

Introductory Comments:

“Licensee” denotes users of radioactive material and “registrant” denotes users of electronically-produced ionizing radiation. References to “registrant” were removed from rules dealing only with radioactive material. References to “licensee” were removed from rules dealing only with electronically-produced ionizing radiation.

Boxes containing information are not part of the draft rules and are included to provide additional information for the reviewer.

Subpart J - Precautionary Procedures

Sec. Rule D.1901 - Caution Signs.

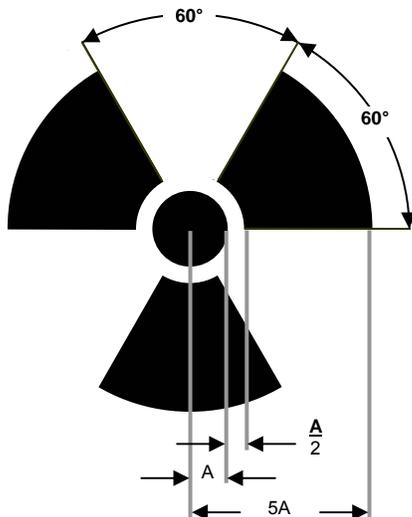
a. ~~Standard Radiation Symbol. Unless Except as provided in this rule or~~ otherwise authorized by the ~~Agency department~~, the ~~licensee or registrant shall use the radiation~~ symbol prescribed by this ~~section shall use the colors magenta, or purple, or black on yellow background. The symbol prescribed is the rule with the~~ three-bladed design as follows:

i. The blades and interior circle shall be magenta, purple, or black on a yellow background; or

b. ~~Exception to Color Requirements for Standard Radiation Symbol. Notwithstanding the requirements of D.1901a., licensees or registrants are authorized to label sources, source holders, or device components containing sources of radiation that are subjected to high temperatures, with conspicuously etched or stamped radiation caution symbols and without a color requirement.~~

ii. Conspicuously cast, etched, or stamped without regard to a color requirement on sources, source holders, or device components containing sources that are subject to extreme environmental conditions that would cause the color to deteriorate.

The state of Washington uses i and ii above.



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~~eb. Additional Information on Signs and Labels.~~ In addition to the contents of signs and labels prescribed in Part D, the required in this part, a licensee or registrant may provide, on or near the required signs and labels, additional information, ~~as appropriate,~~ to make individuals aware of potential radiation exposures and to minimize ~~the those~~ exposures.

Sec. Rule D.1902 - Posting Requirements.

- a. ~~Posting of Radiation Areas.~~ The licensee or registrant shall post each radiation area with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, RADIATION AREA".
- b. ~~Posting of High Radiation Areas.~~ The licensee or registrant shall post each high radiation area with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, HIGH RADIATION AREA" or "DANGER, HIGH RADIATION AREA".
- c. ~~Posting of Very High Radiation Areas.~~ The licensee or registrant shall post each very high radiation area with a conspicuous sign or signs bearing the radiation symbol and the words "GRAVE DANGER, ~~[not required to use the word GRAVE, this may be omitted],~~ VERY HIGH RADIATION AREA".
- d. ~~Posting of Airborne Radioactivity Areas.~~ The licensee ~~or registrant~~ shall post each airborne radioactivity area with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, AIRBORNE RADIOACTIVITY AREA" or "DANGER, AIRBORNE RADIOACTIVITY AREA".
- e. ~~Posting of Areas or Rooms in which Licensed or Registered Material is Used or Stored. If an area or room contains more than ten times the quantity of licensed radioactive material specified in Appendix C in use or in storage,~~ the licensee or registrant shall post each the area or room in which there is used or stored an amount of licensed or registered material exceeding 10 times the quantity of such material specified in Appendix C with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, RADIOACTIVE MATERIAL(S)" or "DANGER, RADIOACTIVE MATERIAL(S)".
- f. The licensee shall post access openings to manufacturing or process equipment such as tanks and vessels on or in which radiation sources are mounted, if a person could gain access to the radiation beam and receive a dose to any part of their body greater than the applicable limits for individuals in rules D.1201 through D.1302. The posting must include a conspicuous sign or signs bearing the radiation symbol and warning of the hazard.

Individuals have entered large diameter pipes and traversed along them until they enter an area where a radioactive gauge is attached to the system. This rule warns individuals to make sure the source is in a safe position before entering the pipe system. Because of the distance from the gauge, it is not practical to interlock the opening. The NRC has not commented on this Ohio subrule nor required them to remove it from their rules.

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Because 10 CFR 20.1903 is more concise than the version in the Suggested State Regulations, the following draft rule is based on it instead of the SSR version. Sec. D.1903 is presented in a box at the end of this draft rule.

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69 **10-CFR-20. Rule D.1903 - Exceptions to ~~p~~Posting ~~r~~Requirements.**
70

71 ~~a-~~ A licensee or registrant is not required to post caution signs pursuant to rule D.1902 in areas
72 or rooms ~~containing radioactive materials for periods of less than 8 hours, if each of the~~
73 ~~following conditions is met~~ in the following situations:
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75 a. The sources of radiation are in the room for periods of less than 8 hours and:
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77 i. The ~~materials~~ sources of radiation are constantly attended ~~during these periods~~ by an
78 individual who takes the precautions necessary to prevent the exposure of individuals to
79 radiation or radioactive materials ~~in excess of~~ above the limits ~~established~~ specified in
80 this part; and

81 ii. The area or room is ~~subject to~~ under the licensee's or registrant's control.
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84 b. ~~Rooms or other areas in hospitals that are~~ The area or room is occupied by patients ~~are not~~
85 ~~required to be posted with caution signs pursuant to §20.1902 provided that the patient who~~
86 ~~could be released from licensee control pursuant to §35.75 of this chapter~~ rule G.40.
87

88 c. A ~~room or area is not required to be posted with a caution sign because of the presence of a~~
89 ~~sealed source~~ is in the area or room and ~~provided~~ the radiation level at 30 centimeters from
90 the surface of the source container or housing does not exceed ~~0.005 rem (0.05 mSv)~~ 0.05
91 millisievert (5 millirem) per hour.
92

93 d. ~~Rooms in hospitals or clinics that are~~ The room is used for teletherapy ~~are exempt from the~~
94 ~~requirement to post caution signs under §20.1902 if~~ and:
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96 i. Access to the room is controlled pursuant to ~~40-CFR-35.615~~ rules G.75, X.6, or X.7; and
97

98 ii. ~~Personnel in attendance~~ Attending personnel take the necessary precautions to prevent
99 the inadvertent exposure of workers, other patients, and members of the public to
100 radiation ~~in excess of~~ above the limits ~~established~~ specified in this part.
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102 e. The area or room contains radiation machines used for diagnosis in the healing arts.
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INFORMATION

Rule G.40 Release of Individuals Containing Radioactive Drugs or Implants.

Rule G.75 Safety Precautions for Remote Afterloader Units, Teletherapy Units, and Gamma Stereotactic Radiosurgery Units.

Rule X.6 Therapeutic Radiation Machines of Less Than 500 kV.

Rule X.7 Therapeutic Radiation Machines - Photon Therapy Systems (500 kV and Above) and Electron Therapy Systems (500 keV and Above).

Suggested State Regulations Sec. D.1903 - provided for information only.

Sec. D.1903 - Exceptions to Posting Requirements.

- a. A licensee or registrant is not required to post caution signs in areas or rooms containing sources of radiation for periods of less than 8 hours, if each of the following conditions is met:
 - i. The sources of radiation are constantly attended during these periods by an individual who takes the precautions necessary to prevent the exposure of individuals to sources of radiation in excess of the limits established in Part D; and
 - ii. The area or room is subject to the licensee's or registrant's control.
- b. Rooms or other areas in hospitals that are occupied by patients are not required to be posted with caution signs pursuant to D.1902 provided that the patient could be released from confinement pursuant to [cite applicable Part G reference] of these regulations are met.
- c. Rooms or other areas in hospitals that are occupied by patients are not required to be posted with caution signs, provided that:
 - i. A patient being treated with a permanent implant could be released from confinement pursuant to [cite applicable Part G reference] of these regulations; or
 - ii. A patient being treated with a therapeutic radiopharmaceutical could be released from confinement pursuant to [cite applicable Part G reference] of these regulations.
- d. A room or area is not required to be posted with a caution sign because of the presence of a sealed source provided the radiation level at 30 centimeters from the surface of the sealed source container or housing does not exceed 0.05 millisievert (0.005 rem) per hour.
- e. A room or area is not required to be posted with a caution sign because of the presence of radiation machines used solely for diagnosis in the healing arts.
- f. Rooms in hospitals or clinics that are used for teletherapy are exempt from the requirement to post caution signs under D.1902 if:
 - i. Access to the room is controlled pursuant to [cite applicable Part G reference]; and
 - ii. Personnel in attendance take necessary precautions to prevent the inadvertent exposure of workers, other patients, and members of the public to radiation in excess of the limits established in this Part.

Subrule c. has been removed from the NRC regulations and the rules of many states.

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Sec. Rule D.1904 - Labeling Containers and Radiation Machines of Radioactive Material.

- a. The licensee ~~or registrant~~ shall ~~ensure~~ make sure that each container of licensed ~~or registered~~ material bears a durable, clearly visible label bearing with the radiation symbol and the words "CAUTION, RADIOACTIVE MATERIAL" or "DANGER, RADIOACTIVE MATERIAL". The label ~~shall~~ must also provide sufficient information, ~~such as the radionuclides present, an estimate of the quantity of radioactivity, the date for which the activity is estimated, radiation levels, kinds of materials, and mass enrichment,~~ to permit individuals handling or using the containers, or working in the vicinity of the containers, to take precautions to avoid or minimize exposures. As appropriate, the label information may include the radionuclides present, an estimate of the activity, the date for which the activity is estimated, a description of the contents, radiation levels, kinds of materials, and mass enrichment.
- b. ~~Each~~ Before disposing of an empty, uncontaminated container or moving a container to an unrestricted area, the licensee ~~or registrant~~ shall, ~~prior to removal or disposal of empty uncontaminated containers to unrestricted areas,~~ remove or deface the radioactive material

123 label or otherwise clearly ~~indicate~~ show that the container no longer contains radioactive
124 materials.

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126 **~~Sec. Rule D.1904a~~ - Labeling ~~Containers and~~ Radiation Machines.**

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128 e. Each registrant shall ~~ensure~~ make sure that each radiation machine is labeled in a
129 conspicuous manner ~~which that~~ cautions individuals that radiation is produced when ~~if the~~
130 machine is energized.

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132 **~~Sec. Rule D.1905~~ - Exemptions to Labeling Requirements.**

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134 A licensee ~~or registrant~~ is not required to label:

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136 a. ~~Containers~~ A container holding licensed ~~or-registered~~ radioactive material in quantities less
137 than the quantities listed in Appendix C; ~~or~~

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139 b. ~~Containers~~ A container holding licensed ~~or-registered~~ radioactive material in concentrations
140 less than those specified in Table III of Appendix B; ~~or~~

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142 c. ~~Containers~~ A container attended by an individual who takes the precautions necessary to
143 prevent the exposure of individuals to radiation or radioactive material in excess of above
144 the limits ~~established by Part D~~ specified in this part; ~~or~~

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146 d. ~~Containers when they are~~ A container in transport and packaged and labeled ~~in accordance~~
147 with according to the regulations of the U.S. Department of Transportation;~~2/ or~~

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149 e. ~~Containers that are~~ A container accessible only to individuals authorized to handle, ~~or~~ use
150 them, or ~~to~~ work in the vicinity of the containers, if a readily available written record identifies
151 the contents ~~of the container are identified to (these)(those) the~~ individuals by a readily
152 available written record. ~~Examples of c~~Containers of this type are include containers in
153 ~~locations such as~~ water-filled canals, storage vaults, or hot cells. A licensee shall keep Tthe
154 record ~~shall be retained~~ as long as the containers are in use used for the purpose indicated
155 written on the record; or

156

157 f. Installed manufacturing or process equipment, such as piping and tanks.

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159 ~~2/ Labeling of packages containing radioactive materials is required by the Department of~~
160 ~~Transportation if the amount and type of radioactive material exceeds the limits for an excepted~~
161 ~~quantity or article as defined and limited by Department of Transportation regulations 49 CFR~~
162 ~~173.403 (m) and (w) and 173.421-424.~~

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The following is included in 10 CFR 20.1905 but is not necessary in state rules.

(g) Containers holding licensed material (other than sealed sources that are either specifically or generally licensed) at a facility licensed under Parts 50 or 52 of this chapter, not including non-power reactors, that are within an area posted under the requirements in §20.1902 if the containers are:

(1) Conspicuously marked (such as by providing a system of color coding of containers) commensurate with the radiological hazard;

(2) Accessible only to individuals who have sufficient instruction to minimize radiation exposure while handling or working in the vicinity of the containers; and

(3) Subject to plant procedures to ensure they are appropriately labeled, as specified at §20.1904 before being removed from the posted area.

Sec. Rule D.1906 - Procedures for Receiving and Opening Packages.

- a. Each licensee ~~or registrant~~ who expects to receive a package containing quantities of radioactive material ~~in excess of~~ exceeding a Type A quantity, as defined in rule T.2 and Appendix A of ~~Part part~~ T of these ~~regulations rules~~, shall ~~make arrangements~~ arrange to receive:
- i. The package when the carrier offers it for delivery; or
 - ii. ~~The notification~~ Notification of the arrival of the package at the carrier's terminal and to take possession of the package expeditiously.

INFORMATION

Part T - Transportation of Radioactive Material

Rule T.2 - Definitions

"Type A quantity" means a quantity of radioactive material, the aggregate radioactivity of which does not exceed A1 for special form radioactive material or A2 for normal form radioactive material, where A1 and A2 are given in Appendix A or may be determined by procedures described in Appendix A.

- b. Upon receipt of a package containing radioactive material, a ~~Each~~ licensee ~~or registrant~~ shall:
- i. Monitor the external surfaces of a ~~labeled~~^{3/} package for removable radioactive contamination if the package has a Radioactive White I, Yellow II, or Yellow III label as specified in U.S. Department of Transportation regulations, 49 CFR 172.403 and 172.436 through 172.440 unless the package contains only radioactive material ~~in the form of~~ as a gas or in special form as defined in rule A.2 ~~of these regulations; and~~
 - ii. Monitor the external surfaces of a ~~labeled~~^{3/} package for radiation levels if the package has a Radioactive White I, Yellow II, or Yellow III label as specified in U.S. Department of Transportation regulations, 49 CFR 172.403 and 172.436 through 172.440 unless the package contains quantities of radioactive material that are less than or equal to the Type A quantity, as defined in rule T.2 and Appendix A of ~~Part part~~ T of these ~~regulations rules~~; and
 - iii. Monitor all packages known to contain radioactive material for radioactive contamination and radiation levels if there is evidence of package degradation ~~of package integrity~~, such as ~~packages that are~~ a crushed, wet, or damaged package.

~~3/ Labeled means labeled with a Radioactive White I, Yellow II, or Yellow III label as specified in Department of Transportation regulations 49 CFR 172.403 and 172.436-440.~~

Deleted footnote.

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- 202 c. The licensee ~~or registrant~~ shall ~~perform the monitoring monitor as~~ required by ~~D.1906b.~~
203 ~~subrule b. of this rule or~~ as soon as ~~practicable practical~~ after receipt of the package, but not
204 later than 3 hours after the package is received at the licensee's ~~or registrant's~~ facility if it is
205 received during the licensee's ~~or registrant's~~ normal working hours, ~~or if there is evidence of~~
206 ~~degradation of package integrity, such as a package that is crushed, wet, or damaged.~~ If a
207 package is received after ~~normal~~ working hours ~~and has no evidence of degradation of~~
208 ~~package integrity~~, the package shall be monitored no later than 3 hours from the beginning
209 of the next working day.
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10 CFR 20.1906(c) reads "The licensee shall perform the monitoring required by paragraph (b) of this section as soon as practical after receipt of the package, but not later than 3 hours after the package is received at the licensee's facility if it is received during the licensee's normal working hours, or not later than 3 hours from the beginning of the next working day if it is received after working hours.

- 211
212 d. The licensee ~~or registrant~~ shall immediately notify the final delivery carrier and ~~the~~
213 ~~department;~~ by telephone ~~and either telegram, mailgram, or facsimile, the Agency~~
214 ~~(telephone number: [to be added later] - daytime; [to be added later] - after hours) when:~~
215
216 i. Removable radioactive surface contamination exceeds the limits of ~~subrule~~ T.15h. ~~of~~
217 ~~these regulations;~~ or
218
219 ii. External radiation levels exceed the limits of ~~subrules~~ T.15i. and j. ~~of these regulations.~~
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10 CFR 20.1906 text:

- (d) The licensee shall immediately notify the final delivery carrier and the NRC Operations Center (301-816-5100), by telephone, when:
(1) Removable radioactive surface contamination exceeds the limits of § 71.87(i) of this chapter; or
(2) External radiation levels exceed the limits of § 71.47 of this chapter.

Part T References

Sec. T.15 - Routine Determinations. Prior to each shipment of licensed material, the licensee shall determine that:

- h. The level of non-fixed radioactive contamination on the external surfaces of each package offered for shipment is as low as reasonably achievable.
i.
ii. ...
i. External radiation levels around the package and around the vehicle, if applicable, will not exceed 2 millisievert per hour (200 mrem/hr) at any point on the external surface of the package at any time during transportation. The transport index shall not exceed 10.0;
j. For a package transported in exclusive use by rail, highway or water, radiation levels external to the package may exceed the limits specified in T.15i. but shall not exceed any of the following:
i.
ii.
iii.
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222 e. Each licensee ~~or registrant~~ shall:
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224 i. Establish, maintain, and retain written procedures for safely opening packages ~~in which~~
225 ~~containing~~ radioactive material ~~is received~~; and
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227 ii. ~~Ensure~~ Make sure that the procedures are followed and that due consideration is given
228 to special instructions for the type of package being opened.
229
230 f. ~~Licensees or registrants transferring~~ A licensee transporting special form sources in ~~vehicles~~
231 ~~licensee-~~owned or ~~licensee-~~operated vehicles by the licensee or registrant to and from a
232 work site are exempt from the contamination monitoring requirements of ~~D.1906b. subrule b.~~
233 of this rule, but ~~are not exempt from the monitoring requirement in D.1906b. for measuring~~
234 shall measure radiation levels ~~that ensures to verify~~ that the source is still properly lodged in
235 its shield as required by subrule b. of this rule.
236

10 CFR 20.1906 text:

(f) Licensees transferring special form sources in licensee-owned or licensee-operated vehicles to and from a work site are exempt from the contamination monitoring requirements of paragraph (b) of this section, but are not exempt from the survey requirement in paragraph (b) of this section for measuring radiation levels that is required to ensure that the source is still properly lodged in its shield.

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Subpart K - Waste Disposal

~~See. Rule~~ D.2001 - Waste Disposal General Requirements.

- a. ~~Unless otherwise exempted, a~~ A licensee ~~or registrant~~ shall dispose of licensed ~~or~~
~~registered~~ radioactive material only:
- i. By transfer to an authorized recipient as provided in rule D.2006 or in ~~Parts~~ part C, ~~M, or~~
~~U~~^{***} of these ~~regulations~~ rules, or to the Department of Energy; ~~or~~
- ii. By decay in storage; ~~or~~
- iii. By release in effluents within the limits specified in rule D.1301; or
- iv. As authorized ~~pursuant to~~ under rules D.2002, D.2003, D.2004, ~~or~~ D.2005, or D.2008.

~~***/ Part U is in draft form.~~

INFORMATION

Part C - Licensing of Radioactive Material
Part M - Licensing Requirements for Land Disposal of Radioactive Waste. The state does not intend to include Part M in the rules.

- 256
257 b. A person shall be specifically licensed ~~or registered~~ to receive waste containing licensed ~~or~~
258 registered radioactive material from other persons for:

- 259
260 i. Treatment ~~prior to~~ before disposal; ~~or~~
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262 ii. ~~Treatment or disposal by incineration~~ Incineration; ~~or~~
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264 iii. Decay in storage; ~~or~~
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266 iv. Disposal at a land disposal facility ~~licensed pursuant to Part M of these regulations~~; or
267
268 v. Storage ~~until transferred~~ pending transfer to a storage or disposal facility authorized to
269 receive the waste.

270
271 **Sec. Rule D.2002 - Method for Obtaining to Obtain Approval of Proposed Alternate**
272 **Disposal Procedures.**
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274 ~~A licensee or registrant or applicant for a license or registration may~~ A person can apply to the
275 Agency department for approval of ~~proposed~~ procedures to dispose of radioactive material not
276 otherwise authorized in these ~~regulations rules, to dispose of licensed or registered material~~
277 ~~generated in the licensee's or registrant's operations.~~ Each The application shall include:
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- 279 a. A description of the waste containing ~~licensed or registered~~ radioactive material ~~to be~~
280 ~~disposed of~~, including:
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282 i. ~~the~~ The quantities and kinds of radioactive material,
283
284 ii. The levels of radioactivity involved,
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286 iii. Other physical and chemical properties ~~that have an impact on~~ important to risk
287 evaluation, and
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289 iv. ~~the~~ The proposed manner and conditions of ~~waste~~ disposal.
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291 b. An analysis and evaluation of pertinent information ~~on the nature of~~ about the environment
292 of the disposal site; ~~and~~
293
294 c. The nature and location of other potentially affected facilities; and
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296 d. Analyses and procedures to ~~ensure~~ make sure that doses are ~~maintained ALARA~~ as low as
297 reasonably achievable and within the dose limits in ~~Part D~~ this part.
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299 **Sec. Rule D.2003 - Disposal by Release into Sanitary Sewerage.**
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- 301 a. A licensee ~~or registrant may~~ can discharge ~~licensed or registered~~ radioactive material into
302 the sanitary sewerage ~~if each of~~ under the following conditions ~~is satisfied~~:
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304 i. The material is readily soluble in water; or is ~~readily dispersible~~ biological material, that
305 readily disperses in water; ~~and~~
306
307 ii. The quantity of ~~licensed or registered~~ radioactive material that the licensee ~~or registrant~~
308 releases into the ~~sewer~~ sanitary sewerage in 1 month divided by the average monthly

- 309 volume of water released into the sewer sanitary sewerage by the licensee ~~or registrant~~
310 does not exceed the concentration listed in Table III of Appendix B; ~~and~~
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312 iii. If more than one radionuclide is to be released, ~~the following conditions must also be~~
313 ~~satisfied:~~
314
315 (1) The licensee ~~or registrant~~ shall determine the fraction of the limit in Table III of
316 Appendix B represented by discharges into the sanitary sewerage by dividing the
317 actual monthly average concentration of each radionuclide released by the licensee
318 ~~or registrant~~ into the sewer sanitary sewerage by the concentration of that
319 radionuclide listed in Table III of Appendix B; and
320
321 (2) The sum of the fractions for each radionuclide required by subrule D.2003a.iii.(1)
322 does not exceed unity; and
323
324 iv. The total quantity of ~~licensed or registered~~ radioactive material that the ~~licensee or~~
325 ~~registrant person~~ releases into the sanitary sewerage in a year does not exceed 185
326 Gigabecquerel (5 ~~Ci curies~~) of hydrogen-3, 37 Gigabecquerel (1 ~~Ci curie~~) of carbon-14,
327 and 37 Gigabecquerel (1 ~~Ci curie~~) of all other radioactive materials combined.
328
329 b. Excreta from individuals undergoing medical diagnosis or therapy with radioactive material
330 are not subject to the ~~limitations contained limits~~ in ~~D.2003a subrule (a) of this rule.~~
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Some states have a subrule excluding septic systems. The definition of sanitary sewerage already excludes those systems. "Sanitary sewerage" means a system of public sewers for carrying off waste water and refuse, but excluding sewage treatment facilities, septic tanks, and leach fields owned or operated by the licensee."

332
333 **Sec. Rule D.2004 - Treatment or Disposal by Incineration.**
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335 A licensee ~~or registrant may treat or dispose of licensed or registered~~ can incinerate licensed
336 radioactive material ~~by incineration~~ only in:
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338 a. If the material is in a form and concentration specified in rule D.2005; or
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340 b. as As specifically approved by the Agency department pursuant to rule D.2002.
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The following subrule is included in 10 CFR 20.2004 but is not appropriate for states:

(b)(1) Waste oils (petroleum derived or synthetic oils used principally as lubricants, coolants, hydraulic or insulating fluids, or metalworking oils) that have been radioactively contaminated in the course of the operation or maintenance of a nuclear power reactor licensed under part 50 of this chapter may be incinerated on the site where generated provided that the total radioactive effluents from the facility, including the effluents from such incineration, conform to the requirements of appendix I to part 50 of this chapter and the effluent release limits contained in applicable license conditions other than effluent limits specifically related to incineration of waste oil. The licensee shall report any changes or additions to the information supplied under §§50.34 and 50.34a of this chapter associated with this incineration pursuant to §50.71 of this chapter, as appropriate. The licensee shall also follow the procedures of §50.59 of this chapter with respect to such changes to the facility or procedures.

(2) Solid residues produced in the process of incinerating waste oils must be disposed of as provided by §20.2001 .

(3) The provisions of this section authorize onsite waste oil incineration under the terms of this section and supersede any provision in an individual plant license or technical specification that may be inconsistent.

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Sec. Rule D.2005 - Disposal of Specific Wastes.

- a. A licensee ~~or registrant~~ may dispose of the following licensed ~~or registered~~ radioactive material as if it were not radioactive without regard to its radioactivity:
 - i. 1.85 kilobecquerel (0.05 µCi microcuries), or less, of hydrogen-3 or carbon-14 per gram of medium used for liquid scintillation counting; and
 - ii. 1.85 kilobecquerel (0.05 µCi microcuries), or less, of hydrogen-3 or carbon-14 per gram of animal tissue, averaged over the weight of the entire animal.
- b. A licensee ~~or registrant~~ shall not dispose of tissue ~~pursuant to D.2005a.ii.~~ under subrule (a)(ii) of this rule in a manner that would ~~permit allow~~ its use ~~either~~ as food for humans or as animal feed.
- c. A licensee may hold radioactive material with a physical half-life of 120 days or less for decay in storage before disposal in ordinary trash, and is exempt from the requirements of rule D.2001, if:
 - i. The licensee monitors the container of radioactive material at the surface before disposal to determine that its radioactivity cannot be distinguished from the background radiation level with an appropriate radiation detection survey meter set on its most sensitive scale and with no interposed shielding; and
 - ii. The licensee removes or obliterates all radiation labels, except for radiation labels on materials that are within containers and that will be managed as biomedical waste after they have been released from the licensee.

The NRC has approved subrule c for several states. Subrule c is essentially identical to 10 CFR 35.92, "Decay in Storage."
“(a) A licensee may hold byproduct material with a physical half-life of less than or equal to 120 days for decay-in-storage before disposal without regard to its radioactivity if it—
“(1) Monitors byproduct material at the surface before disposal and determines that its radioactivity cannot be distinguished from the background radiation level with an appropriate radiation detection survey meter set on its most sensitive scale and with no interposed shielding; and
“(2) Removes or obliterates all radiation labels, except for radiation labels on materials that are within containers and that will be managed as biomedical waste after they have been released from the licensee.”

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ed. The licensee ~~or registrant~~ shall ~~maintain~~ keep records in accordance with rule D.2108.

Sec. Rule D.2006 - Transfer for Disposal and Manifests.

- 376 a. ~~Requirements~~ The requirements of ~~D.2006 this rule~~ and Appendix G- of this part:
- 377
- 378 i. ~~Control transfers of low-level radioactive waste by any waste generator, waste collector,~~
379 ~~or waste processor licensee, as defined in Appendix G of Part D, who ships low-level~~
380 ~~waste either directly, or indirectly through a waste collector or waste processor, to a~~
381 ~~licensed low-level waste land intended for disposal at a licensed low-level radioactive~~
382 ~~waste disposal facility as defined in Part A.2 of these regulations.~~
- 383
- 384 ii. Establish a manifest tracking system; and
- 385
- 386 iii. Supplement existing requirements concerning transfers and recordkeeping for those
387 wastes.
- 388

Kentucky, Maine, Maryland, Oregon, Texas, and Virginia have a shortened version of 10 CFR 20.2006(a)(i) similar to that proposed above.

- 389
- 390 b. ~~Shipment of Radioactive Waste. Any licensee shipping~~ Each shipment of radioactive waste
391 intended destined for ~~ultimate~~ disposal at a licensed ~~land~~ low-level radioactive waste
392 disposal facility ~~must document the information required on the Agency's Uniform Low-Level~~
393 ~~Radioactive Waste Manifest and transfer this recorded information to the intended~~
394 ~~consignee~~ shall be accompanied by a shipment manifest in accordance with Appendix G of
395 this part.
- 396
- 397 c. Each shipment manifest shall include a certification by the waste generator as specified in
398 section II of Appendix G, ~~as appropriate~~.
- 399
- 400 d. Each person involved in the transfer ~~of waste~~ for disposal ~~or in the~~ and disposal of waste,
401 including the waste generator, waste collector, waste processor, and disposal facility
402 operator, shall comply with the requirements specified in section III of Appendix G of this
403 part, as appropriate.
- 404

10 CFR 20.2006(d) has "Each person involved in the transfer for disposal and disposal of waste, including the waste generator, waste collector, waste processor, and disposal facility operator, shall comply with the requirements specified in section III of appendix G to 10 CFR Part 20."

405

The NRC added 10 CFR 20.2006(e) in 72 FR 55922 published on October 1, 2007. The NRC regulation is used as the basic text.

- 406
- 407 e. Any licensee shipping byproduct material as defined in ~~paragraphs~~ subrules (3) and (4) of
408 the definition of ~~Byproduct material~~ set forth in § 20.1003 intended in Rule A.2 destined for
409 ultimate disposal at a ~~land~~ licensed low-level radioactive waste disposal facility ~~licensed~~
410 ~~under part 61 of this chapter must~~ shall document the information required on the NRC's
411 Uniform Low-Level Radioactive Waste Manifest and transfer this recorded manifest
412 information to the intended consignee in accordance with Appendix G ~~to~~ of this part.
- 413

414 **Sec. Rule D.2007 - Compliance with Environmental and Health Protection Rules and**
415 **Regulations.**

416

417 Nothing in ~~D.2001, D.2002, D.2003, D.2004, D.2005, or D.2006~~ these rules relieves the
418 licensee ~~or registrant~~ from complying with other applicable ~~F~~federal, ~~S~~state, and local rules and
419 regulations governing any other toxic or hazardous properties of materials that may can be
420 disposed ~~of~~ in accordance with ~~D.2001, D.2002, D.2003, D.2004, D.2005, or D.2006~~ this part.
421

The NRC added 10 CFR 20.2008 in 72 FR 55922 published on October 1, 2007. The NRC regulation is used as the basic text.

422
423 **§ 20Rule D.2008 - Disposal of certain byproduct material.**
424

- 425 a. Licensed material as defined in paragraphs subrules (3) and (4) of the definition of
426 Bbyproduct material set forth in §20.1003 in rule A.2 may be disposed ~~of~~ in accordance with
427 part 61 of this chapter 10 CFR part 61 or equivalent agreement state rules, even though it is
428 not defined as low-level radioactive waste. Therefore, any licensed byproduct material
429 being disposed ~~of~~ at a licensed low-level radioactive waste disposal facility, or transferred for
430 ultimate disposal at a licensed low-level radioactive waste disposal facility ~~licensed under~~
431 part 61 of this chapter, must meet the requirements of §20 rule D.2006.
432
433 b. A licensee may dispose of byproduct material, as defined in paragraphs subrules (3) and (4)
434 of the definition of Bbyproduct material set forth in § 20.1003 in rule A.2, at a disposal facility
435 authorized to dispose of such material in accordance with any Federal or State solid or
436 hazardous waste law, ~~including the Solid Waste Disposal Act, as authorized under the~~
437 Energy Policy Act of 2005.
438

439
440 **Subpart L - Records**

441 **Sec. Rule D.2101 - Records General Provisions for Records.**
442

- 443 a. Each licensee or registrant shall use either or both of the international system of units (SI)
444 units becquerel, gray, sievert, and coulomb per kilogram, or the special units curie,
445 disintegrations per minute, rad, rem, and roentgen, including multiples and subdivisions, and
446 shall clearly indicate the units of all quantities on records required by ~~Part D~~ this part.
447

Most states allow the use of the International System of Units or the special units.

10 CFR 20.2101(a)

Each licensee shall use the units: curie, rad, rem, including multiples and subdivisions, and shall clearly indicate the units of all quantities on records required by this part.

- 448
449 ~~b. Notwithstanding the requirements of D.2101a, when recording information on shipment~~
450 ~~manifests, as required in D.2006, information must be recorded in SI units or in SI units and~~
451 ~~special units as specified in D.2101a.~~
452

Subrule b. is unnecessary because of the wording of subrule a.

10 CFR 20.2101(b)

(b) In the records required by this part, the licensee may record quantities in SI units in parentheses following each of the units specified in paragraph (a) of this section. However, all quantities must be recorded as stated in paragraph (a) of this section.

454 ~~eb.~~ The licensee or registrant shall make a clear distinction among the quantities entered on the
455 records required by ~~Part D, such as, these rules.~~ The dose to an individual must be
456 specified in quantities such as the effective dose equivalent, total effective dose equivalent,
457 shallow-dose equivalent, lens dose equivalent, deep-dose equivalent, total organ dose
458 equivalent, or committed effective dose equivalent.
459

10 CFR 20.2101 has:

(d) The licensee shall make a clear distinction among the quantities entered on the records required by this part (e.g., total effective dose equivalent, shallow-dose equivalent, lens dose equivalent, deep-dose equivalent, committed effective dose equivalent).

Regulatory Guide 8.7 - Instructions for Recording and Reporting Occupational Radiation Exposure Data

The term total organ dose equivalent (TODE) has been added, and it means the sum of the deep dose equivalent and the committed dose equivalent to the organ receiving the highest dose as described in 10 CFR 20.2106(a)(6).

The Total Organ Dose Equivalent is on NRC Form 5:

"TOTAL ORGAN DOSE EQUIVALENT MAX ORGAN (ADD BLOCKS 11 AND 16) (TODE)"

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Sec. Rule D.2102 - Records of Radiation Protection Programs.

- a. Each licensee or registrant shall maintain records of the radiation protection program, including:
 - i. The provisions of the program; and
 - ii. Audits and other reviews of program content and implementation.
- b. The licensee or registrant shall retain the records required by ~~D.2102a.i.~~ subrule a.i. of this rule until the Agency department terminates each pertinent license or registration requiring the record. The licensee or registrant shall retain the records required by ~~D.2102a.ii.~~ subrule a.ii. of this rule for 3 years after the record is made.

Sec. Rule D.2103 - Records of Surveys and Calibrations.

- a. ~~Each~~ The licensee or registrant shall maintain records showing of the results of surveys and calibrations required by rules D.1501 and D.1906b. The licensee or registrant shall retain these records for 3 years after the record is made.
- b. The licensee or registrant shall retain ~~each of~~ the following records until the Agency department terminates ~~each pertinent the~~ license or registration requiring the record:
 - i. Records of the results of surveys to determine the dose from external sources of radiation and used, in the absence of or in combination with individual monitoring data, in the assessment of individual dose equivalents; ~~and~~
 - ii. Records of the results of measurements and calculations used to determine individual intakes of radioactive material and used in the assessment of internal dose; ~~and~~

- 491 iii. Records ~~showing of~~ the results of air sampling, surveys, and bioassays required
492 pursuant to rules D.1703c.i. and ii.; and
493
494 iv. Records of the results of measurements and calculations used to evaluate the release of
495 radioactive effluents to the environment.
496

Twenty states (AL, CO, GA, IL, KS, LA, ME, MD, MS, NE, NH, NM, NY, ND, OH, OR, RI, UT, VA, and WI) have the records of tests for leakage or contamination located here in their rules. It follows in sequence better here than after rule D.2110 "Form of Records." Nine states do not have this rule.

497
498 **Sec. D.2111 Rule D.2103A - Records of Tests for Leakage or Contamination of Sealed**
499 **Sources.**
500

501 ~~Records of tests~~ A record of each test for leakage or contamination of sealed sources required
502 by ~~D.310 these rules~~ shall be kept in units of becquerel or microcurie and maintained for
503 inspection by the Agency department for ~~5~~ 3 years after the records ~~are~~ is made.
504

The NRC requires these records be kept for 3 years.

505
506 **Sec. Rule D.2104 - Determination and Records of Prior Occupational Dose.**
507

- 508 a. For each individual ~~who is~~ likely to receive, ~~in a year,~~ an annual occupational dose requiring
509 monitoring ~~pursuant to~~ under rule D.1502, the licensee or registrant shall:
510 i. ~~Determine~~ determine the occupational radiation dose received during the current year;
511 and
512 ii. ~~Attempt to obtain the records of cumulative occupational radiation dose.~~
513

10 CFR 20.2104 has:

(a) For each individual who is likely to receive an annual occupational dose requiring monitoring under §20.1502, the licensee shall determine the occupational radiation dose received during the current year.

Federal Register Vol. 72, No. 232, Tuesday, December 4, 2007

Pages 68043 to 68059

Occupational Dose Records, Labeling Containers, and the Total Effective Dose Equivalent
ACTION: Final rule.

The fourth amendment removes the provision in 10 CFR 20.2104(a)(2) that requires licensees to attempt to obtain the records of cumulative occupational radiation dose for each worker requiring monitoring under 10 CFR 20.1502, "Conditions Requiring Individual Monitoring of External and Internal Occupational Dose."

- 514
515 b. ~~Prior to permitting~~ Before allowing an individual to participate in a planned special exposure,
516 the licensee or registrant shall determine:
517
518 i. The internal and external doses from all previous planned special exposures; and
519
520 ii. All doses in excess of the limits, including doses received during accidents and
521 emergencies, received during the lifetime of the individual; ~~and.~~

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- c. ~~In complying with the requirements of D.2104a.~~ To comply with subrules a. or b. of this rule,
a licensee or registrant may:
- i. Accept, as a record of ~~the~~ an individual's occupational dose ~~that the individual received during the current year,~~ a written and signed statement from the individual, or from the individual's most recent employer for work involving radiation exposure, that ~~discloses documents~~ the nature and the amount of any occupational dose ~~that~~ the individual may have received during the current year; ~~and~~
 - ii. Accept, as the record of cumulative radiation dose, an up-to-date Agency department Form Y or equivalent, signed by the individual and countersigned by an appropriate official of the most recent employer for work involving radiation exposure, or the individual's current employer; ~~if the individual is not employed by the licensee or registrant; and-~~

Department Form Y is equivalent to NRC Form 4, "Cumulative Occupational Dose History."

NRC wording

(b) Prior to permitting an individual to participate in a planned special exposure, the licensee shall determine:

- (1) The internal and external doses from all previous planned special exposures; and
- (2) All doses in excess of the limits (including doses received during accidents and emergencies) received during the lifetime of the individual.

(c) In complying with the requirements of paragraphs (a) or (b) of this section, a licensee may-

- (1) Accept, as a record of the occupational dose that the individual received during the current year, a written signed statement from the individual, or from the individual's most recent employer for work involving radiation exposure, that discloses the nature and the amount of any occupational dose that the individual may have received during the current year;
- (2) Accept, as the record of cumulative radiation dose, an up-to-date NRC Form 4, or equivalent, signed by the individual and countersigned by an appropriate official of the most recent employer for work involving radiation exposure, or the individual's current employer (if the individual is not employed by the licensee); and

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- iii. Obtain reports of the individual's dose equivalent(s) from the most recent employer for work involving radiation exposure, or the individual's current employer; ~~if the individual is not employed by the licensee or registrant, by telephone, telegram, facsimile, other electronic media,~~ or letter. The licensee or registrant shall request a written verification of the dose data if the authenticity of the ~~transmitted~~ reports ~~s~~ cannot be established.

NRC

(3) Obtain reports of the individual's dose equivalent(s) from the most recent employer for work involving radiation exposure, or the individual's current employer (if the individual is not employed by the licensee) by telephone, telegram, electronic media, or letter. The licensee shall request a written verification of the dose data if the authenticity of the transmitted report cannot be established.

545

- 546 d. The licensee or registrant shall record the exposure history of each individual, as required
547 by D.2104a. subrules a. or b. of this rule, on Agency department Form Y, or other clear and
548 legible record, of that includes all the information required on that form.
549
- 550 i. The form or record shall must show each period in which the individual received
551 occupational exposure to radiation or radioactive material and shall be signed by the
552 individual who received the exposure. For each period for which the licensee or
553 registrant obtains reports, the licensee or registrant shall use the dose shown in the
554 report in preparing Agency department Form Y or equivalent. For any period in which
555 the licensee or registrant does not obtain a report, the licensee or registrant shall place a
556 notation on Agency department Form Y or equivalent indicating the periods of time for
557 which data are not available.
558

A search on the NRC ADAMS website did not find an instance where the NRC cited a facility for not having an individual sign their NRC Form 4 (Agency Form Y). Michigan's Agreement State Advisory Committee indicated that individuals have never signed these forms and recommended that the requirement be eliminated.

- 559
- 560 ii. For the purposes of complying with this requirement, licensees or registrants are not
561 required to partition historical dose between external dose equivalent(s) and internal
562 committed dose equivalent(s). Further, occupational Occupational exposure histories
563 obtained and recorded on Agency department Form Y or equivalent before [cite effective
564 date of these regulations], would might not have included effective dose equivalent, but
565 may be used in the absence of specific information on the intake of radionuclides by the
566 individual.
567

NRC

(d) The licensee shall record the exposure history of each individual, as required by paragraphs (a) or (b) of this section, on NRC Form 4, or other clear and legible record, including all of the information required by NRC Form 4.⁴ The form or record must show each period in which the individual received occupational exposure to radiation or radioactive material and must be signed by the individual who received the exposure. For each period for which the licensee obtains reports, the licensee shall use the dose shown in the report in preparing the NRC Form 4. For any period in which the licensee does not obtain a report, the licensee shall place a notation on the NRC Form 4 indicating the periods of time for which data are not available.

⁴ Licensees are not required to partition historical dose between external dose equivalent(s) and internal committed dose equivalent(s). Further, occupational exposure histories obtained and recorded on NRC Form 4 before January 1, 1994, might not have included effective dose equivalent, but may be used in the absence of specific information on the intake of radionuclides by the individual.

568

Since the NRC revised 10 CFR 20.2104(a) to no longer require an occupational dose history from previous years, the following subrule was reworded to clarify that only the current year occupational dose record is needed for routine assignments.

- 569
- 570 e. If the licensee or registrant is unable to cannot obtain a complete record of an individual's
571 current and previously accumulated occupational dose, the licensee or registrant shall
572 assume:
573

- 574 i. ~~In~~ An individual's occupational dose for the current year, the licensee or registrant shall
575 assume, in establishing administrative controls pursuant to subrule D.1201f. for the
576 current year, that the allowable dose limit for the individual is reduced by 12.5
577 millisieverts (~~1.25 rem~~ 1,250 millirem) for each quarter for which records ~~were~~ are
578 unavailable and the individual was engaged in activities that could have resulted in
579 occupational radiation exposure; and
580
581 ii. ~~That~~ An individual's current and previously accumulated occupational dose, that the
582 individual is not available for planned special exposures.
583
584 f. The licensee or registrant shall retain the records on Agency department Form Y or
585 equivalent until the Agency department terminates each pertinent license or registration
586 requiring this record. The licensee or registrant shall retain records used in preparing
587 Agency department Form Y or equivalent for 3 years after the record is made.
588
589 ~~g. Upon termination of the license or registration, the licensee or registrant shall permanently~~
590 ~~store records on AGENCY FORM Y or equivalent, or shall make provision with the Agency~~
591 ~~for transfer to the Agency.~~
592

593 **Sec. Rule D.2105 - Records of Planned Special Exposures.**
594

- 595 a. For each ~~use of the provisions of D.1206 for~~ planned special exposures, the licensee or
596 registrant shall maintain records that describe:
597
598 i. The exceptional circumstances requiring the use of a planned special exposure; ~~and~~
599
600 ii. The name of the management official who authorized the planned special exposure and
601 a copy of the signed authorization; ~~and~~
602
603 iii. What actions were necessary; ~~and~~
604
605 iv. Why the actions were necessary; ~~and~~
606
607 v. ~~What precautions were taken to assure that~~ How doses were maintained ALARA as low
608 as reasonably achievable; ~~and~~
609
610 vi. What individual and collective doses were expected to result; ~~and~~
611
612 vii. The doses actually received ~~in~~ during the planned special exposure.
613
614 b. The licensee or registrant shall retain the records until the Agency department terminates
615 each pertinent license ~~or registration~~ requiring these records.
616
617 ~~c. Upon termination of the license or registration, the licensee or registrant shall permanently~~
618 ~~store records on Agency Form Y or equivalent, or shall make provision with the Agency for~~
619 ~~transfer to the Agency.~~
620

621 **Sec. Rule D.2106 - Records of Individual Monitoring Results.**
622

- 623 a. ~~Recordkeeping Requirement.~~ Each licensee or registrant shall maintain records of doses
624 received by all individuals for whom monitoring was required pursuant to rule D.1502, and

- 625 records of doses received during planned special exposures, accidents, and emergency
626 conditions. ~~Assessments of dose equivalent and records made using units in effect before~~
627 ~~the effective date of Part D need not be changed.~~ These records shall must include, when
628 applicable:
- 629
 - 630 i. The deep-dose equivalent to the whole body, lens dose equivalent, shallow-dose
631 equivalent to the skin, and shallow-dose equivalent to the extremities; ~~and~~
 - 632
 - 633 ii. The estimated intake of radionuclides; see rule D.1202; ~~and~~
 - 634
 - 635 iii. The committed effective dose equivalent assigned to the intake of radionuclides; ~~and~~
 - 636
 - 637 iv. The specific information used to ~~calculate~~ assess the committed effective dose
638 equivalent pursuant to rules D.1204a. and D.1204c. and when required by rule D.1502;
639 ~~and~~
 - 640
 - 641 v. The total effective dose equivalent when required by rule D.1202; and
 - 642
 - 643 vi. The ~~total of the deep-dose equivalent and the committed dose to the organ receiving the~~
644 ~~highest total dose~~ total organ dose equivalent.
 - 645

The NRC uses “assess” instead of “calculate” in subrule a.iv.

The “total organ dose equivalent” is defined as the “total of the deep-dose equivalent and the committed dose to the organ receiving the highest total dose.”

- 646
- 647 b. ~~Recordkeeping Frequency.~~ The licensee or registrant shall make entries of the records
648 specified in ~~D.2106a. subrule a. of this rule~~ at ~~intervals not to exceed 1 year~~ least annually.
 - 649
 - 650 c. ~~Recordkeeping Format.~~ The licensee or registrant shall maintain the records specified in
651 ~~D.2106a. subrule a. of this rule~~ on Agency department Form Z, in accordance with the
652 instructions for Agency department Form Z, or in clear and legible records containing all the
653 information required by Agency department Form Z.
 - 654

Department Form Z is equivalent to NRC Form 5, “Occupational Dose Record for a Monitoring Period.”

- 655
- 656 d. The licensee or registrant shall maintain the records of dose to an embryo/fetus with the
657 records of dose to the declared pregnant woman. The declaration of pregnancy, ~~including~~
658 ~~the estimated date of conception~~, shall also be kept on file, but may be maintained
659 separately from the dose records.
 - 660

The definition of “declared pregnant woman” makes the phrase “including the estimated date of conception” unnecessary.

10 CFR 20 definition: “Declared pregnant woman means a woman who has voluntarily informed the licensee, in writing, of her pregnancy and the estimated date of conception. The declaration remains in effect until the declared pregnant woman withdraws the declaration in writing or is no longer pregnant.” The SSR definition has “... licensee or registrant ...”.

10 CFR 20.2106(e) The licensee shall maintain the records of dose to an embryo/fetus with the records of dose to the declared pregnant woman. The declaration of pregnancy shall also be kept on file, but may be maintained separately from the dose records.

- 661
662 e. The licensee or registrant shall retain ~~each the~~ required form or record until the ~~Agency~~
663 ~~department~~ terminates each pertinent license or registration requiring the record.
664
665 f. ~~Upon termination of the license or registration, the licensee or registrant shall permanently~~
666 ~~store records on Agency Form Y or equivalent, or shall make provision with the Agency for~~
667 ~~transfer to the Agency.~~
668

The NRC includes a regulation regarding privacy protection, but only says that it “should” be done. We are not planning to include it in Michigan’s rules.

10 CFR 20.2106(d) Privacy protection. The records required under this section should be protected from public disclosure because of their personal privacy nature. These records are protected by most State privacy laws and, when transferred to the NRC, are protected by the Privacy Act of 1974, Public Law 93–579, 5 U.S.C. 552a, and the Commission's regulations in 10 CFR part 9.

In Michigan, the Freedom of Information Act, Act 442 of 1976, MCL 15.231 to 15.246 contains requirements for privacy protection.

669
670 **~~Sec. Rule~~ D.2107 - Records of Dose to Individual Members of the Public.**

- 671
672 a. Each licensee or registrant shall maintain records sufficient to demonstrate compliance with
673 the dose limit for individual members of the public. ~~See as required by rule~~ D.1301.
674
675 b. The licensee or registrant shall retain the records required by ~~D-2107a- subrule a. of this rule~~
676 until the ~~Agency department~~ terminates each pertinent license or registration requiring the
677 record.
678

679 **~~Sec. Rule~~ D. 2108 - Records of Waste Disposal.**

- 680 a. Each licensee ~~or registrant~~ shall maintain records of:
681
682 i. ~~the~~ The disposal of licensed ~~or registered~~ radioactive materials made pursuant to under
683 rules D.2002, D.2003, D.2004, and D.2005, Part M of these regulations, rules.
684
685 ii. ~~and disposal by burial in soil, including burials authorized before [insert effective date of~~
686 ~~rule that removed the authorization].⁴¹ The burial of any licensed material made under
687 10 CFR 20.304 before its repeal in 1981 or under R325.5240 before it was rescinded on
688 [insert the effective date of the current rule changes].
689~~

690
691 ⁴¹~~A previous D.304 permitted burial of small quantities of licensed materials in soil before [date~~
692 ~~of rule that removed authorization], without specific Agency authorization.~~
693

10 CFR 20.2108 (a) Each licensee shall maintain records of the disposal of licensed materials made under §§20.2002, 20.2003, 20.2004, 20.2005, 10 CFR part 61 and disposal by burial in soil, including burials authorized before January 28, 1981.⁶

Footnote 6: A previous §20.304 permitted burial of small quantities of licensed materials in soil before January 28, 1981, without specific Commission authorization.

- 694
695 b. The licensee ~~or registrant~~ shall retain the records required by ~~D.2108a. subrule a. of this rule~~
696 until the ~~Agency department~~ terminates each pertinent license ~~or registration~~ requiring the
697 record.

698
699 **See. Rule D.2109 - Records of Testing Entry Control Devices for Very High Radiation**
700 **Areas.**

- 701
702 a. Each licensee or registrant shall maintain records of tests ~~made pursuant to D.1603b.ix.~~
703 ~~performed~~ on entry control devices for very high radiation areas. These records must
704 include the date, time, and results of each ~~such test of function.~~
705
706 b. The licensee or registrant shall retain the records required by ~~subrule D.2109a. of this rule~~
707 for 3 years after the record is made.
708

10 CFR 20.2109 [Reserved]

709
Since a very high radiation area can be produced by a few radiation machines as well as irradiators using radioactive material, this rule will be retained.
10 CFR Part 36 "Licenses and Radiation Safety Requirements for Irradiators" does not require testing of entry control devices.

10 CFR 20.2109 has [Reserved]

710
711 **See. Rule D.2110 - Form of Records.**

- 712
713 a. Each record required by ~~Part D shall these rules must~~ be legible, readily identifiable, and
714 retrievable throughout the specified retention period.
715
716 b. The record shall be:
717
718 i. ~~the~~ The original; ~~or~~
719
720 ii. ~~a~~ A reproduced copy; ~~or~~
721
722 iii. An electronic copy stored in an electronic recordkeeping system.
723
724 iv. ~~a~~ A microform, ~~provided that the copy or microform if it~~ is authenticated by authorized
725 personnel and ~~that the microform~~ is capable of producing a clear copy throughout the
726 required retention period ~~or the record may also be stored in electronic media with the~~
727 ~~capability for producing legible, accurate, and complete records during the required~~
728 ~~retention period.~~
729

- 730 c. Records, such as letters, drawings, and specifications, ~~shall~~ must include all pertinent
731 information, such as stamps, initials, and signatures.
732
733 d. The licensee or registrant shall maintain adequate safeguards against tampering with and
734 loss of records.
735

COMMENT: The original language says that the record has to be the original, a reproduced copy, or a microform. Storing the document solely in electronic format is not acceptable. We want to allow official records to be stored electronically. We will define “electronic recordkeeping system” in the definitions.

“NRC Records and Document Management Program Directive 3.53” (Revised: March 15, 2007) allows the NRC to electronically store their official record copy of text documents in an electronic recordkeeping system.

excerpt:

“There are two types of electronic systems: “electronic information systems” and “electronic recordkeeping systems.” Electronic information systems produce, use, or store data files and disposition instructions for the data that shall be incorporated into the system’s design. Electronic recordkeeping systems maintain the official file copy of text documents on electronic media and must meet specific requirements outlined in 36 CFR 1234.22.”

36 CFR 1234.22 Creation and use of text documents.

(a) Electronic recordkeeping systems that maintain the official file copy of text documents on electronic media shall meet the following minimum requirements:

- (1) Provide a method for all authorized users of the system to retrieve desired documents, such as an indexing or text search system;
- (2) Provide an appropriate level of security to ensure integrity of the documents;
- (3) Provide a standard interchange format when necessary to permit the exchange of documents on electronic media between agency computers using different software/operating systems and the conversion or migration of documents on electronic media from one system to another; and
- (4) Provide for the disposition of the documents including, when necessary, the requirements for transferring permanent records to NARA (see §1228.270 of this chapter).

(b) Before a document is created electronically on electronic recordkeeping systems that will maintain the official file copy on electronic media, each document shall be identified sufficiently to enable authorized personnel to retrieve, protect, and carry out the disposition of documents in the system. Appropriate identifying information for each document maintained on the electronic media may include: office of origin, file code, key words for retrieval, addressee (if any), signator, author, date, authorized disposition (coded or otherwise), and security classification (if applicable). Agencies shall ensure that records maintained in such systems can be correlated with related records on paper, microform, or other media.

- 736
737 ~~**Sec. D.2111 – Records of Tests for Leakage or Contamination of Sealed Sources.**~~
738
739 ~~Records of tests for leakage or contamination of sealed sources required by D.310 shall be kept~~
740 ~~in units of becquerel or microcurie and maintained for inspection by the Agency for 5 years after~~
741 ~~the records are made.~~
742

This rule is now rule D.2103A.

743

Subpart M has been modified to use the term “notification” to refer to initial contacts by telephone and to use the term “report” to refer to written documentation.

744

745

Subpart M - Notifications and Reports

746

Sec. Rule D.2201 - Notifications and Reports of Stolen, Lost, or Missing Theft or Loss of Licensed or Registered Sources of Radiation.

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a. ~~Telephone Reports.~~ Each A licensee or registrant shall ~~report to notify~~ the Agency department by telephone ~~as follows of any of the following events:~~

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iii. ~~Immediately after its occurrence becomes known to the registrant, a~~ A stolen, lost, or missing radiation machine within 10 days after its absence becomes known.

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ii. ~~Immediately after its occurrence becomes known to the licensee or registrant, stolen~~ Stolen, lost, or missing licensed ~~or registered~~ radioactive material in an aggregate quantity equal to or greater than 1,000 times the quantity ~~specified~~ in Appendix C immediately after its absence becomes known to the licensee under such circumstances that it appears to the licensee or registrant that an exposure could result to individuals in unrestricted areas; or

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A licensee would not know the location of stolen, lost, or missing radioactive material and would have to assume that an individual in an unrestricted area could receive an exposure.

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iii. ~~Within 30 days after its occurrence becomes known to the licensee or registrant, lost, stolen, Stolen, lost,~~ or missing licensed ~~or registered~~ radioactive material in an aggregate quantity greater than 10 times the quantity ~~specified~~ in Appendix C that is still missing within 30 days after its absence becomes known to the licensee. This notification is not required if the material is located or otherwise recovered by the licensee within the 30-day period.

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The following part of 10 CFR 20.2201(a) is not appropriate for adoption in state rules.

(2) Reports must be made as follows:

(i) Licensees having an installed Emergency Notification System shall make the reports to the NRC Operations Center in accordance with §50.72 of this chapter, and

(ii) All other licensees shall make reports by telephone to the NRC Operations Center (301–816–5100).

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773

b. ~~Written Reports.~~ Each licensee or registrant required to ~~make a report pursuant to D.2201a. notify the department under subrule a. of this rule~~ shall, within 30 days after making the telephone ~~report notification~~, make a written report to the ~~Agency setting forth department containing~~ the following information:

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776

i. A description of the ~~licensed or registered~~ source of radiation involved, including: (1) for radioactive material, the The kind, quantity, and chemical and physical form of the radioactive material; and,

777

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779

- 780 ~~(2) for radiation machines, the~~ The manufacturer, and model, and serial number, type
781 and maximum energy of radiation emitted and the machine registration tag number
782 of the radiation machine;
783
784 ii. A description of the circumstances under which the loss or theft occurred; ~~and~~
785
786 iii. A statement of disposition, or probable disposition, of the licensed or registered source
787 of radiation involved; ~~and~~
788
789 iv. Exposures of individuals to radiation, the circumstances under which the exposures
790 occurred, and the possible total effective dose equivalent to ~~persons~~ individuals in
791 unrestricted areas; ~~and~~
792
793 v. Actions that have been taken, or will be taken, to recover the source of radiation; and
794
795 vi. ~~Procedures or measures that have been, or will be, adopted~~ Actions taken or planned
796 ensure against prevent a recurrence of the loss or theft of licensed or registered sources
797 of radiation.
798

The following parts of 10 CFR 20.2201(b) and (c) are not appropriate for adoption in state rules.

(2) Reports must be made as follows:

- (i) For holders of an operating license for a nuclear power plant, the events included in paragraph (b) of this section must be reported in accordance with the procedures described in §50.73(b), (c), (d), (e), and (g) of this chapter and must include the information required in paragraph (b)(1) of this section, and
(ii) All other licensees shall make reports to the Administrator of the appropriate NRC Regional Office listed in appendix D to part 20.

(c) A duplicate report is not required under paragraph (b) of this section if the licensee is also required to submit a report pursuant to §§30.55(c), 40.64(c), 50.72, 50.73, 70.52, 73.27(b), 73.67(e)(3)(vii), 73.67(g)(3)(iii), 73.71, or §150.19(c) of this chapter.

- 799
800 c. ~~Subsequent to After~~ filing the written report, the licensee or registrant shall also make an
801 additional written report to the department containing any additional substantive information
802 ~~on regarding~~ the loss or theft within 30 days after the licensee or registrant learns of ~~such~~
803 the new information.
804
805 d. The licensee or registrant shall prepare any report filed with the Agency department
806 pursuant to ~~D.2204~~ this rule so that the names of individuals who may have received
807 exposure to radiation are stated contained in a separate and detachable ~~portion part~~ of the
808 report.
809

810 **Sec. Rule D.2202 - Notification of Incidents.**

- 811
812 a. ~~Immediate Notification. Notwithstanding~~ In addition to any other requirements for notification,
813 ~~each a~~ licensee or registrant shall immediately ~~report each~~ notify the department of any
814 event involving a source of radiation possessed by the licensee or registrant that may have
815 caused or threatens to cause any of the following conditions:
816
817

- 818 i. An individual to receive:
819 (1) A total effective dose equivalent of 0.25 sievert (25 rem) or more; ~~or~~
820 (2) A lense dose equivalent of 0.75 sievert (75 rem) or more; or
821 (3) A shallow-dose equivalent to the skin or extremities ~~or a total organ dose equivalent~~
822 of 2.5 gray (250 rads) or more; or
823
824 ii. The release of radioactive material, inside or outside ~~of~~ a restricted area, so that, ~~had if~~
825 an individual ~~had~~ been present for 24 hours, the individual could have received an intake
826 ~~equal to or greater than~~ five times the occupational ~~ALI~~ annual limit on intake. This
827 provision does not apply to locations where personnel are not normally stationed during
828 routine operations, such as hot-cells or process enclosures.
829
830 b. ~~Twenty-Four Hour Notification. Each~~ Within 24 hours of discovery of the event, a licensee or
831 registrant shall, ~~within 24 hours of discovery of the event, report to the Agency each~~ notify
832 the department of any event involving ~~loss of control of~~ a licensed or registered source of
833 radiation possessed by the licensee or registrant that may have caused, or threatens to
834 cause, any of the following conditions:
835
836 i. An individual to receive, in a period of 24 hours:
837 (1) A total effective dose equivalent exceeding 0.05 sievert (5 rem); ~~or~~
838 (2) A lense dose equivalent exceeding 0.15 sievert (15 rem); or
839 (3) A shallow-dose equivalent to the skin or extremities ~~or a total organ dose equivalent~~
840 exceeding 0.5 sievert (50 rem); or
841
842 ii. The release of radioactive material, inside or outside ~~of~~ a restricted area, so that, ~~had if~~
843 an individual ~~had~~ been present for 24 hours, the individual could have received an intake
844 ~~in excess of exceeding~~ one occupational ~~ALI~~ annual limit on intake. This provision does
845 not apply to locations where personnel are not normally stationed during routine
846 operations, such as hot-cells or process enclosures.
847

10 CFR 20.2202(a) and (b) do not include the total organ dose equivalent.

- 848
849 c. Licensees or registrants shall make the ~~reports~~ notifications required by ~~D.2202~~ subrules a.
850 and b. ~~of this rule by initial contact~~ by telephone to the Agency department and shall confirm
851 the ~~initial contact notification within 24 hours~~ by e-mail, telegram, mailgram, or facsimile, or
852 overnight mail to the Agency department.
853
854 d. The licensee or registrant shall prepare ~~each report~~ the written confirmation filed with the
855 Agency department pursuant to ~~D.2202~~ this rule so that the names of individuals who have
856 received an exposure to ~~sources of~~ radiation or radioactive material are stated contained in
857 a separate and detachable ~~portion part~~ of the report written confirmation.
858
859 e. ~~The provisions of D.2202 do~~ This rule does not apply to doses ~~that result~~ from planned
860 special exposures, ~~provided such doses that~~ are within the limits for planned special
861 exposures, and that are reported pursuant to rule D.2204.
862

863 **Sec. Rule D.2203 - Reports of Exposures, Radiation Levels, and Concentrations of**
864 **Radioactive Material Exceeding the Constraints or Limits.**
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The title of 10 CFR 20.2203 is "Reports of exposures, radiation levels, and concentrations of radioactive material exceeding the constraints or limits."

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- a. ~~Reportable Events.~~ In addition to the notification required by rule D.2202, ~~each a~~ licensee or registrant shall submit a written report to the department within 30 days after learning of any of the following occurrences:
- i. ~~Incidents~~ Any event for which notification is required by requiring notification under rule D.2202; or
- ii. ~~Doses in excess of~~ Any dose exceeding any of the following:
- (1) The occupational dose limits for adults in rule D.1201; ~~or~~
- (2) The occupational dose limits for a minor in rule D.1207; ~~or~~
- (3) The limits for an embryo/fetus of a declared pregnant woman in rule D.1208; ~~or~~
- (4) The limits for ~~an individual a~~ member of the public in rule D.1301; ~~or~~
- (5) Any applicable limit in the license or registration; or
- (6) The ALARA air emission constraints ~~for air emissions established under~~ in rule D.1101d. ~~or~~
- iii. Levels of radiation or concentrations of radioactive material in:
- (1) A restricted area ~~in excess of~~ exceeding any applicable ~~limits~~ limit in the license ~~or registration~~; or
- (2) An unrestricted area ~~in excess of~~ exceeding 10 times ~~the any~~ applicable limit ~~set forth in Part D in this part~~ or in the license or registration, whether or not ~~involving exposure of this involves a dose to~~ any individual in excess of the limits in rule D.1301; or
- iv. For licensees subject to ~~the provisions of~~ the U.S. Environmental Protection Agency's generally applicable environmental radiation standards in 40 CFR part 190, levels of radiation or releases of radioactive material ~~in excess of~~ exceeding those standards, or of license conditions related to those standards.
- b. ~~Contents of Reports.~~
- i. Each written report required by ~~D.2203a.~~ shall describe the extent of exposure of ~~individuals to radiation and radioactive material, including,~~ subrule a. of this rule must include, as appropriate:
- (1) A description of the event, including the possible cause and the manufacturer and model number, if applicable, of any equipment that failed or malfunctioned;
- (2) The location of the event;
- (3) The isotopes, quantities, and chemical and physical form of the licensed material;
- (4) The date and time of the event;
- (5) The results of any evaluations or assessments, including:
- (4a) Estimates An estimate of each individual's dose; and
- (2b) The levels of radiation and concentrations of radioactive material ~~involved~~; and
- (3) ~~The cause of the elevated exposures, dose rates, or concentrations; and~~
- (4)(6) ~~Corrective steps~~ Actions taken or planned to ~~ensure against prevent~~ a recurrence, including the schedule for achieving conformance with applicable limits, ALARA the air emission constraints in rule D.1101d, and generally applicable environmental standards, and ~~associated~~ applicable license or registration conditions.

915

Several states specify items (1) through (4) in their rules.

916

917 ii. After filing the written report, the licensee or registrant shall make an additional written
918 report to the department containing any additional substantive information regarding the
919 event within 30 days after the licensee or registrant learns of the new information.

920

This subrule is similar to subrule D.2201(c).

921

922 iii. (1) Each report filed pursuant to D.2203a. shall with the department under this rule must
923 include the name, a unique identification number or social security number, and date
924 of birth for of each occupationally overexposed¹ individual: the name, Social Security
925 account number, and date of birth. ⁴ With respect to the limit for the If the dose to an
926 embryo/fetus exceeds the limit in rule D.1208, the identifiers should be those of the
927 declared pregnant woman.

928

929 (2) The report shall must be prepared so that this the information in subrule b.ii.(1) of
930 this rule is stated contained in a separate and detachable portion part of the report.
931 and must be clearly labeled "Protected Information: Not for Public Disclosure."

932

10 CFR 20.2203(b)(2) states, "Each report filed pursuant to paragraph (a) of this section must include for each occupationally overexposed¹ individual: the name, Social Security account number, and date of birth. The report must be prepared so that this information is stated in a separate and detachable part of the report and must be clearly labeled "Privacy Act Information: Not for Public Disclosure."

¹ With respect to the limit for the embryo-fetus (§ 20.1208), the identifiers should be those of the declared pregnant woman."

The following part of 10 CFR 20.2203 is not appropriate for adoption in state rules.

(c) For holders of an operating license or a combined license for a nuclear power plant, the occurrences included in paragraph (a) of this section must be reported in accordance with the procedures described in §§50.73(b), (c), (d), (e), and (g) of this chapter, and must include the information required by paragraph (b) of this section. Occurrences reported in accordance with §50.73 of this chapter need not be reported by a duplicate report under paragraph (a) of this section.

933

934 ~~c. All licensees or registrants who make reports pursuant to D.2203a. shall submit the report in~~
935 ~~writing to the Agency.~~

936

Adding the phrase "to the department" in subrule a. removes the need for this subrule.

937

938 **Sec. Rule D.2204 - Reports of Planned Special Exposures.**

939

940 The A licensee or registrant shall submit a written report to the Agency department within 30
941 days following any planned special exposure conducted in accordance with as specified in rule
942 D.1206, informing the Agency that a planned special exposure was conducted and indicating
943 The written report must include the date the planned special exposure occurred and the
944 information required by Sec. rule D.2105.

945

946 **Sec. Rule D.2205 - Reports to Individuals of Exceeding Dose Limits.**

947
948 When ~~a licensee or registrant is required, pursuant to rules~~ D.2203, ~~or~~ D.2204, ~~or D.2206~~
949 ~~require a licensee or registrant~~ to report to the ~~Agency any department the~~ exposure of an
950 identified occupationally exposed individual, or an identified member of the public, to radiation or
951 radioactive material, the licensee ~~or registrant~~ shall also provide ~~the individual~~ a ~~copy of the~~
952 report ~~submitted to on his or her exposure data included in~~ the ~~Agency to the individual report~~
953 ~~submitted to the department~~. This report must be transmitted ~~at a time~~ no later than the
954 transmittal to the ~~Agency department~~.
955

19 CFR 20.2205
When a licensee is required by §§20.2203 or 20.2204 to report to the Commission any exposure of an identified occupationally exposed individual, or an identified member of the public, to radiation or radioactive material, the licensee shall also provide the individual a report on his or her exposure data included in the report to Commission. This report must be transmitted no later than the transmittal to the Commission.

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957
On December 4, 2007 in 72 FR 68043, "Expanded Definition of Byproduct Material; Notification of Waiver Termination," the NRC "removes the reference to 10 CFR 20.2206 in 10 CFR 19.13(d) and 10 CFR 20.2205, and consolidates the requirement to report annual dose to the individual into a single requirement in 10 CFR 19.13(b)."

958
959 **Sec. Rule D.2206 - Reports of Individual Monitoring for Licensed Industrial Radiography**
960 **and for Processing or Manufacturing of Radioactive Material for Distribution.**

- 961
962 a. This ~~section rule~~ applies to each person licensed ~~or registered~~ by the ~~Agency department~~ to:
963
964 i. Possess or use ~~sources of radiation byproduct material~~ for ~~purposes of~~ industrial
965 radiography pursuant to Parts C and E of these ~~regulations rules~~; or
966

Part C is licensing of radioactive material. Part E is industrial radiography.

- 967
968 ii. Possess or use ~~at any time~~, for processing or manufacturing for distribution pursuant to
969 Parts ~~C~~ or G of these ~~regulations rules~~, radioactive material in quantities exceeding ~~any~~
970 one ~~or more~~ of the following quantities:
971

Radionuclide	Activity ^{af}	
	GBq	Ci
Cesium-137	37	1
Cobalt-60	37	1
Gold-198	3,700	100
Iodine-131	37	1
Iridium-192	370	10
Krypton-85	37,000	1,000
Promethium-147	370	10
Technetium-99m	37,000	1,000

972
973 ^{af} The ~~Agency department~~ may require as a license condition, or by rule, ~~regulation~~, or
974 order pursuant to ~~rule~~ A.7 ~~of these regulations~~, reports from licensees ~~or registrants~~ who

975 are licensed ~~or registered~~ to use radionuclides not on this list, in quantities sufficient to
976 cause comparable radiation levels.
977

Part C is licensing of radioactive material. Part G is radioactive material in the healing arts.

978
979 b. Each licensee ~~or registrant in a category listed in D.2206a- subject to subrule a. of this rule~~
980 shall submit an annual report of the results of individual monitoring carried out by the
981 licensee ~~or registrant~~ for each individual for whom monitoring was required by rule D.1502
982 during that year. The licensee ~~or registrant~~ may include additional data for individuals for
983 whom monitoring was provided but not required. The licensee ~~or registrant~~ shall use
984 Agency Form Z or equivalent ~~or electronic media containing all the information required by~~
985 Agency Form Z.
986

The NRC considers subrule to be Compatibility Category D which means that it is not required. Some states include this rule and some do not. Since Michigan has a very limited number of facilities that would be required to report, it would not be worthwhile for the state to develop an electronic database that licensees could access to report the data.

987
988 c. The licensee ~~or registrant~~ shall file submit the report required by ~~D.2206b- subrule b. of this~~
989 rule, covering the preceding year, ~~on or before April 30 May 1~~ of each year. ~~The licensee or~~
990 ~~registrant shall submit the report~~ to the Agency department.
991

~~Sec. D.2207 - Notifications and Reports to Individuals.~~

992
993
994 a. ~~Requirements for notification and reports to individuals of exposure to radiation or~~
995 ~~radioactive material are specified in J.13 of these regulations.~~
996
997 b. ~~When a licensee or registrant is required pursuant to D.2203 to report to the Agency any~~
998 ~~exposure of an individual to radiation or radioactive material, the licensee or registrant shall~~
999 ~~also notify the individual. Such notice shall be transmitted at a time not later than the~~
1000 ~~transmittal to the Agency, and shall comply with the provisions of J.13a. of these regulations.~~
1001

Since this rule duplicates the requirements in rules J.13 and D.2203, the NRC eliminated the corresponding 10 CFR 20.2207 in the early 1990's.

1002
1003

On November 8, 2006 in 71 FR 65686, "National Source Tracking of Sealed Sources," the NRC added a new 10 CFR 20.2207. Minor revisions were made on October 19, 2007. The current Part 20 regulation is used as the basic text.

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20 Rule D.2207 - Reports of Transactions Involving Nationally Tracked Radioactive Sources.

Each licensee who manufactures, transfers, receives, disassembles, or disposes of a nationally tracked source shall complete and submit a National Source Tracking Transaction Report as specified in paragraphs subrules a. through e. of this section rule for each type of transaction.

a. Each licensee who manufactures a nationally tracked source shall complete and submit a National Source Tracking Transaction Report. The report must include the following information:

- 1015 i. The name, address, and license number of the reporting licensee;
1016 ii. The name of the individual preparing the report;
1017 iii. The manufacturer, model, and serial number of the source;
1018 iv. The radioactive material in the source;
1019 v. The initial source strength in becquerels (curies) at the time of manufacture; and
1020 vi. The manufacture date of the source.
1021
- 1022 b. Each licensee that transfers a nationally tracked source to another person shall complete
1023 and submit a National Source Tracking Transaction Report. The report must include the
1024 following information:
1025 i. The name, address, and license number of the reporting licensee;
1026 ii. The name of the individual preparing the report;
1027 iii. The name and license number of the recipient facility and the shipping address;
1028 iv. The manufacturer, model, and serial number of the source or, if not available, other
1029 information to uniquely identify the source;
1030 v. The radioactive material in the source;
1031 vi. The initial or current source strength in becquerels (curies);
1032 vii. The date for which the source strength is reported;
1033 viii. The shipping date;
1034 ix. The estimated arrival date; and
1035 x. For nationally tracked sources transferred as waste under a Uniform Low-Level
1036 Radioactive Waste Manifest, the waste manifest number and the container identification
1037 of the container with the nationally tracked source.
1038
- 1039 c. Each licensee that receives a nationally tracked source shall complete and submit a
1040 National Source Tracking Transaction Report. The report must include the following
1041 information:
1042 i. The name, address, and license number of the reporting licensee;
1043 ii. The name of the individual preparing the report;
1044 iii. The name, address, and license number of the person that provided the source;
1045 iv. The manufacturer, model, and serial number of the source or, if not available, other
1046 information to uniquely identify the source;
1047 v. The radioactive material in the source;
1048 vi. The initial or current source strength in becquerels (curies);
1049 vii. The date for which the source strength is reported;
1050 viii. The date of receipt; and
1051 ix. For material received under a Uniform Low-Level Radioactive Waste Manifest, the waste
1052 manifest number and the container identification with the nationally tracked source.
1053
- 1054 d. Each licensee that disassembles a nationally tracked source shall complete and submit a
1055 National Source Tracking Transaction Report. The report must include the following
1056 information:
1057 i. The name, address, and license number of the reporting licensee;
1058 ii. The name of the individual preparing the report;
1059 iii. The manufacturer, model, and serial number of the source or, if not available, other
1060 information to uniquely identify the source;
1061 iv. The radioactive material in the source;
1062 v. The initial or current source strength in becquerels (curies);
1063 vi. The date for which the source strength is reported;
1064 vii. The **disassemble** date **of** the source was disassembled.
1065

- 1066 e. Each licensee who disposes of a nationally tracked source shall complete and submit a
1067 National Source Tracking Transaction Report. The report must include the following
1068 information:
1069 i. The name, address, and license number of the reporting licensee;
1070 ii. The name of the individual preparing the report;
1071 iii. The waste manifest number;
1072 iv. The container identification with the nationally tracked source.
1073 v. The date of disposal; and
1074 vi. The method of disposal.
1075
- 1076 f. The ~~licensee shall submit the~~ reports ~~discussed required~~ in ~~paragraphs subrules~~ a. through
1077 e. of this ~~section must be submitted rule~~ by the close of the next business day after the
1078 transaction. A single report may be submitted for multiple sources and transactions. The
1079 reports must be submitted to the National Source Tracking System by using:
1080 i. The on-line National Source Tracking System;
1081 ii. ~~Electronically~~ Electronic transmission using a computer-readable format;
1082 iii. ~~By facsimile~~ Facsimile;
1083 iv. ~~By mail~~ Mail, sent to the address specified on the National Source Tracking Transaction
1084 Report Form (NRC Form 748); or
1085 v. ~~By telephone~~ Telephone with ~~followup~~ written confirmation by facsimile or mail.
1086
- 1087 g. Each licensee shall correct any error in previously ~~filed~~ reports or file a new report for any
1088 missed transaction within 5 business days of the discovery of the error or missed
1089 transaction. ~~Such~~ These errors may be detected by a variety of methods such as
1090 administrative reviews or by physical inventories required by ~~regulation~~ these rules.
1091
- 1092 ~~h.~~ In addition, each Each licensee shall reconcile the inventory of nationally tracked sources
1093 possessed by the licensee against that licensee's data in the National Source Tracking
1094 System. The reconciliation must be conducted during ~~the month of~~ January ~~in of~~ each year.
1095 The reconciliation process must include resolving any discrepancies between the National
1096 Source Tracking System and the actual inventory by filing the reports ~~identified required~~ by
1097 ~~paragraphs subrules~~ a. through e. of this ~~section rule~~. ~~By January 31~~ Before February 1 of
1098 each year, each licensee ~~must shall~~ submit to the National Source Tracking System
1099 confirmation that the data in the National Source Tracking System is correct.
1100
- ~~hi.~~ ~~Each licensee that possesses Category 1 nationally tracked sources shall report its initial~~
1101 ~~inventory of Category 1 nationally tracked sources to the National Source Tracking System~~
1102 ~~by January 31, 2009. Each licensee that possesses Category 2 nationally tracked sources~~
1103 ~~shall report its initial inventory of Category 2 nationally tracked sources to the National~~
1104 ~~Source Tracking System by January 31, 2009. The information may be submitted by using~~
1105 ~~any of the methods identified by paragraph f.i. through f.iv. of this section. The initial~~
1106 ~~inventory report must include the following information:~~
1107 ~~i.~~ ~~The name, address, and license number of the reporting licensee;~~
1108 ~~ii.~~ ~~The name of the individual preparing the report;~~
1109 ~~iii.~~ ~~The manufacturer, model, and serial number of each nationally tracked source or, if not~~
1110 ~~available, other information to uniquely identify the source;~~
1111 ~~iv.~~ ~~The radioactive material in the sealed source;~~
1112 ~~v.~~ ~~The initial or current source strength in becquerels (curies); and~~
1113 ~~vi.~~ ~~The date for which the source strength is reported.~~
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Since the initial inventory date has passed, the above subrule may be able to be omitted. Virginia's rules do not include this subrule.

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~~**Sec. D.2208--Reports of Leaking or Contaminated Sealed Sources.**~~

~~The licensee or registrant shall file a report within 5 working days with the Agency if the test for leakage or contamination [required pursuant to D.1310] indicates a sealed source is leaking or contaminated. The report shall include the equipment involved, the test results and the corrective action taken.~~

Reporting requirements for leaking sources are specified in the Part licensing that use of the radiation source.

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Subpart N--Additional Requirements

~~**Sec. D.2301--Vacating Premises.**~~

~~Each specific licensee or registrant shall, no less than 30 days before vacating or relinquishing possession or control of premises which may have been contaminated with radioactive material as a result of his activities, notify the Agency in writing of intent to vacate. When deemed necessary by the Agency, the licensee shall decontaminate the premises in such a manner as the Agency may specify.~~

This notification requirement will be included in Part O, "Decommissioning."

1135

The following 10 CFR 20 regulations are included in Part A of the draft rules.

Subpart N--Exemptions and Additional Requirements
20.2301 Applications for exemptions.
20.2302 Additional requirements.

Subpart O--Enforcement
20.2401 Violations.
20.2402 Criminal penalties.

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We propose that the following appendices incorporate the 10 CFR Appendices by reference.

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Appendices

Rule D.2400. Availability of referenced documents.

"Standards for Protection Against Radiation," 10 C.F.R. part 20 (2009) are referenced in Appendices A, B, C, and G. These documents are available for no cost from either of the following sources:

a. The website of the Michigan Department of Community Health, Radiation Safety Section at <http://www.michigan.gov/rss>.

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b. [The website of the nuclear regulatory commission at http://www.nrc.gov](http://www.nrc.gov).

Rule D.2401. Appendix A - Assigned Protection Factors for Respirators.

[“Appendix A - Assigned Protection Factors for Respirators.” 10 CFR Part 20 \(2009\), is incorporated by reference in these rules.](#)

Rule D.2402. Appendix B - Annual Limits on Intake (ALIs) and Derived Air Concentrations (DACs) of Radionuclides for Occupational Exposure; Effluent Concentrations; Concentrations for Release to Sanitary Sewerage.

[“Appendix B - Annual Limits on Intake \(ALIs\) and Derived Air Concentrations \(DACs\) of Radionuclides for Occupational Exposure; Effluent Concentrations; Concentrations for Release to Sewerage,” 10 CFR Part 20 \(2009\), is incorporated by reference in these rules.](#)

Rule D.2403. Appendix C - Quantities of Licensed or Registered Material Requiring Labeling.

[“Appendix C - Quantities of Licensed Material Requiring Labeling,” 10 CFR Part 20 \(2009\), is incorporated by reference in these rules.](#)

In the SSR, Appendix D is designated “Reserved.” In 10 CFR 20, Appendix D lists the contact information for NRC headquarters and the regional offices and is not appropriate for adoption in state rules.

In the SSR, Appendix E is designated “Reserved.” In 10 CFR 20, Appendix E lists the Terabecquerel quantities at which a source is designated as a “Nationally Tracked Source.” In 10 CFR 20, Appendix E is only mentioned in the definition of “Nationally Tracked Source.” Appendix E will be included in Part A where “Nationally Tracked Source” will be defined.

In the SSR, Appendix F has the quantities for use with decommissioning and will be included in Part O, “Decommissioning.” In 10 CFR 20, Appendix F is designated “Reserved.”

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Rule D.2404. Appendix G - Requirements for Transfers of Low-Level Radioactive Waste Intended for Disposal at Licensed Land Disposal Facilities and Manifests.

[“Appendix G - Requirements for Transfers of Low-Level Radioactive Waste Intended for Disposal at Licensed Land Disposal Facilities and Manifests” 10 CFR Part 20 \(2009\), is incorporated by reference in these rules.](#)