, January 13, 2015**

Notice to Contractors: Sealed Bid Proposals for the project listed above will be received by the MAC, a public corporation, at the office thereof located at 6040 - 28th Avenue South, Minneapolis, Minnesota 55450, until the date and hour indicated. The project provides for the repainting of weathered metal railings on the parking ramps at Terminal 1-Lindbergh. The work includes removal/reinstallation of the existing railing, installation/removal of temporary fencing, and blasting and painting metal railing.

Targeted Group Businesses (TGB): The goal of the MAC for the utilization of TGB on this project is 4%.

Bid Security: Each bid shall be accompanied by a "Bid Security" in the form of a certified check made payable to the MAC in the amount of not less than five percent (5%) of the total bid, or a surety bond in the same amount, running to the MAC, with the surety company thereon duly authorized to do business in the State of Minnesota.

Availability of Bidding Documents: Bidding documents are on file for inspection at the office of Kimley-Horn and Associates, Inc., at the Minnesota Builders Exchange; McGraw-Hill Construction; and NAMC-UM Plan Room. Bidders desiring bidding documents may secure a complete set from: Kimley-Horn and Associates, Inc.; 2550 University Avenue West, Suite 238N; St. Paul, MN, 55114; phone: (651) 645-4197. Make checks payable to: Kimley-Horn and Associates, Inc. Deposit per set (refundable): $100. Requests for mailing sets will require a separate, non-refundable $15.00 check for mailing charges. Deposit will be refunded upon return of bidding documents in good condition within 10 days of opening of bids.

MAC Internet Access of Additional Information: A comprehensive Notice of Call for Bids for this project will be available on December9, 2014, at MAC's web address of ***http://www.metroairports.org/Airport-Authority/Business-Opportunities/Solicitations.aspx*** (construction bids.)

Minnesota's Bookstore

Admin Minnesota
DEPARTMENT OF ADMINISTRATION

Several convenient ways to order:

- **Retail store** Open 8 a.m. - 5 p.m. Monday - Friday, 660 Olive Street, St. Paul
- **Phone** (credit cards): 8 a.m. - 5 p.m. Monday - Friday, 651.297.3000 (Twin Cities) or 1.800.657.3757 (nationwide toll-free)
- **On-line orders**: www.minnesotasbookstore.com
- **Minnesota Relay Service**: 8 a.m. - 5 p.m. Monday - Friday, 1.800.627.3529 (nationwide toll-free)
- **Fax** (credit cards): 651.215.5733 (fax line available 24 hours/day)
- **Mail orders**: Orders can be sent to Minnesota's Bookstore, 660 Olive Street, St. Paul, MN 55155

PREPAYMENT REQUIRED. ***Prices and availability subject to change.***
Fax and phone orders: Credit card purchases ONLY (American Express/Discover/MasterCard/VISA). Please allow 1-2 weeks for delivery. Mail orders: Complete order blank and send to address above. Enclose check or include credit card information. Please allow 4-6 weeks for delivery. Please make checks payable to "Minnesota's Bookstore." A $20.00 fee will be charged for returned checks.

Stock No.	Title	Quantity	Unit Price	Total

Send my order to:

Company

Name

Street Address *(Not deliverable to P.O. boxes)*

City ( ) State Zip

Daytime phone *(In case we have a question about your order)*

Shipping Charges

If Product Subtotal is:	*Please Add:*
Up to $15.00	$ 5.00
$15.01-$25.00	$ 6.00
$25.01-$50.00	$ 9.00
$50.01-$100.00	$ 14.00
$100.01-$1,000	$ 17.00*

*$17 to an address in MN, WI, SD, ND, IA. If delivered to an address in other states, Canada or internationally, we will contact you if there are additional charges.

More than $1,000 Call

Product Subtotal _____

Shipping _____

Subtotal _____

Sales tax _____

(6.875% sales tax if shipped to MN address, 7.625% if shipped to St. Paul address. 7.125% MN transit tax or other local sales tax if applicable)

TOTAL _____

Credit card number: _____

Expiration date: _____ Signature: _____

If tax exempt, please provide ES number or completed exemption form.
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July 2009