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July 26, 2011

Terrence Reis, Acting Deputy Director
Division of Materials Safety and State Agreements
Office of Federal and State Materials and
Environmental Management Programs
U.S. Nuclear Regulatory Commission
T8-E24, Washington, D.C. 20555-0001

Dear Mr. Reis:
Enclosed is Nevada's response to SRS 10/05/10 and RATS IDs 2009-1 and 2011-1, comprising of the following submissions for your review:

#	RATS ID	TITLE	PROPOSED/FINAL /CLARIFICATION	LOCATION OF RESPONSE
1	1995-3	Low-Level Waste Shipment Manifest Information and Reporting (10 CFR 20.2006(a)(1)	Proposed	Proposed Regulations PR 2011-1 – Sec. C.
2	1999-3	Respiratory Protection and Controls to Restrict Internal Exposures 10 CFR 20 - Definitions	Clarification	ML101690074 , SRS 07/14/10 & SRS 10/05/10.
3	2001-1	Requirements for Certain Generally Licensed Industrial Devices Containing Byproduct Material 10 CFR 30, 31, 32	Clarification	NAC 459.218, SRS 10/05/10 & SRS 10/29/07
4	2002-2	Medical Use of Byproduct Material 10 CFR 20, 32, and 35 (10 CFR 20.1301(c))	Proposed	Proposed Regulations PR 2011-1 – Sec. D.
5	2005-2	Medical Use of Byproduct Material--Recognition of Specialty Boards - 10 CFR 35	Final	R185-08A, Sec. 74
6	2006-1	Minor Amendments- Part 20, 30, 32, 35, 40, and 70	Final	RATS ID 2006-1
7	2007-1	Medical Use of Byproduct Material - Minor Corrections and Clarifications 10 CFR Parts 32 and 35	Final	RATS ID 2007-1
8	2007-3	Requirements for Expanded Definition of Byproduct Material 10 CFR Parts 20, 30, 31, 32, 33, 35, 50, 61, 62, 72, 110, 150, 170, and 171	Final	RATS ID 2007-3
9	2008-1	Occupational Dose Records, Labeling Containers, and Total Effective Dose Equivalent Parts 19 and 20	Final	RATS ID 2008-1
10	2009-1	Medical Use of Byproduct Material—Authorized User Clarification, Part 35	Proposed	Proposed Regulations PR 2011-1, Sec. A

#	RATS ID	TITLE	PROPOSED/FINAL /CLARIFICATION	LOCATION OF RESPONSE
11	2011-1	Decommissioning Planning, Parts 20, 30, 40, and 70	Proposed	Proposed Regulations PR 2011-1, Sec. B

We believe that adoption of these revisions satisfies the compatibility and health and safety categories established in the Office of Federal and State Materials and Environmental Management Programs (FSME) Procedure SA-200.

We would also like to point out, for the record, Nevada's unique legislative process. When a set of regulations is adopted by the Board of Medical Examiners and signed by the Secretary of State, it becomes effective, final and legally binding with the force of the law behind it. From this point onwards, it is enforceable. This is the state of the regulations in R185-08A, that became effective on May 7, 2010. It will take between 1-3 years for these to be codified and incorporated into the Nevada Administrative Code. In the meanwhile they continue to be legally binding, since their adoption in 2010, right up through codification in the near future and beyond.

If you have any questions, please feel free to contact Sneha Ravikumar, Radiological Staff Specialist at 775-687-7528 or at sravikumar@health.nv.gov.

Sincerely,

Karen K. Beckley, M.S., M.P.A
Manager
Radiation Control Program
Bureau of Health Care Quality and Compliance
Nevada State Health Division

Attachments:
1. Instructions
2. Regulation Binder – 2011 comprising of:
    a. Response to SRS 10/05/10 & RATS IDs 2009-1 & 2011-1
    b. Proposed Regulations PR 2011-1
    c. R185-08A
    d. NAC 459
    e. RATS ID 2006-1
    f. RATS ID 2007-1
    g. RATS ID 2007-3
    h. RATS ID 2008-1
    i. SRS 10/29/07
    j. SRS 10/05/10
    k. SRS 07/14/10
    l. ML101690074

SR/nm

Instructions for Navigating the Regulation Binder -2011

1. **Response to SRS 10/05/10 & RATS IDs 2009-1 & 2011-1**, which makes up the first two pages in the binder, will be the basis for review.
2. Under the column titled "**LOCATION,**" boxes enclosed in dotted green lines are linked to the destination sections of the binder.
3. In the Toolbar, on top, choose the hand symbol  . Using the hand symbol, click inside the dotted green lines to be taken directly to specific destinations in the binder
4. To get back to the starting page each time, use the hand symbol and click in the little yellow squares placed conveniently in the top right and bottom right corners of every page.

#	RATS ID	TITLE	LOCATION	COMMENTS
1	**1995-3** **Proposed**	Low-Level Waste Shipment Manifest Information and Reporting (10 CFR 20.2006(a)(1)	**Proposed Regulations PR 2011-1** -**Section C** – (R185-08A – Sec.76 –NAC 459.313)	
2	**1999-3** Final (10 CFR 20.1003) Clarification **Adopted**	Respiratory Protection and Controls to Restrict Internal Exposures 10 CFR 20 - Definitions	**SRS 10/05/10** inaccurately states that there are comments. All definitions have been adopted in **R185-08A – Sections 3, 7, 11 & 12.**	**SRS 07/14/10** accurately states that there are no comments since all deficiencies were resolved in **ML101690074**.
3	**2001-1** 10CFR 31.6 Clarification **Adopted**	Requirements for Certain Generally Licensed Industrial Devices Containing Byproduct Material 10 CFR 30, 31, 32	Has been adopted. More restrictive than the NRC. (**NAC 459.218**).	SRS 10/29/07 & SRS 10/05/10
4	**2002-2** **Proposed**	Medical Use of Byproduct Material 10 CFR 20, 32, and 35 (10 CFR 20.1301(c))	**Proposed Regulations PR 2011-1** -**Section D** – (NAC 459. 335.2(b)) (Nevada substituted licensee for authorized user, based on previous direction by NRC)	'Licensee' has been replaced by 'Authorized User'.
5	**2005-2** **Final** **Adopted**	Medical Use of Byproduct Material-- Recognition of Specialty Boards - 10 CFR 35	10 CFR 35, as on 11/11/07, has been adopted in **R185-08A, Section 74**	
6	**2006-1** **Final** **Adopted**	Minor Amendments- Part 20, 30, 32, 35, 40, and 70	Has been adopted. Please refer to **RATS ID 2006-1** for details.	(Attachment)
7	**2007-1** **Final** **Adopted**	Medical Use of Byproduct Material - Minor Corrections and Clarifications 10 CFR Parts 32 and 35	Has been adopted. Please refer to **RATS ID 2007-1** for details.	(Attachment)
8	**2007-3** **Final** **Adopted**	Requirements for Expanded Definition of Byproduct Material 10 CFR Parts 20, 30, 31, 32, 33, 35, 50, 61, 62, 72, 110, 150, 170, and 171	Has been adopted. Please refer to **RATS ID 2007-3** for details.	(Attachment)
9	**2008-1** **Final** **Adopted**	Occupational Dose Records, Labeling Containers, and Total Effective Dose Equivalent Parts 19 and 20	Has been adopted. Please refer to **RATS ID 2008-1** for details.	(Attachment)
10	**2009-1**	Medical Use of Byproduct Material—	**Proposed Regulations PR**	

#	RATS ID	TITLE	LOCATION	COMMENTS
	Proposed	Authorized User Clarification, Part 35	**2011-1** - **Section A** – (R185-08A – Section 74 - NAC 459.3062)	
11	**2011-1 Proposed**	Decommissioning Planning, Parts 20, 30, 40, and 70	**Proposed Regulations PR 2011-1**-(**Sections B: 1- 6)** 1. 10 CFR 20.1403(c) – **Section B.1** – [NAC 459.318.1.(2), 4.(a)] 2. 10 CFR 20.1404(a) – **Section B.2** – [NAC 459.3182.1.(c), (d)] 3. 10 CFR 20.1406(c) – **Section B.3** – [NAC 459.3174.3] 4. 10 CFR 20.1501(a), (b) – **Section B.4** – [R185-08A: Section 78 - NAC 459.337.1, 3] 5. 10 CFR 30.34(b) – **Section B.5** – [R185-08A: Section 58 – NAC 459.198.2(b), 4, 5] 6. 10 CFR 30.35 (e) – **Section B.6** – [R185-08A – Section 57 – NAC 459.1955.10]	

PROPOSED REGULATIONS – PR 2011-1

KEY

Newly added

~~Newly Redacted~~

Already added in R185-08A (Adopted, not codified)

~~Already redacted in R185-08A (Adopted, not codified)~~

A. 10 CFR 35 : [RATS ID 2009-1]

R185-08A: Sec. 74. NAC 459.3062 is hereby amended to read as follows:

459.3062 1. The provisions of 10 C.F.R. Part 35, ***~~as they existed on [September 16, 2004,]November 30, 2007,~~*** are hereby adopted by reference, subject to the following:
(a) 10 C.F.R. §§ 35.8, ***35.10(a), 35.11(c) ~~[(2),]~~ (1) 35.13(a)(1), 35.13(a)(2), 35.13(b)(5), 35.14(a),35.15(f), 35.57(b)(3),*** 35.4001 and 35.4002 are not adopted by reference.
(b) Except as otherwise provided in this chapter, the implementation date ~~[described]~~ ***specified*** in 10 C.F.R. §§ 35.10(a) and 35.10(d) is November 13, 2006.
(c) Except as otherwise provided in this chapter, the October 24, 2002, date ~~[described]~~ ***specified*** in 10 C.F.R. § 35.57(a)(1) shall be deemed to mean November 13, 2006.
(d) ***Except as otherwise provided in this chapter, the April 29, 2005, date specified in 10 C.F.R. § 35.57(a)(2) shall be deemed to mean April 29, 2008.***
(e) Except as otherwise provided in this section, any reference in 10 C.F.R. Part 35 to:
(1) "10 CFR Part 19" or "10 CFR 19" shall be deemed to mean "NAC 459.780 to 459.794, inclusive."
(2) "10 CFR 19.12" or "§ 19.12" shall be deemed to mean "NAC 459.784."
(3) "10 CFR Part 20" or "10 CFR 20" shall be deemed to mean "NAC 459.320 to 459.374, inclusive."

(4) "10 CFR 20.1101" or "§ 20.1101" shall be deemed to mean "paragraph (a) of subsection 1 of NAC 459.321."

(5) "10 CFR 20.1301(a)(1)" or "§ 20.1301(a)(1)" shall be deemed to mean "paragraph (a) of subsection 1 of NAC 459.335."
(6) "10 CFR 20.1301(c)" or "§ 20.1301(c)" shall be deemed to mean ~~[~~"paragraph (c) of subsection 1~~]~~ ***"subsection 2*** of NAC 459.335."
(7) "10 CFR 20.1501" or "§ 20.1501" shall be deemed to mean "NAC 459.337."
(8) "10 CFR Part 30" or "10 CFR 30" shall be deemed to mean "NAC 459.180 to 459.313, inclusive."
(9) "10 CFR 30.34(b)" or "§ 30.34(b)" shall be deemed to mean "subsection 2 of NAC 459.198."
(10) "10 CFR 30.6" or "§ 30.6" shall be deemed to mean "NAC 459.134."
(11) "10 CFR 32.72(b)(4)" or "§ 32.72(b)(4)" shall be deemed to mean "paragraph (c) of subsection 2 of NAC 459.300."
(12) "10 CFR Part 33" or "10 CFR 33" shall be deemed to mean "NAC 459.262 to 459.274, inclusive."
(13) "10 CFR 33.13" or "§ 33.13" shall be deemed to mean "NAC 459.268."
(14) "10 CFR Part 170," "10 CFR 170," "10 CFR Part 171" or "10 CFR 171" shall be deemed to mean "NAC 459.310."
(15) "Byproduct material" shall be deemed a reference to "radioactive material."
(16) "Commission" or "NRC" shall be deemed a reference to "Division."

(17) "Commission's regulations," "federal regulations" or "NRC regulations" shall be deemed a reference to "NAC 459.010 to 459.950, inclusive ~~[."]~~ ***, and sections 2 to 45, inclusive, of this regulation."***
(18) "NRC Form 313" shall be deemed a reference to ~~***"NRC Form 5," Application for Radioactive Material License,***~~ ~~[described in NAC 459.2434.]~~ ~~***specified by the Division[.]***~~***the Medical Use of Radioactive Materials License Application Form which is found at http://health.nv.gov/HCQC_Radiological_Forms.htm.***
(19) "NRC license" shall be deemed a reference to "license issued by the Division pursuant to NAC 459.010 to 459.950, inclusive ~~[."]~~ ***, and sections 2 to 45, inclusive, of this regulation."***
(20) "NRC Operations Center ~~["]~~ ***," "NRC Regional Office listed in § 30.6"*** or "Director, Office of Nuclear Safety and Safeguards" shall be deemed a reference to "the provisions of NAC 459.134 and the contact information described in the State of Nevada Radiological Emergency Response Plan."
(21) "NRC or an Agreement State," "Commission or an Agreement State" or "Commission or by an Agreement State" shall be deemed a reference to "Division, Nuclear Regulatory Commission or an agreement state."
(22) The text of 10 C.F.R. § 35.491(b)(3) shall be deemed to read "Has obtained written attestation, signed by a preceptor authorized user who meets the requirements in 35.57, § 35.490 or §35.491 or equivalent requirements of an Agreement State, that the individual has satisfactorily completed the requirements in paragraph (b)(1) and (b)(2) of this section and has achieved a level of competency sufficient to function independently as an authorized user of strontium-90 for ophthalmic use."

~~(c)]~~ ***(f)*** The full text of any sentence that contains a reference to "10 CFR Part 21," "10 CFR 21," "10 CFR 30.7," "§ 30.7," "10 CFR 30.9," "§ 30.9," "10 CFR 30.10" or "§ 30.10" shall be deemed omitted.

2. A copy of the volume containing 10 C.F.R. Part 35 may be obtained
~~[*by mail from the Superintendent of Documents, United States Government Printing Office, [Washington, D.C. 20402-9325,] P.O. Box 979050, St. Louis, Missouri 63197-9000, or by toll-free telephone at(866) 512-1800, at a cost of [$61,] $67, or free of charge at the Internet address http://www.gpoaccess.gov/cfr/index.html.]*~~
online, free of charge, at http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=f40742ec5c8c22b39d190d7a40c767db&rgn=div5&view=text&node=10:1.0.1.1.25&idno=10.

B. RATS ID 2011-1

1. 20.1403(C):

NAC 459.318 Property of decommissioned facility: Eligibility for release for restricted use. (NRS 459.030, 459.201**)**

1. The property of a decommissioned facility that is not eligible for release for unrestricted use is eligible for release for restricted use if the licensee:

(a) Demonstrates that further reductions in residual radioactivity necessary to comply with NAC 459.3178:

(1) Would result in net increase in harm to the public or environment; or

(2) Were not being made because the levels of residual radioactivity associated with restricted conditions are as low as is reasonably achievable. ***Determination of the levels which are as low as reasonably achievable (ALARA) must take into account consideration of any detriments, such as traffic accidents, expected to potentially result from decontamination and waste disposal;***

(b) Establishes that the licensee has provided for institutional controls that:

(1) Are legally enforceable;

(2) Provide reasonable assurance that the average member of the critical group will receive a total effective dose equivalent from residual radioactivity at the site distinguishable from background radiation that does not exceed 25 millirem (0.25 millisievert) per year; and

(3) Will not impose an undue burden on the community to be affected by the decommissioning or any person or institution therein.

(c) Provides, by a method set forth in subsection 4, sufficient financial assurance to enable a third party, including a governmental custodian of the site, to assume and carry out responsibilities for any necessary control and maintenance of the site.
(d) Submits to the Division a decommissioning plan that:
(1) Declares the intent of the licensee to decommission in accordance with NAC 459.1955;
(2) Specifies that the licensee intends to decommission by restricting the use of the site; and
(3) Documents how the advice of persons and institutions in the community that may be affected by the decommissioning has been sought, analyzed and, if appropriate, incorporated into the decommissioning plan.
(e) Provides reasonable assurance that the residual radioactivity at the site distinguished from background radiation has been reduced to levels such that, even in the absence of the institutional controls required by paragraph (b), the average member of the critical group will receive a total effective dose equivalent, from residual radioactivity at the site distinguishable from background radiation, that:
(1) Is as low as is reasonably achievable; and
(2) Except as otherwise provided in subsection 2, does not exceed 100 millirem (1 millisievert) per year.
2. A licensee may satisfy the requirements of subparagraph (2) of paragraph (e) of subsection 1 if the licensee:
(a) Provides reasonable assurance that the average member of the critical group will receive a total effective dose equivalent, from residual radioactivity at the site distinguishable from background radiation, that does not exceed 500 millirem (5 millisieverts) per year;
(b) Demonstrates that reducing residual radioactivity to the level necessary to comply with the 100 millirem (1 millisievert) requirement of subparagraph (2) of paragraph (e) of subsection 1 is not technically feasible, would be prohibitively expensive, or would likely result in net harm to the public or environment;
(c) Makes provisions for durable institutional controls; and
(d) Provides, by a mechanism set forth in subsection 4, sufficient financial assurance to enable a third party, including a governmental custodian of the site:
(1) To carry out periodic rechecks of the site not less frequently than every 5 years to ensure that the institutional controls remain in place as necessary to meet the criteria of paragraph (b) of subsection 1; and
(2) To assume and carry out responsibility for any necessary control and maintenance of those controls.

3. Before a licensee may submit to the Division a decommissioning plan pursuant to subsection 1, the licensee must seek advice from natural persons and institutions in the community who may be affected by the decommissioning concerning whether the licensee's proposed plan of decommissioning satisfies each of the requirements of paragraphs (b) and (c) of subsection 1.
4. A licensee, to satisfy the requirements of this section relating to the provision of financial assurance, may use any of the following methods:
(a) The deposit of an amount of money in cash or liquid assets into ~~*an account*~~ ***a trust*** that is segregated from the assets of the licensee and outside the administrative control of the licensee ~~*as described in paragraph (a) of subsection 11 of NAC 459.1955;*~~ ***and in which the adequacy of the trust funds is to be assessed based on an assumed annual one percent real rate of return or investment;***

~~*(b) Provision of a surety, including insurance, or other guarantee, as described in paragraph (b) of subsection 11 of NAC 459.1955*~~;

~~(c)~~ ***(b)*** If the licensee is a federal, state or local governmental entity, a statement of intent as described in paragraph (d) of subsection 11 of NAC 459.1955; or

~~(d)~~ ***(c)*** If a federal, state or local governmental entity is assuming custody and ownership of the site, any arrangement or mechanism for financial assurance that the governmental entity determines is adequate.

2. 20.1404 (A)

NAC 459.3182 Property of decommissioned facility: Alternate criteria for release for restricted or unrestricted use. (NRS 459.030)

1. The Division may terminate a license and release the property of a decommissioned facility for restricted or unrestricted use using alternate criteria greater than the dose criterion of 25 millirem (0.25 millisievert) per year set forth in NAC 459.3178 and paragraph (b) of subsection 1 of NAC 459.318 if the licensee:

(a) By submitting an analysis of possible sources of exposure, provides reasonable assurance that:

(1) The public health and safety will continue to be protected; and

(2) It is unlikely that the dose from all man-made sources combined, other than medical, would be more than the limit of 0.1 rem (1 millisievert) per year set forth in NAC 459.335;

(b) Has employed, to the extent practical, restrictions on site use according to the provisions of NAC 459.318 in minimizing exposures at the site;

(c) Reduces doses to levels that are as low as is reasonably achievable***, taking into consideration any detriments such as traffic accidents expected to potentially result from decontamination and waste disposal; and***

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

~~(d)~~ ***(e)*** Submits to the Division a decommissioning plan that:

(1) Declares the intent of the licensee to decommission in accordance with NAC 459.1955;

(2) Specifies that the licensee proposes to decommission pursuant to the alternate criteria provisions of this section; and

(3) Documents how the advice of natural persons and institutions in the community that may be affected by the decommissioning has been sought, analyzed and, if appropriate, incorporated into the decommissioning plan.

2. To satisfy the public comment requirement of subparagraph (3) of paragraph (d) of subsection 1, a licensee shall:

(a) Provide an opportunity for participation by representatives of a broad cross section of community interests;

(b) Provide an opportunity for a comprehensive, collective discussion on the issues by the participants represented; and
(c) Make publicly available a summary of the results of all such discussions, including, without limitation:
(1) A description of the individual viewpoints of the participants on the issues; and
(2) The extent of agreement and disagreement among the participants on the issues.

3. Before the Division terminates a license using the alternate criteria of this section, the Division will consider the recommendations of the staff of the Division concerning any comments provided by the Environmental Protection Agency and any public comments submitted pursuant to NAC 459.3184.

3. 20.1406(C):

NAC 459.3174 Requirements for issuance of any license – *Minimization of contamination*. **(**NRS 459.030**,** 459.201**)** An applicant for any license issued by the Division pursuant to NAC 459.010 to 459.950, inclusive, except an applicant for the renewal of a license, must describe in the application how facility design and procedures for operation will:
1. Minimize, to the extent practicable, the:
(a) Contamination of the facility and environment; and
(b) Generation of radioactive waste; and
2. Facilitate eventual decommissioning.

3.Licensees shall, to the extent practical, conduct operations to minimize the introduction of residual radioactivity into the site, including the subsurface, in accordance with the existing radiation protection requirements in NAC 459.321 and radiological criteria for license termination pursuant to NAC 459.316 to 459.3184.

4. 20.1501(A) & (B):

R185-08A:Sec. 78. NAC 459.337 is hereby amended to read as follows:
459.337
1. Each licensee and registrant shall make, or cause to be made, ***surveys of areas, including the subsurface, that:***
(a) Are necessary for the licensee or registrant to comply with NAC 459.010 to 459.950, inclusive ~~[.]~~ , ***and sections 2 to 45, inclusive, of this regulation***; and
(b) Are necessary under the circumstances to evaluate:
(1) The magnitude and extent of radiation levels;
(2) Concentrations or quantities ***of ~~radioactive material~~ residual radioactivity***; and
(3) The potential radiological hazards ***of the radiation levels and residual radioactivity detected.***

2. ***The Division may exempt a licensee or registrant from the requirements of subsection 1 if the Division determines that the exemption will not result in a significant risk to public health and safety.***

3.Notwithstanding NAC 459.3645.1, records from surveys describing the location and amount of subsurface residual radioactivity identified at the site must be kept with records important for decommissioning, and such records must be retained in accordance with NAC 459.1955.12.

~~3.~~ ***4*** The licensee or registrant shall ensure that instruments and equipment used for quantitative radiation measurements are calibrated for the radiation measured at intervals not to exceed 12 months.

4. 5. All personnel dosimeters, except for direct and indirect reading pocket ionization chambers and those dosimeters used to measure the dose to any extremity, that require processing to determine the dose of radiation and that are used by licensees and registrants to comply with NAC 459.325, with other applicable provisions of NAC 459.010 to 459.950, inclusive, ***and sections 2 to 45, inclusive, of this regulation*** or with conditions specified in a license or registration must be processed and evaluated by a dosimetry processor who is accredited by the National Voluntary Laboratory Accreditation Program of the National Institute of Standards and Technology for the type of radiation or radiations included in the program that most closely approximate the type of radiation for which the person wearing the dosimeter is monitored.

~~5~~. ***6***. The licensee or registrant shall ensure that adequate precautions are taken to prevent a deceptive exposure of personnel monitoring equipment.

5. 30.34.(B)

R185-08A:**Sec. 58.** NAC 459.198 is hereby amended to read as follows:

459.198 1. Each license issued pursuant to NAC 459.180 to 459.950, inclusive, ***and sections 20 to 45, inclusive, of this regulation*** is subject to all the provisions of chapter 459 of NRS, now or hereafter in effect, and to all regulations and orders of the Division.

2.***(a)*** No license issued or granted under NAC 459.180 to 459.950, inclusive, ***and sections 20 to 45, inclusive, of this regulation*** or right to possess or utilize radioactive material granted by any license issued pursuant to those provisions, may be transferred, assigned or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of any license to any person unless the Division, after securing full information , finds that the transfer is in accordance with the provisions of chapter 459 of NRS and gives its consent in writing.

(b). An application for transfer of license must include:

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

(ii) Financial assurance for decommissioning information required by NAC 459.1955.

3. Each person licensed by the Division pursuant to NAC 459.180 to 459.950, inclusive, ***and sections 20 to 45, inclusive, of this regulation*** or each person seeking a license, shall:
(a) Confine his use and possession of the material licensed to the locations and purposes authorized in the license.
(b) Inform the Division in writing before the sale or lease of his business if the transaction involves the transfer of a source of radiation to another person.
(c) Inform the Division, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under Title 11 of the United States Code or the appropriate chapter of NRS by or against:
(1) The licensee;
(2) An entity, as that term is defined in 11 U.S.C. § 101(15), which controls the licensee or which lists the licensee as a property of the estate of the entity; or
(3) An affiliate, as that term is defined in 11 U.S.C. § 101(2), of the licensee.
(d) Keep records of information important to the safe and effective decommissioning of the facility where the radioactive material is located in a location identified to the Division until the license is terminated by the Division. If records of information relevant to decommissioning are kept for other purposes, references to ~~[these]~~ ***those*** records and their locations may be used. Such information must include:
(1) Records of spills or other unusual occurrences involving the spread of contamination in or around the facility, the equipment of the facility or the site of the facility. ~~[These]~~ ***The*** records may be limited to instances when contamination remains after any cleanup procedures or when there is a reasonable likelihood that contaminants may have spread to inaccessible areas **,** including possible seepage into porous materials such as concrete. ~~[These]~~ ***The*** records must include any information known to the licensee on the identification of nuclides, quantities, forms and concentrations involved.
(2) Any available drawings of structures and equipment of the facility, as originally built and as modified, which are located in restricted areas where radioactive materials are used or stored, and of locations of inaccessible areas to which contaminants may spread, such as buried pipes which may be subject to contamination. If drawings are not available, the licensee shall provide to the Division other appropriate records of information concerning these areas.
(3) Records of any performance of an estimate of the costs of decommissioning for incorporation in a plan for financing the decommissioning and any records of the method used for assuring the availability of money for the costs of decommissioning the facility.

4. Each person licensed by the Division pursuant to NAC 459.180 to 459.950, inclusive, ***and sections 20 to 45, inclusive, of this regulation*** who uses a portable gauge shall use ***the following when the gauge is not under the control and constant surveillance of the licensee:***
(a)A minimum of two independent physical controls that form tangible barriers to secure the portable gauge from unauthorized removal; ***and*** ~~***when the portable gauge is not under the control and constant surveillance of the licensee[.]***~~
(b)Trigger locks to prevent accidental exposure to radiation.

5. Each person licensed by the Division pursuant to NAC 459.180 to 459.950, inclusive,and sections 20 to 45, inclusive, of this regulation shall conduct a physical inventory every six months or in accordance with state and federal regulations, whichever is more restrictive, to account for all sources and devices received and possessed under the license. Records of inventories shall be maintained for three years from the date of each inventory and shall include the quantities and kinds of radioactive material, manufacturer's name and model numbers, location of the sources and devices, and the date of the inventory.

~~[5]~~. 6.. Each person licensed by the Division pursuant to NAC 459.180 to 459.950, inclusive, and sections 20 to 45, inclusive, of this regulation who prepares technetium-99m radiopharmaceuticals from molybdenum-99 and technetium-99m generators or who prepares rubidium-82 from strontium-82 and rubidium-82 generators shall:
(a) Test the generator eluates for molybdenum-99 breakthrough or contamination by strontium-82 and strontium-85, respectively, pursuant to 10 C.F.R. § 35.204; and
(b) Record the results of each test and retain each record for at least 3 years after the record is made.
6. Each licensee authorized pursuant to NAC 459.236 to produce positron emission tomography radioactive drugs for noncommercial distribution to medical use licensees in its consortium shall:
(a) Satisfy the labeling requirements in paragraph (d) of subsection 1 of NAC 459.300 for each positron emission tomography radioactive drug, transport radiation shield and each syringe, vial or other container used to hold the positron emission tomography radioactive drug;
(b) Possess and use instrumentation to measure the radioactivity of the positron emission tomography radioactive drug and meet the procedures, radioactivity measurement, instrument test, instrument check and instrument adjustment requirements pursuant to subsection 3 of NAC 459.300;
(c) If the licensee is a pharmacy, ensure that any person who prepares positron emission tomography radioactive drugs:
(1) Is an authorized nuclear pharmacist who meets the requirements of paragraph (b) of subsection 2 of NAC 459.300; or
(2) Is under the supervision of an authorized nuclear pharmacist pursuant to 10 C.F.R. § 35.27; and
(d) If the licensee is a pharmacy that allows a person to work as an authorized nuclear pharmacist, it shall meet the requirements of paragraph (d) of subsection 2 of NAC 459.300. Any authorization obtained pursuant to NAC 459.236 to produce positron emission tomography radioactive drugs for noncommercial distribution to medical use licensees in a consortium does not relieve the licensee from the requirement to comply with any applicable

regulations of the United States Food and Drug Administration, or other federal and state laws or regulations governing radioactive drugs.

6. 30.35 (E):

R185-08A:Sec. 57. NAC 459.1955 is hereby amended to read as follows:

459.1955 1. A plan for financing decommissioning, as described in subsection 10, must be submitted by each applicant for a license authorizing the possession and use of:
(a) Unsealed radioactive materials with a half-life of more than 120 days in quantities that exceed 10^5 times the applicable quantities set forth in NAC 459.362; or
(b) The involvement of a combination of radionuclides when R divided by 10_5 is greater than 1.
2. A plan for financing decommissioning, as described in subsection 10, must be submitted by each licensee who is authorized to possess and use, and each applicant for a specific license authorizing the possession and use of:
(a) Sealed sources of radioactive material or plated foils of radioactive material with a halflife of more than 120 days in quantities that exceed 10_{12} times the applicable quantities set forth in NAC 459.362; or
(b) The involvement of a combination of isotopes when R divided by 10_{12} is greater than 1.
3. Each applicant for a specific license that authorizes the possession and use of radioactive material with a half-life of more than 120 days and in the quantities set forth in subsection 9 must submit:
(a) A plan for financing decommissioning as described in subsection 10; or
(b) A certification which sets forth that financial assurance for decommissioning:
(1) Has been provided in the amount required by subsection 9 using one of the methods set forth in subsection 11; or
(2) Will be provided after the application has been approved and the license issued, but before the receipt of any licensed material by the licensee.
4. If an applicant:
(a) Defers the execution of the financial instrument until after the license has been issued pursuant to subparagraph (2) of paragraph (b) of subsection 3, the applicant must submit to the Division as part of the certification a signed original of the financial instrument used to comply with subsection 11 before the receipt of any licensed material.
(b) Does not defer the execution of the financial instrument until after the license has been issued, the applicant must submit to the Division as part of the certification a signed original of the financial instrument used by the applicant to comply with subsection 11.
5. An applicant for a specific license of the type described in subsection 1 or 3 must submit a plan for financing decommissioning or a certification of financial assurance for decommissioning with his application.
6. The holder of a specific license that is issued before January 26, 1999, and:
(a) Of a type described in subsection 1, shall submit a plan for financing decommissioning or a certification of financial assurance for decommissioning in an amount not less than $1,125,000.

If a certification of financial assurance is submitted, the licensee shall include a plan for financing decommissioning in an application for renewal of the license.

(b) Of a type described in subsection 3 shall submit a plan for financing decommissioning or a certification of financial assurance for decommissioning.

7. A licensee who has submitted an application for renewal of his license before January 26, 1999, in accordance with NAC 459.202, shall:

(a) Provide financial assurance for decommissioning in accordance with subsections 1 and 3; and

(b) Submit a plan for financing decommissioning.

8. Waste collectors and waste processors, as defined in Appendix G, shall:

(a) Provide financial assurance for decommissioning in an amount based on a plan for financing decommissioning as described in subsection 10; and

(b) Submit a plan for financing decommissioning which must include, without limitation:

(1) The cost of disposal of the maximum amount, measured in curies, of radioactive material permitted by the license;

(2) The cost of disposal of the maximum quantity, measured by volume, of radioactive material which could be present at the licensee's facility at any time; and

(3) The cost to remediate the licensee's site to meet the license termination criteria set forth in NAC 459.200.

9. Financial assurance for decommissioning must be provided in accordance with the following amounts:

(a) Not less than $1,125,000 is required if:

(1) The amount of radioactive material is greater than 10^4, but less than or equal to 10^5 times the applicable quantities described in NAC 459.362, in unsealed form; or

(2) R, for a combination of radionuclides, divided by 10^4 is greater than 1 but R divided by 10^5 is less than or equal to 1.

(b) Not less than $225,000 is required if:

(1) The amount of radioactive material is greater than 10^3, but less than or equal to 10^4 times the applicable quantities described in NAC 459.362, in unsealed form; or

(2) R, for a combination of radionuclides, divided by 10^3 is greater than 1 but R divided by 10^4 is less than or equal to 1.

(c) Not less than $113,000 is required if:

(1) The amount of radioactive material is greater than 10^{10} times the applicable quantities described in NAC 459.362, in sealed sources or plated foils; or

(2) R, for a combination of radionuclides, divided by 10^{10} is greater than 1.

~~*10. The plan for financing decommissioning must contain the following:*~~

~~*(a) An estimate of the costs of decommissioning the facility based on the decommissioning plan;*~~

~~*(b) A description of the method of assuring financing for decommissioning in compliance with subsection 11;*~~

~~*(c) A schedule for adjusting the estimate of costs, which estimates of costs must be adjusted at least every 3 years, and associated levels of funding periodically over the life of the facility; and*~~

~~*(d) A certification by the licensee that financial assurance for decommissioning has been*~~

~~*provided in the amount of the cost estimate for decommissioning and a signed original of the financial instrument used to satisfy the requirements of subsection 11.*~~

10. (1)Each decommissioning funding plan must be submitted for review and approval and must contain –

(i) A detailed cost estimate for decommissioning, in an amount reflecting:

(A) The cost of an independent contractor to perform all decommissioning activities;

(B) The cost of meeting the criteria in NAC 459.3178 for unrestricted use, provided that, if the applicant or licensee can demonstrate its ability to meet the provisions of NAC 459.318, the cost estimate may be based on meeting the NAC 459.318 criteria; (C) The volume of onsite subsurface material containing residual radioactivity that will require remediation to meet the criteria for license termination; and

(D) An adequate contingency factor.

(ii) Identification of and justification for using the key assumptions contained in the decommissioning cost estimate (DCE) ;

(iii) A description of the method of assuring funds for decommissioning from subsection 11, including means for adjusting cost estimates and associated funding levels periodically over the life of the facility;

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

(v) A signed original of the financial instrument obtained to satisfy the requirements of subsection 11 (unless a previously submitted and accepted financial instrument continues to cover the cost estimate for decommissioning).

(2) At the time of license renewal and at intervals not to exceed 3 years, the decommissioning funding plan must be resubmitted with adjustments as necessary to account for changes in costs and the extent of contamination. If the amount of financial assurance will be adjusted downward, this can not be done until the updated decommissioning funding plan is approved. The decommissioning funding plan must update the information submitted with the original or prior approved plan, and must specifically consider the effect of the following events on decommissioning costs:

(i) Spills of radioactive material producing additional residual radioactivity in onsite subsurface material;

(ii) Waste inventory increasing above the amount previously estimated;

(iii) Waste disposal costs increasing above the amount previously estimated;

(iv) Facility modifications;

(v) Changes in authorized possession limits;

(vi) Actual remediation costs that exceed the previous cost estimate;
(vii) Onsite disposal; and
(viii) Use of a settling pond.

11. Financial assurance for decommissioning must be provided by one or more of the following methods:

(a) Prepayment in the form of a deposit of an amount of money in cash or liquid assets that would be sufficient to pay the costs of decommissioning before starting operations at the facility into an account segregated from the assets of the licensee and outside the administrative control of the licensee. Prepayment may be in the form of a trust, escrow account, government fund, certificate of deposit or deposit of government securities.

(b) Provision of a surety that assures that the costs of decommissioning will be paid should the licensee fail to do so. A guarantee of money from a parent company of the licensee for the cost of decommissioning that is based on a financial test may be used if the guarantee and test meet the criteria set forth in subsection 14. Such a guarantee may not be used in combination with any other method of financing to satisfy the requirements of this subsection. A guarantee of money by the applicant or licensee for the cost of decommissioning that is based on a financial test may be used if the guarantee and test meet the criteria set forth in subsection 14. Such a guarantee must not be used in combination with any other method of financing to satisfy the requirements of this subsection or if the applicant or licensee has a parent company that holds a majority control of the voting stock of the applicant or licensee. Any surety used to provide financial assurance for decommissioning must contain the following conditions:

(1) The surety must be open-ended or, if written for a specified term, must be renewed automatically unless 90 days or more before the renewal date the issuer notifies the Division, the beneficiary and the licensee of his intention not to renew. The surety must provide that the fullface
amount will be paid to the beneficiary automatically before the expiration without proof of forfeiture if the licensee fails to provide a replacement acceptable to the Division within 30 days after receipt of notification of the cancellation.

(2) The surety must be payable to a trust established for the costs of decommissioning the facility. The trustee and trust must be approved by the Division. The Division will approve as a trustee an appropriate agency of the State or Federal Government or an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by an agency of the State or Federal Government.

- A licensee shall maintain the surety in effect until the Division has terminated his license.

(c) Provision of an external sinking fund in which deposits are made at least annually, coupled with a surety issued in compliance with the provisions of paragraph (b) except that the value of the surety may decrease by the amount being accumulated in the external sinking fund.

(d) If the licensee is a federal, state or local governmental agency, a statement of intent containing an estimate of the costs of decommissioning or an amount required by subsection 9 and an indication that money for decommissioning will be obtained when necessary.

12. A person licensed pursuant to NAC 459.180 to 459.313, inclusive, shall maintain the following records in an identified location until the site is released for unrestricted use:

(a) Records of spills or other unusual occurrences involving the spread of contamination in

and around the facility, equipment or site. Such records must include, without limitation, the name, quantity, form and concentration of a nuclide involved in the spill or unusual occurrence.
(b) Drawings and other documents relating to:
(1) The modification of structures and equipment in restricted areas where radioactive materials are used and stored; and
(2) Locations where it is possible that contamination which is inaccessible has occurred, including, without limitation, areas of seepage into concrete and other porous materials.
(c) A list of all the areas:
(1) Designated and formerly designated as restricted areas;
(2) Outside of restricted areas that require documentation pursuant to paragraph (a);
(3) Outside of restricted areas where waste has been buried; and
(4) Outside of restricted areas which contain material that, if the license expired, the licensee would be required to decontaminate the area to unrestricted release levels or apply for approval for disposal pursuant to NAC 459.3595.
(d) Except for areas containing only sealed sources which have not leaked or where no contamination remains after any leak, or for by-product material having only a half-life of less than 65 days, a list contained in a single document and updated every 2 years which sets forth the following:
(1) All areas designated or formerly designated as restricted areas as defined in 10 C.F.R. § 20.1003, or for requirements before January 1, 1994, 10 C.F.R. § 20.3 as contained in the C.F.R. edition revised as of January 1, 1993;
(2) All areas outside of restricted areas that require documentation pursuant to paragraph (a);
(3) All areas outside of restricted areas where current and previous wastes have been buried as documented pursuant to 10 C.F.R. § 20.2108; and
(4) All areas outside of restricted areas that contain material such that, if the license expired, the licensee would be required to either decontaminate the area to meet the criteria for decommissioning set forth in 10 C.F.R. Part 20, Subpart E, or apply for approval for disposal under 10 C.F.R. § 20.2002.
If records important to the decommissioning of a facility are kept for other purposes, reference to these records and their locations may be used.
13. Before licensed activities are transferred or assigned pursuant to subsection 2 of NAC 459.198, the licensee must transfer all the records described in paragraphs (a), (b) ***,*** ~~[and]~~ (c) ***and (d)*** of subsection 12 to the licensee to whom the activities have been transferred or assigned. Such records become, upon receipt, the responsibility of the licensee to whom the activities have been transferred or assigned and must be retained by that licensee until its license is terminated.
14. To pass the financial test referred to in subsection 11:
(a) A parent company must have:
(1) Two of the following three ratios:
(I) A ratio of total liabilities to net worth that is less than 2;
(II) A ratio of the sum of net income plus depreciation, depletion and amortization to total liabilities that is more than 0.1; and
(III) A ratio of current assets to current liabilities that is more than 1.5;
(2) Net working capital and tangible net worth that are each at least six times the current

cost estimates for decommissioning or, if certification is used, the amount set forth in subsection 9; and
(3) Assets located in the United States that amount to at least 90 percent of the total assets of the parent company or at least six times the cost estimate for decommissioning or, if certification is used, the amount set forth in subsection 9; or
(b) A parent company must have:
(1) A rating for its most recent bond issuance of AAA, AA, A or BBB as issued by Standard and Poor's Ratings Services or a rating of Aaa, Aa, A or Baa as issued by Moody's Investors Service, Inc.;
(2) Tangible net worth of at least six times the current cost estimate for decommissioning, or, if a certification is used, the amount set forth in subsection 9; and
(3) Assets located in the United States that amount to at least 90 percent of the total assets of the parent company or at least six times the cost estimate for decommissioning.
15. The terms of a guarantee of a parent company must provide that:
(a) The guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the licensee and the Division. The guarantee may not be cancelled until 120 days after the date the notice of cancellation is received by both the licensee and the Division, as evidenced by the return receipts.
(b) If the licensee fails to provide alternate financial assurance as specified in this section within 90 days after receipt by the licensee and the Division of a notice of cancellation of the guarantee from the guarantor, the guarantor must provide such alternate financial assurance in the name of the licensee.
(c) The guarantee and financial test provisions set forth in subsection 14 must remain in effect until the Division has terminated the license.
(d) If a trust is established for the costs of decommissioning, the trustee and trust must be acceptable to the Division. An acceptable trustee includes an appropriate state or federal agency or an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.
16. A licensee who guarantees the costs of decommissioning must have:
(a) A tangible net worth of at least 10 times the total estimated cost of decommissioning or the current amount required for decommissioning;
(b) Assets located in the United States that amount to at least 90 percent of its total assets or at least 10 times the cost estimate for decommissioning;
(c) A rating for its most recent bond issuance of AAA, AA or A as issued by Standard and Poor's Ratings Service or a rating of Aaa, Aa or A as issued by Moody's Investors Services, Inc.; and
(d) At least one class of equity securities registered pursuant to the Securities Exchange Act of 1934.
17. A licensee shall ensure that a certified public accountant who is independent of the licensee compares the data used to satisfy the financial test as set forth in subsections 14 and 16. The data must be derived from audited, year-end financial statements for the last fiscal year. A licensee shall inform the Division within 90 days after matters which cause the certified public accountant to believe that the data used to satisfy the financial test should be adjusted and that the licensee or parent company, as applicable, can no longer pass the test. After the initial

financial test, the licensee or parent company, as applicable, shall repeat the test within 90 days after the close of each fiscal year. If the parent company can no longer pass the test, the licensee shall notify the Division of its intent to establish alternate financial assurance as specified in this section. The notice must be sent by certified mail within 90 days after the close of the fiscal year. The licensee shall provide alternate financial assurance within 120 days after the close of such fiscal year.

18. If a bond issuance of the licensee or parent company, as applicable, ceases to be rated in a category of A or above by either Standard and Poor's Ratings Services or Moody's Investors Service, Inc., the licensee shall notify the Division in writing within 20 days after the rating. If the bond issuance ceases to be rated in a category of A or above by both Standard and Poor's Ratings Services and Moody's Investors Service, Inc., the licensee or parent company, as applicable, no longer meets the financial test as set forth in subsection 14.

19. The licensee shall provide to the Division a written guarantee or commitment by a corporate officer which provides that the licensee will fund and complete the decommissioning of the facility or, upon issuance of an order by the State Board of Health, the licensee shall establish a trust in the amount of the current cost estimates for decommissioning.

20. As used in this section:

(a) "External sinking fund" means a fund established and maintained by depositing money periodically in an account segregated from the licensee's assets and outside the licensee's administrative control in which the total amount of money to be accumulated before the termination of the operation is expected is sufficient to pay the costs of decommissioning. The term includes, without limitation, a trust, escrow account, government fund, certificate of deposit or deposit of government securities.

(b) "R" equals the sum of the ratios of the quantity of each radionuclide to the applicable value as set forth in NAC 459.362.

(c) "Surety" includes, without limitation, a trust fund, surety bond, letter of credit, line of credit, insurance, guarantee of performance or, except as otherwise provided in this section, any combination thereof.

C. RATS ID 1995-3 : (20.2006(a)(1)) - R185-08A – Sec. 76 – NAC 459.313 – (Response to SRS 10-10-2010)

R185-08A - Sec. 76.- NAC 459.313 is hereby amended to read as follows:

Sec. 76. NAC 459.313 is hereby amended to read as follows:

459.313 : ***1. The requirements of this section and appendix G to 10 CFR Part 20 are designed to control transfers of low-level radioactive waste by any waste generator, waste collector, or waste processor licensee, as defined in NAC 459. Sections 1146, 1147 & 1148, who ships low-level waste either directly, or***

indirectly through a waste collector or waste processor, to a licensed low-level waste land disposal facility as defined in NAC 459.0475.

~~[1].~~ ***2***.A licensee who ships radioactive waste intended for ultimate disposal at a licensed land disposal facility must document the information required on ***the*** Nuclear Regulatory Commission Form 541,~~]~~ ***Commission's*** Uniform Low-Level Radioactive Waste Manifest, and transfer the recorded manifest information to the intended consignee in accordance with the provisions of Appendix G.

~~2.~~ ***3.*** Each manifest described in subsection 1 must include a certification by the waste generator as provided in section II of Appendix G.

3. Each person involved in the transfer for disposal or the disposal of radioactive waste, including, without limitation, the waste generator, waste collector, waste processor and disposal facility operator, shall comply with the requirements of section III of Appendix G.

~~4.~~ ***5. A licensee who ships any by-product material specified in subsections 2 and 3 of NAC 459.022, which is intended for disposal at a land disposal facility licensed pursuant to 10 C.F.R. Part 61, shall document the information required on the Nuclear Regulatory Commission's Uniform Low-Level Radioactive Waste Manifest and transfer the recorded information to the intended consignee in accordance with Appendix G.***

D. RATS ID 2002-2 - (10 CFR 20.1301(c)(2)) – NAC 459.335.2.(b) – Amended - (Response to SRS 10 -10 - 2010)

NAC 459.335.2.(b) Dose limits for individual members of public; application for authorization to increase annual dose limit; imposition of additional restrictions; standards for nuclear power operations. (NRS 459.030, 459.201)

1. Except as otherwise provided in this section and subsection 2 of NAC 459.321, each licensee and registrant shall conduct operations to ensure that:

(a) The total effective dose equivalent to any member of the public from its licensed or registered operation does not exceed 0.1 rem (1 millisievert) per year, not including the dose contribution from background radiation, any medical administration the member of the public has received, exposure to natural persons who have been administered radioactive material and have been released from the control of a licensee pursuant to 10 C.F.R. § 35.75, voluntary participation in medical research, and the disposal by the licensee of radioactive material into sanitary sewerage in accordance with NAC 459.3605; and

(b) The dose in any unrestricted area from external sources, not including the dose contributions from natural persons who have been administered radioactive material and have been released from the control of a licensee pursuant to 10 C.F.R. § 35.75, does not exceed 0.002 rem (0.02 millisievert) in any 1 hour.

2. Notwithstanding the provisions of paragraph (a) of subsection 1, a licensee may allow a visitor to a person who cannot be released pursuant to 10 C.F.R. § 35.75 to receive a radiation dose greater than 0.1 rem (1 millisievert) if:

(a) The radiation dose does not exceed 0.5 rem (5 millisieverts); and

(b) Before the visit, the ~~licensee~~ ***authorized user*** has determined that the visit is appropriate.

3. A licensee, a registrant or an applicant for a license or registration may apply to the Division for authorization to operate up to an annual dose limit for a member of the public of 0.5 rem (5 millisieverts) per year. The application must include:

(a) A demonstration of the need for and the expected duration of operations in excess of the limit specified in paragraph (a) of subsection 1;

(b) A description of the program of the licensee or registrant to assess and control the dose within the annual limit of 0.5 rem (5 millisieverts); and'

(c) The procedures to be followed to maintain the dose as low as is reasonably achievable.

4. The Division may impose additional restrictions on radiation levels in unrestricted areas and on the total quantity of radionuclides that a licensee may release in effluents in order to restrict the collective dose.

5. In addition to the requirements of this section, a licensee who is subject to the provisions of 40 C.F.R. Part 190 shall comply with the standards set forth therein.

ADOPTED REGULATION OF THE

STATE BOARD OF HEALTH

LCB File No. R185-08

Effective May 7, 2010

EXPLANATION – Matter in ***italics*** is new; matter in brackets **[**~~omitted material~~**]** is material to be omitted.

AUTHORITY: §§1-29, 31-51, 53-56, 58, 61-74, 76, 79, 81-86 and 88, NRS 459.201; §§30 and 75, NRS 439.150 and 459.201; §§52, 57, 59, 60, 77 and 78, NRS 459.030 and 459.201; §§80 and 87, NRS 459.070 and 459.201.

A REGULATION relating to radioactive material; regulating the possession or transfer of radium-226 and americium-241; adopting by reference certain federal regulations; requiring the registration of any new X-ray system, including fees to be paid; regulating the operation, maintenance and use of therapeutic X-ray systems to include electronic brachytherapy systems; setting forth the training requirements and duties of authorized users, authorized medical physicists for electronic brachytherapy and certain radiation safety officers; requiring a registrant who uses a therapeutic X-ray system to provide annual safety training for that system; setting forth proper operating procedures, including various safety and calibration checks, for facilities with therapeutic X-ray systems; requiring a registrant to establish and maintain a quality management program and a quality assurance program; setting forth the requirements which must be followed by operators of portable equipment which is hand-held; revising certain exemptions in the handling of by-product material for certain licensees; revising certain provisions to include exempt quantities of radioactive materials; setting forth certain procedures for the production of radioactive drugs, including reporting to the Health Division of the Department of Health and Human Services; requiring certain annual reports regarding exposure to radioactive material; repealing certain provisions relating to medical uses of radiation; and providing other matters properly relating thereto.

Section 1. Chapter 459 of NAC is hereby amended by adding thereto the provisions set forth as sections 2 to 45, inclusive, of this regulation.

Sec. 2. ***"Accelerator-produced radioactive material" means, except as otherwise provided in NAC 459.0525, any material made radioactive by a particle accelerator.***

Sec. 3. *"Air-purifying respirator" means a respirator with an air-purifying filter, cartridge or canister that removes specific air contaminants by passing ambient air through the air-purifying element.*

Sec. 4. *"Authorized medical physicist for electronic brachytherapy" means a person who has met the requirements of section 32 of this regulation.*

Sec. 5. *"Consortium" means an association of medical use licensees and a production facility for positron emission tomography radionuclides, located at an educational institution or medical facility, which:*

1. Are in the same geographical area; and

2. Jointly own or share in the operation and maintenance costs of the production facility which produces positron emission tomography radionuclides for use in producing radioactive drugs within the consortium for noncommercial distribution among the associated members of the consortium for medical use.

Sec. 6. *"Discrete source" means a radionuclide that is processed so that its concentration within a material is purposely increased for use in commercial, medical or research activities.*

Sec. 7. *"Disposable respirator" means a respirator for which maintenance is not intended and which is designed to be discarded after excessive breathing resistance, sorbent exhaustion, physical damage or its end-of-service-life renders it unsuitable for use.*

Sec. 8. *"Electronic brachytherapy" means a method of radiation therapy that uses X-rays which are electronically generated to deliver a radiation dose at a distance of up to a few centimeters by intracavitary, intraluminal or interstitial application or by an application with the source in contact with, or very close to, the body surface.*

Sec. 9. *"Electronic brachytherapy source" means the X-ray tube component used in an electronic brachytherapy system.*

Sec. 10. *"Electronic brachytherapy system" means the system used to produce and deliver therapeutic radiation, including, without limitation, the electronic brachytherapy source, the control mechanism, the cooling system and the power source.*

Sec. 11. *"Filtering facepiece" or "dust mask" means a negative pressure particulate respirator with a filter as an integral part of the facepiece or with the entire facepiece composed of the filtering medium, which is not equipped with elastomeric sealing surfaces and adjustable straps.*

Sec. 12. *"Helmet" means a rigid respiratory inlet covering that also provides head protection against impact and penetration.*

Sec. 13. *"Hood" means a respiratory inlet covering that completely covers the head and neck and may also cover portions of the shoulders and torso.*

Sec. 14. *"Loose-fitting facepiece" means a respiratory inlet covering that is designed to form a partial seal with the face.*

Sec. 15. *"Medical event" means any event, other than an event that is the result of patient intervention, in which the administration of radiation results in:*

1. A dose that differs from the prescribed dose;

2. The total dose delivered differing from the prescribed dose by 20 percent or more;

3. The fractionated dose delivered differing from the prescribed dose for a single fraction by 50 percent or more; or

4. An administration of a dose to the wrong person or at the wrong treatment site.

Sec. 16. *"Mobile electronic brachytherapy" means an electronic brachytherapy system which is transported from the address of record to be used at another address which is not the address of record.*

Sec. 17. *"Portable shielding" means shielding which may be moved easily by a mobility device or by hand and placed in a primary or secondary beam to reduce the radiation exposure of a person.*

Sec. 18. *"Specific training on the system provided by the manufacturer" means training in the operation of the system, safety procedures and clinical use of the system for the uses approved by the United States Food and Drug Administration, and may be fulfilled:*

1. By satisfactory completion of a training program provided by the manufacturer or an approved institution contracted by the manufacturer; or

2. By receiving training from an authorized user or authorized medical physicist for electronic brachytherapy who is authorized by the Division to use the system.

Sec. 19. *"Waste" means any low-level radioactive waste containing source material, special nuclear material or by-product material specified in NAC 459.022 that is acceptable for disposal in a land disposal facility. The term does not include any high-level radioactive waste, transuranic waste, spent nuclear fuel or by-product material specified in subsections 3 and 4 of NAC 459.022.*

Sec. 20. *A licensee may dispose of by-product material specified in subsections 3 and 4 of NAC 459.022:*

1. At a facility licensed pursuant to 10 C.F.R. Part 61 or equivalent regulations of an agreement state, even though it is not defined as low-level radioactive waste, if it meets the requirements of NAC 459.313; or

2. At any disposal facility authorized to dispose of such material in accordance with any federal or state solid or hazardous waste law, including the Solid Waste Disposal Act, as authorized pursuant to the Energy Policy Act of 2005, Public Law 109-058.

Sec. 21. *1. A general license is hereby issued to acquire, receive, possess, use or transfer radium-226 which is contained in the following products, if those products were manufactured before July 6, 2010:*

(a) Antiquities which were originally intended for use by the general public and distributed in the late 19th and early 20th centuries, including, without limitation, radium emanator jars, revigators, radium water jars, radon generators, refrigerator cards, radium bath salts and healing pads;

(b) Intact timepieces containing greater than 1 microcurie (0.037 megabecquerel) of radium-226, nonintact timepieces and timepiece hands and dials which are no longer installed in timepieces;

(c) Luminous items installed in air, marine or land vehicles;

(d) All other luminous products, if not more than 100 items are used or stored at the same location at any one time; and

(e) Radium sources which contain not more than 1 microcurie (0.037 megabecquerel) of radium-226, including, without limitation, discrete survey instrument check sources, sources contained in radiation measuring instruments, sources used in educational demonstrations such as cloud chambers and spinthariscopes, electron tubes, lightning rods, ionization sources, static eliminators or items otherwise designated by the Division.

2. A person who acquires, receives, possesses, uses or transfers radium-226 contained in any product listed in subsection 1 in accordance with a general license issued pursuant to that

subsection is exempt from the provisions of NAC 459.124, 459.320 to 459.374, inclusive, and 459.780 to 459.794, inclusive, and 10 C.F.R. Part 21.

3. A person who acquires, receives, possesses, uses or transfers a product containing radium-226 in accordance with a general license issued pursuant to subsection 1 shall:

(a) Notify the Division within 30 days, in writing, if there is any indication of possible damage to the product which may result in a loss of the radioactive material, including a brief description of the event in which the damage occurred and any remedial action taken;

(b) Not abandon any product containing radium-226, but ensure that the product and any radioactive material from the product are disposed of pursuant to section 20 of this regulation or by transfer to a person authorized by a specific license to receive the radium-226 in the product or as otherwise approved by the Division;

(c) Not export the product containing radium-226;

(d) Dispose of the product containing radium-226 at a disposal facility authorized to dispose of radioactive material in accordance with any federal or state hazardous waste law, including, without limitation, the Solid Waste Disposal Act, as authorized under the Energy Policy Act of 2005, Public Law 109-058, by a transfer to a person authorized to receive radium-226 by a specific license issued pursuant to NAC 459.180 to NAC 459.313, inclusive, or an equivalent regulation of an agreement state, or as approved by the Division; and

(e) Respond to a written request from the Division to provide information relating to the acquisition, receipt, possession, use or transfer of radium-226 contained in any product listed in subsection 1 within 30 days after the request, unless another period is specified in the request. If the person is unable to provide the requested information within the required

period, he or she may request an extension of time from the Division in writing at the address specified in NAC 459.134.

4. Except for the disassembly and repair of timepieces, a general license issued pursuant to subsection 1 does not authorize a person to manufacture, assemble, disassemble, repair or import products which contain radium-226.

Sec. 22. *An application for a specific license to manufacture or initially transfer calibration or reference sources which contain americium-241 or radium-226 for distribution to a person who holds a general license issued pursuant to NAC 459.224 will be approved:*

1. If the applicant satisfies the general requirements of NAC 459.238;

2. If the applicant submits sufficient information regarding each type of calibration or reference source relating to the evaluation of the potential radiation exposure, including, without limitation:

(a) The chemical and physical form of the source and maximum quantity of americium-241 or radium-226 in the source;

(b) The details of construction and design of the source;

(c) The details of the method of incorporation and binding of the americium-241 or radium-226 in the source;

(d) The procedure for and results of a prototype testing of a source designed to contain more than 0.005 microcurie (185 becquerels) of americium-241 or radium-226 in order to demonstrate that the americium-241 or radium-226 contained in each source will not be released or removed from the source under normal conditions of use;

(e) The details of quality control procedures which will be followed in the manufacture of the source;

(f) A description of the labeling to be affixed to the source or the storage container for the source; and

(g) Any additional information, including experimental studies and tests, required by the Division to facilitate a determination of the safety of the source;

3. If each source contains not more than 5 microcuries (185 kilobecquerels) of americium-241 or radium-226; and

4. If the Division determines, for any source which contains more than 0.005 microcurie (185 becquerels) of americium-241 or radium-226 that:

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

(b) The source has been subjected to, and has passed in a satisfactory manner, the prototype tests prescribed by 10 C.F.R. § 32.102, Schedule C, as it existed on November 30, 2007, or an equivalent regulation of an agreement state.

Sec. 23. *1. Before transferring a source containing more than 0.1 microcurie (3.7 kilobecquerels) of americium-241 or radium-226 to a person who holds a general license issued pursuant to NAC 459.224, a person who holds a specific license issued pursuant to section 22 of this regulation shall perform a dry wipe test on the source. The test must be performed by wiping with moderate pressure the entire radioactive surface of the source with a filter paper.*

2. The radioactivity of the filter paper after the dry wipe test must be measured by a radiation detection instrument which is capable of detecting 0.005 microcurie (185 becquerels) of americium-241 or radium-226.

3. If the test discloses more than 0.005 microcurie (185 becquerels) of radioactive material, the source shall be deemed to be leaking americium-241 or radium-226 and must not be transferred to a general licensee pursuant to NAC 459.224, 10 C.F.R. § 31.8 or an equivalent regulation of an agreement state.

Sec. 24. *A person who holds a general license issued pursuant to section 21 of this regulation shall affix a label to each source or storage container for the source, which contains sufficient information to ensure the safe use and storage of the source and shall include in the label the information contained in NAC 459.224, or a substantially similar statement. Sources licensed under 10 C.F.R. § 32.57 or an equivalent state regulation before January 19, 1978, may bear labels authorized by the regulations in effect on January 1, 1978.*

Sec. 25. *The provisions of 10 C.F.R. §§ 71.0(c), 71.1(a), 71.3, 71.4, 71.15, 71.17, 71.19(a), 71.19(b), 71.19(c), 71.20 to 71.23, inclusive, 71.47, 71.83 to 71.89, inclusive, 71.97, 71.101(a), 71.101(b), 71.101(c), 71.101(g), 71.105, 71.127 to 71.137, inclusive, and Appendix A to Part 71, as those provisions existed on November 14, 2007, are hereby adopted by reference, subject to the following:*

1. The exclusion of the following definitions from 10 C.F.R. § 71.4:

(a) "Close reflection by water";

(b) "Licensed material";

(c) "Optimum interspersed hydrogenous moderation";

(d) "Spent nuclear fuel or spent fuel"; and

(e) "State."

2. The substitution of the following rule references:

(a) "NAC 459.737" for "§ 34.31(b) of this chapter" as found in 10 C.F.R. § 71.101(g);

(b) "Subsection 1 of NAC 459.339" for "10 C.F.R § 20.1502";

(c) "NAC 459.3062" for "10 C.F.R. Part 35";

(d) "Subsection 5 of NAC 459.3585" for "10 C.F.R. § 20.1906(e)";

(e) "Section 26 of this regulation" for "10 C.F.R. § 71.5";

(f) "10 C.F.R. §§ 71.101(a), 71.101(b), 71.101(c)(1), 71.101(g), 71.105 and 71.127 to 71.137, inclusive," for "subpart H of this part" or "subpart H," except in 10 C.F.R. §§ 71.17(b), 71.20(b), 71.21(b), 71.22(b) and 71.23(b);

(g) "10 C.F.R. §§ 71.0(c), 71.1(a), 71.3, 71.4, 71.17(c)(2), 71.20(c)(2), 71.21(d)(2), 71.83 to 71.89, inclusive, 71.97, 71.101(b), 71.101(c), 71.101(g), 71.105 and 71.127 to 71.137, inclusive," for "subparts A, G and H of this part";

(h) "10 C.F.R. § 71.47" for "subparts E and F of this part"; and

(i) "10 C.F.R. §§ 71.101(a), 71.101(b), 71.101(c)(1), 71.101(g), 71.105 and 71.127 to 71.137, inclusive," for "§§ 71.101 through 71.137."

3. The substitution of the following terms:

(a) "Division" for:

(1) "Commission" in 10 C.F.R. §§ 71.0(c), 71.17(a), 71.20(a), 71.21(a), 71.22(a), 71.23(a) and 71.101(c)(1);

(2) "Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response" in 10 C.F.R. §§ 71.97(c)(1) and 71.97(f)(1);

(3) "Director, Office of State Programs, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001" in 10 C.F.R. § 71.97(c)(3)(iii); and

(4) "NRC" in 10 C.F.R. § 71.101(f);

(b) "The Nuclear Regulatory Commission or an agreement state" for "Commission" in 10 C.F.R. § 71.3;

(c) "The Governor of Nevada" for:

(1) "The governor of a State" in 10 C.F.R. § 71.97(a);

(2) "Each appropriate governor" in 10 C.F.R. § 71.97(c)(1);

(3) "The governor" in 10 C.F.R. § 71.97(c)(3);

(4) "The governor of the State" in 10 C.F.R. § 71.97(e);

(5) "The governor of each State" in 10 C.F.R. § 71.97(f)(1); and

(6) "A governor" in 10 C.F.R. § 71.97(e);

(d) "State of Nevada" for "State" in 10 C.F.R. §§ 71.97(a), 71.97(b)(2) and 71.97(d)(4);

(e) "The Governor of Nevada's" for:

(1) "The governor's" in 10 C.F.R. §§ 71.97(a), 71.97(c)(3), 71.97(e) and 71.97(f)(1);

(2) "Governor's" in 10 C.F.R. §§ 71.97(c)(1) and 71.97(e); and

(3) "Governors'" in 10 C.F.R. § 71.97(c)(3)(iii);

(f) "Specific or general" for "NRC" in 10 C.F.R. § 71.0(c);

(g) "The Division" for "ATTN: Document Control Desk, Director, Spent Fuel Project Office, Office of Nuclear Material Safety and Safeguards" in 10 C.F.R. § 71.101(c)(1);

(h) "Each" for "Using an appropriate method listed in § 71.1(a), each" in 10 C.F.R. § 71.101(c)(1);

(i) "The material must be contained in a Type A package meeting the requirements of 49 C.F.R. § 173.417(a)" for "The fissile material need not be contained in a package which meets the standards of subparts E and F of this part; however, the material must be contained in a

Type A package. The Type A package must also meet the DOT requirements of 49 C.F.R. 173.417(a)" as found in 10 C.F.R. §§ 71.22(a) and 71.23(a);

(j) "Licensee" for "licensee, certificate holder, and applicant for a CoC"; and

(k) "Licensee is" for "licensee, certificate holder, and applicant for a CoC are."

Sec. 26. *1. Each licensee who transports licensed material outside the site of usage, as specified in the license issued by the Executive Secretary, the United States Nuclear Regulatory Commission or an agreement state, or where transport is on public highways, or who delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the regulations of the United States Department of Transportation set forth in 49 C.F.R. Parts 107, 171 to 180, inclusive, and 390 to 397, inclusive, appropriate to the mode of transport.*

2. The licensee shall particularly note those regulations specified in the following areas:

(a) Accident reporting--49 C.F.R. §§ 171.15 and 171.16.

(b) Hazardous material employee training--49 C.F.R. §§ 172.700 to 172.704, inclusive.

(c) Hazardous material shipper or carrier registration--49 C.F.R. §§ 107.601 to 107.606, inclusive (Subpart G).

(d) Marking and labeling--49 C.F.R. §§ 172.300 to 172.338, inclusive, 172.400 to 172.407, inclusive, and 172.436 to 172.441, inclusive, of Subpart E.

(e) Packaging--49 C.F.R. §§ 173.1 to 173.13, inclusive, 173.21 to 173.40, inclusive, and 173.401 to 173.477, inclusive.

(f) Placarding--49 C.F.R. §§ 172.500 to 172.560, inclusive, and Appendices B and C.

(g) Security plans--49 C.F.R. §§ 172.800 to 172.804, inclusive.

(h) Shipping papers and emergency information--49 C.F.R. §§ 172.200 to 172.205, inclusive, and 172.600 to 172.606, inclusive.

3. The licensee shall also note the regulations of the United States Department of Transportation relating to the following modes of transportation:

(a) Air--49 C.F.R. Part 175;

(b) Public Highway--49 C.F.R. Parts 177 and 390 to 397, inclusive;

(c) Rail--49 C.F.R. §§ 174.1 to 174.86, inclusive, and 174.700 to 174.750, inclusive; and

(d) Vessel--49 C.F.R. §§ 176.1 to 176.99, inclusive, and 176.700 to 176.720, inclusive.

4. If the regulations of the United States Department of Transportation are not applicable to a shipment of licensed material, the licensee shall conform to the standards and requirements of the United States Department of Transportation specified in subsection 1 to the same extent as if the shipment or transportation were subject to those regulations. A request for a modification, waiver or exemption from those requirements, and any notification referred to in those requirements, must be filed with, or made to, the Division.

Sec. 27. *1. Except as otherwise provided in subsection 4, each person who acquires an electronic brachytherapy system or an additional therapeutic X-ray system shall apply to the Division for registration of the machine within 30 days after installing the machine. The application must include, without limitation:*

(a) A list of all authorized users, radiation therapy physicists and operators;

(b) The name of the radiation safety officer and radiation safety committee members;

(c) A copy of the most recent record of surveys, calculations and quality assurance checks on each machine;

(d) A current copy of the quality management program created pursuant to section 43 of this regulation;

(e) A current copy of the quality assurance program created pursuant to section 44 of this regulation; and

(f) The manufacturer's certification.

2. No medical therapy device may be used on a person until the facility has received a certificate of registration from the Division.

3. A separate registration is required for facilities which:

(a) Are not contiguous;

(b) Are not under a single radiation safety program; or

(c) Are not under the same management.

4. The provisions of this section do not apply to radiation devices which are in transit or in storage.

Sec. 28. *1. Only a manufacturer's representative who is registered as a service provider with the State may install the electronic brachytherapy device if the installation includes work on:*

(a) The shielding of the source of radiation;

(b) The driving unit of the source of radiation; or

(c) Any other electronic or mechanical component which may expose the source of radiation, reduce the shielding around the source of radiation or compromise the radiation safety of the system or the source of radiation.

2. Only a manufacturer's representative who is registered as a service provider with the State or an authorized medical physicist for electronic brachytherapy may adjust, maintain,

repair or service an electronic brachytherapy device and must do so in accordance with the guidelines of the manufacturer.

3. A registrant shall maintain the record of any installation, maintenance, adjustment, service or repair of an electronic brachytherapy device for at least 5 years.

Sec. 29. *1. Before a facility may install a new therapeutic X-ray device, or installs a therapeutic X-ray device with a higher energy output into an existing room, the facility must submit the following information for approval by the Division:*

(a) General information concerning the facility, including, without limitation:

(1) The legal name of the facility;

(2) A telephone number and street address for the facility;

(3) The name, address, telephone number and registration or license number of the authorized medical physicist for electronic brachytherapy responsible for the preparation of the shielding plan;

(4) The name and telephone number of the facility supervisor; and

(5) A statement indicating whether or not the installation is for a new facility or a modification to an existing facility;

(b) Proof that a primary protective barrier covers all wall, floor and ceiling areas struck by the useful beam of the system;

(c) Proof that a secondary protective barrier covers all wall, floor and ceiling areas which are not covered by a primary protective barrier; and

(d) Information regarding the type and thickness of the portable shielding used to ensure compliance with NAC 459.400 to 459.624, inclusive, and sections 20 to 45, inclusive, of this

regulation, and a procedure which demonstrates the use of the portable shielding before treatment.

2. Each therapeutic X-ray system must have such primary and secondary protective barriers as are required to comply with the provisions of NAC 459.400 to 459.624, inclusive, and sections 20 to 45, inclusive, of this regulation.

3. Portable shielding may be used to comply with the provisions of NAC 459.400 to 459.624, inclusive, and sections 20 to 45, inclusive, of this regulation.

Sec. 30. *1. A registrant shall pay an annual fee for the registration and inspection of an electronic brachytherapy device in the amount of $4,400.*

2. The registration fee is due within 30 days after the acquisition of the electronic brachytherapy system.

3. An annual renewal fee must be paid not later than the date on which the registration expires. If the fee is not received by that date, the registrant shall:

(a) Cease operating the radiation machine on that date; and

(b) Within 5 days after the registration expires, submit to the Division:

(1) An application for a renewal of the registration;

(2) The fee set forth in subsection 1; and

(3) A fee for late payment that is equal to twice the amount of the registration fee.

Sec. 31. *1. A registrant for any therapeutic X-ray device shall require an authorized user to:*

(a) Be an authorized user of radioactive sources for electronic brachytherapy pursuant to the radioactive material license of the registrant who had completed specific training on the device provided by the manufacturer and approved by the Division; or

(b) Be a physician who:

(1) Is licensed by this State as a physician pursuant to chapter 630 of NRS or an osteopathic physician pursuant to chapter 633 of NRS;

(2) Is certified in:

(I) Radiation oncology or therapeutic radiology by the American Board of Radiology;

(II) Radiation oncology by the American Osteopathic Board of Radiology;

(III) Radiology, with specialization in radiotherapy, as a Fellow of the Faculty of Radiology or Fellow of the Royal College of Radiologists of the United Kingdom; or

(IV) Therapeutic radiology by the Royal College of Physicians and Surgeons of Canada;

(3) Has completed specific training on the system provided by the manufacturer and approved by the Division; and

(4) Has had his or her training reviewed and approved by the Division.

2. An authorized user:

(a) Must be physically present during the initiation of all patient treatment or identify in writing an authorized medical physicist for electronic brachytherapy who is trained in the operation and emergency response for the system who will be physically present during the initiation of all patient treatments;

(b) Shall review the case of a patient to ensure that the therapeutic X-ray procedure is appropriate;

(c) Shall regularly review the progress of each patient receiving therapy and modify the originally prescribed dose if necessary; and

(d) Shall prevent the clinical use of a system in which a malfunction has been identified pursuant to the spot check required by section 40 of this regulation, until such time as the spot check has been evaluated and the malfunction corrected or the equipment repaired.

3. The training and experience required by subsection 1 must be obtained within the 7 years immediately preceding the date of the application, or the person must have related continuing education experience in the same type of radiation therapy on an annual basis.

4. The registrant shall retain all records of annual training for at least 3 years.

Sec. 32. *1. A registrant for any therapeutic X-ray device shall require an authorized medical physicist for electronic brachytherapy to:*

(a) Be currently licensed as a therapeutic radiological physicist by a professional organization specified by the Division or in another state;

(b) Have completed specific training on the device provided by the manufacturer and approved by the Division; and

(c) Have had his or her training reviewed and approved by the Division.

2. An authorized medical physicist for electronic brachytherapy shall:

(a) Evaluate the output from the electronic brachytherapy device;

(b) Prepare the necessary dosimetric information;

(c) Supervise and review the treatment calculations before the initial treatment of any treatment site;

(d) Establish written procedures for performing a spot check pursuant to section 40 of this regulation;

(e) Supervise the conducting of a spot check required by section 40 of this regulation;

(f) Review a spot check conducted pursuant to section 40 of this regulation within 2 days after completion of the spot check;

(g) Notify the registrant, in writing, of any failures detected during a spot check within 24 hours after the failure is detected;

(h) Consult with the authorized user in treatment planning, as needed; and

(i) Perform any calculations and assessments of patient treatments which may constitute medical events.

3. The training and experience required by subsection 1 must be obtained within the 7 years immediately preceding the date of the application, or the person must have related continuing education experience in the same type of radiation therapy on an annual basis.

4. The registrant shall retain all records of:

(a) Annual training for at least 3 years; and

(b) Initial training until the Division authorizes the disposal of the records.

Sec. 33. *1. A registrant for any therapeutic X-ray system shall require a radiation safety officer to:*

(a) Have completed specific training on the system provided by the manufacturer and approved by the Division;

(b) Be an authorized user or authorized medical physicist for electronic brachytherapy;

(c) Be certified by:

(1) The American Board of Health Physics in Comprehensive Health Physics;

(2) The American Board of Radiology in Diagnostic Radiologic Physics, Therapeutic Radiological Physics or Medical Nuclear Physics;

(3) The American Board of Nuclear Medicine;

(4) The American Board of Science in Nuclear Medicine; or

(5) The American Board of Medical Physics; or

(d) Have completed classroom and laboratory training, including, without limitation:

(1) One hundred hours of radiation physics and instrumentation;

(2) Thirty hours of radiation protection;

(3) Twenty hours of mathematics pertaining to the use and measurement of radiation;

(4) Twenty hours of radiation biology;

(5) Thirty hours of medical therapy training; and

(6) One year of full-time experience in radiation safety at a medical institution under the supervision of a radiation safety officer.

2. A radiation safety officer shall:

(a) Implement a radiation safety program in the facility;

(b) Ensure that radiation safety activities are performed in accordance with approved procedures and regulatory requirements in the daily operation of a therapeutic X-ray system;

(c) Promptly investigate and implement corrective actions when:

(1) An incident which compromises safety occurs;

(2) A reportable event occurs; or

(3) An event occurs which deviates from approved radiation safety practices;

(d) Prepare a written report of any investigation conducted pursuant to paragraph (c) and the corrective action taken;

(e) Carry out written policies and procedures for:

(1) The safe use of a therapeutic X-ray system;

(2) The performance of radiation surveys as necessary;

(3) The performance of checks on survey instruments and other safety equipment; and

(4) The training of personnel who frequent or work in areas where radiation is present;

(f) Keep on file:

(1) A copy of all records and reports required by the Division;

(2) A copy of NAC 459.010 to 459.950, inclusive, and sections 2 to 45, inclusive, of this regulation;

(3) A copy of each registration correspondence with the Division; and

(4) The written policies and procedures required by this section; and

(g) Review the occupational radiation exposure of all personnel working with X-ray systems at least once every 3 months.

3. The training and experience in subsection 1 must be obtained within the 7 years immediately preceding the date of the application, or the person must have related continuing education experience in the same type of radiation therapy on an annual basis.

4. The registrant shall retain all records of:

(a) Annual training for at least 3 years; and

(b) Initial training until the Division authorizes the disposal of the records.

5. As used in this section, "radiation safety officer" does not include a radiation safety officer as the term is defined in NAC 459.074.

Sec. 34. *1. A registrant for any therapeutic X-ray system shall require a person who is not an authorized user to:*

(a) Operate the therapeutic X-ray system solely under the direct supervision of an authorized user;

(b) Be certified as a radiation therapy technologist by the American Registry of Radiologic Technologists or a certifying organization accepted by the American Registry of Radiologic Technologists; and

(c) Have completed specific training on the system provided by the manufacturer and approved by the Division.

2. The training and experience required pursuant to subsection 1 must be obtained within the 7 years immediately preceding the date of the application, or the person must have related continuing education experience in the same type of radiation therapy on an annual basis.

3. The registrant shall retain all records of:

(a) Annual training for at least 3 years; and

(b) Initial training until the Division authorizes the disposal of the records.

Sec. 35. *A registrant shall annually provide instruction on radiation safety to each person who provides patient care and treatment planning for patients. The instruction must include, without limitation:*

1. Instruction on the operation of each device used by the person;

2. Safety procedures; and

3. Any updates on clinical use of each of those devices.

Sec. 36. *1. A therapeutic X-ray system must not be used for the irradiation of patients unless the facility complies with the criteria of the United States Food and Drug Administration for systems approved for human use.*

2. When not in use, the therapeutic X-ray system must be secured and unauthorized use or access prevented.

3. When a patient must be held in position for radiation therapy, mechanical supporting or restraining devices must be used.

4. A copy of the current operating and emergency procedures must be kept in a visible place in the treatment room.

5. Except for the patient, a person must not be exposed to radiation during the treatment and the facility must use portable shielding to reduce the occupational dose.

6. A registrant shall:

(a) Notify the radiation safety officer specified in section 33 of this regulation, or the officer's designee, and an authorized user as soon as practicable, if a patient or human research subject has a medical emergency and dies;

(b) Allow a person in the treatment room during treatment only after obtaining the approval of the authorized user, the radiation safety officer specified in section 33 of this regulation or the authorized medical physicist for electronic brachytherapy;

(c) Prevent the operation of more than one device which produces radiation in a treatment room; and

(d) Develop, implement and maintain written procedures for responding to a situation in which an operator is unable to complete the treatment in compliance with the written directive. The procedures must include, without limitation:

(1) Instructions for responding to equipment failures and the names of the persons who are responsible for carrying out any corrective actions;

(2) The process for restricting access to and marking the treatment area to minimize the risk of inadvertent exposure to radiation; and

(3) The names and telephone numbers of the authorized users, the authorized medical physicist for electronic brachytherapy and the radiation safety officer specified in section 33 of this regulation who must be contacted if the system operates abnormally.

Sec. 37. *1. The registrant shall perform, or cause to be performed, a radiation protection survey on each new facility or any existing facility which has not been previously surveyed.*

2. Each facility location authorized to use a therapeutic X-ray device must possess portable monitoring equipment which has been calibrated appropriately and which includes, without limitation, a radiation measurement survey instrument capable of measuring dose rates over the range 0.1 µSv (0.01 mrem) per hour to 10 mSv (1000 mrem) per hour. The instrument must be calibrated annually.

3. The radiation protection survey must:

(a) Be performed by, or under the direction of, an authorized medical physicist for electronic brachytherapy or the radiation safety officer specified in section 33 of this regulation;

(b) Be performed under the following conditions:

(1) The beam must be on;

(2) The largest clinically available treatment field must be used;

(3) A scattering phantom in the useful beam of radiation for secondary barriers must be present;

(4) A phantom must not be used for primary barriers; and

(5) Portable shielding in the primary and secondary beams must be taken into consideration; and

(c) Ensure that the levels of radiation in both restricted and unrestricted areas are not likely to cause exposures to persons in excess of the limits set by this chapter.

4. In addition to the original survey, a radiation protection survey must be performed:

(a) After any changes are made in the shielding of the treatment room or the portable shielding;

(b) After any changes are made in the location of the therapeutic X-ray system within the treatment room;

(c) After relocating the therapeutic X-ray system; and

(d) Before using the therapeutic X-ray system in a manner that may result in increased radiation levels in areas outside the treatment room.

5. The record of the survey must include, without limitation:

(a) All instances where the facility is in violation of applicable regulations;

(b) The date the measurements were taken;

(c) The reason the survey was required;

(d) The name of the manufacturer of the system surveyed;

(e) The model and serial numbers of the system surveyed;

(f) The instrument used to measure the radiation levels;

(g) A diagram of the areas surrounding the treatment room which were surveyed;

(h) The measured dose rates at several points in each area, expressed in microsieverts or millirems per hour;

(i) The calculated maximum level of radiation over a period of 1 week for each restricted and unrestricted area; and

(j) The name and signature of the person who conducted the survey.

Sec. 38. *1. An authorized medical physicist for electronic brachytherapy shall validate the output of an electronic brachytherapy system.*

2. Measurements for calibration must be made:

(a) For each X-ray tube;

(b) After any repair which affects the generation of the X-ray beam; or

(c) At any time indicated by the spot check required by section 40 of this regulation.

3. Calibration must include, without limitation, if applicable:

(a) A determination of the output of the system within 2 percent of the expected value, or a determination of the output if there is no expected value;

(b) A determination of the timer accuracy and linearity over the typical range of use;

(c) A determination of the proper operation of the devices used for back-up control of exposure;

(d) An evaluation of whether the distribution of the relative dose about the source is within 5 percent of that which is expected; and

(e) A determination of the positioning of an X-ray tube within 1 millimeter in the applicator.

4. The validation of the output must use a dosimetry system using approved guidelines, including, without limitation, the guidelines of the American Association of Physicists in Medicine to measure the output.

5. A registrant shall make the calibration measurements required by this section in accordance with any current recommendations from a nationally recognized professional association, including, without limitation, the American Association of Physicists in Medicine, or an equivalent alternative method, for electronic brachytherapy systems. If a protocol from a

nationally recognized professional association is not available, a registrant shall use the protocol included in the operation manual for the system from the manufacturer.

Sec. 39. *1. For an electronic brachytherapy system, calibration of the dosimetry system must include the source and energy in use and must use an established protocol such as the TG-21 protocol established by the American Association of Physicists in Medicine.*

2. A registrant shall ensure that a dosimetry system is available to take measurements during a quality assurance check. This system may be the same system used for calibrating the electronic brachytherapy system pursuant to section 38 of this regulation.

3. A registrant shall keep a record of each calibration, intercomparison and comparison of the dosimetry system for the duration of the registration. The record must include:

(a) The date of the calibration, intercomparison or comparison;

(b) The model number and serial number of the system which was calibrated, intercompared or compared;

(c) The name of the person who performed the calibration, intercomparison or comparison; and

(d) If an intercomparison is performed, evidence that the intercomparison was performed by, or under the direct supervision of, the authorized medical physicist for electronic brachytherapy of record.

4. A registrant shall furnish a copy of all survey and calibration records to the Division within 30 days after the completion of the survey or calibration.

Sec. 40. *1. A registrant shall ensure that a program is in place to perform spot checks on each electronic brachytherapy system:*

(a) At the beginning of each day during which the system will be used;

(b) Each time the system is moved to a new room or site; and

(c) After the installation of an X-ray tube.

2. The spot check must ensure the following components are operating properly:

(a) The indicator lights for radiation exposure on the electronic brachytherapy system and on the control console;

(b) The viewing and intercom systems in each facility, if applicable;

(c) The radiation monitors, if applicable; and

(d) The integrity of all cables, catheters or parts of the system that carry high voltages.

3. A spot check of the dosimetry of a system must include a check which indicates that the output of the X-ray source is within 3 percent of the expected value, including, as appropriate:

(a) Output as a function of time;

(b) Output as a function of a setting on a monitor chamber;

(c) Verification of the consistency of the dose distribution to within 3 percent of that found during calibration;

(d) Validation of the operation of methods of positioning to ensure that the treatment dose exposes the intended location within 1 millimeter; and

(e) Inspection of all treatment components for imperfections on the day of use.

4. A registrant shall retain a record of each spot check for at least 3 years. The record must include:

(a) The date of the spot check;

(b) The name of the manufacturer, model number and serial number of the electronic brachytherapy system checked;

(c) Notations which indicate the operability of radiation monitors, indicator lights for source exposure, viewing and intercom systems, applicators, source transfer tubes, transfer tube-applicator interfaces and the accuracy of source positioning, as applicable; and

(d) The name and signature of the person who performed the spot check.

Sec. 41. *A registrant who provides services for mobile electronic brachytherapy shall:*

1. Check all survey instruments before medical use at each location of use or on each day of use, whichever is more frequent;

2. Account for the X-ray tube in the system before departing from a location; and

3. Perform all the periodic spot checks required by section 40 of this regulation at each location.

Sec. 42. *1. Where applicable, an authorized medical physicist for electronic brachytherapy shall perform an acceptance test on the treatment planning system of computer systems used for therapy, using a published protocol which is accepted by a nationally recognized body. The acceptance test must verify, as applicable:*

(a) The input parameters for a source which are required by the dose-calculation algorithm;

(b) The accuracy of dose, dwell-time and treatment-time calculations at representative points;

(c) The accuracy of isodose plots and graphic displays;

(d) The accuracy of the software used to determine source positions from images; and

(e) If the treatment planning system is different from the treatment delivery system, the accuracy of electronic transfer of the treatment delivery parameters to the treatment delivery unit from the treatment planning system.

2. The position indicators in an applicator must be compared to the actual position of the source or planned dwell positions as appropriate at the time of commissioning.

3. Before each regimen for patient treatment, the parameters for the treatment must be evaluated and approved by the authorized user and the authorized medical physicist for electronic brachytherapy for accuracy through means which are independent of those that were used for the determination of the parameters.

Sec. 43. *1. Each registrant shall establish and maintain a written quality management program to ensure that a radiation therapy system is used as directed by the authorized user. The program must include, without limitation, the following objectives:*

(a) Except where a delay to provide a written directive would jeopardize the health of a patient, a written directive must be prepared before a dose of therapeutic radiation is administered;

(b) If the emergent nature of the condition of a patient threatens the health of the patient, an oral directive to administer treatment is acceptable, so long as the information contained in the oral directive is documented immediately in the record of the patient and a written directive is prepared within 24 hours;

(c) If a delay to provide a written revision to an existing written directive jeopardizes the health of a patient, an oral revision to the existing written directive may be given, so long as the oral revision is immediately documented in the record of the patient and a revised written directive is signed by the authorized user within 48 hours;

(d) A written directive which changes an existing written directive may be made for any therapeutic procedure, so long as the revised directive is signed and dated by an authorized user before the next administration of the electronic brachytherapy dose or fractional dose;

(e) The identity of the patient as being the person named in the written directive must be verified by more than one method before the administration of any therapeutic radiation;

(f) The final plans of treatment and any related calculations must be the same as those specified in the written directive;

(g) Each administration of a dose of therapeutic radiation must comply with the written directive; and

(h) Any unintended deviation from the written directive must be identified and evaluated, and appropriate action must be taken.

2. A registrant shall develop procedures for and conduct a review of the program, including, without limitation:

(a) An evaluation of a representative sample of administrations to patients within the review period through a procedure which must be submitted to the Division;

(b) An evaluation of all reportable events within the review period; and

(c) An evaluation of all medical events within the review period to verify that the actions taken comply with the program.

3. A review of the program must be conducted at least once every 12 months and a record of each review must be maintained for inspection by the Division for at least 3 years. The record must include any evaluations and the findings of the reviews.

4. A registrant shall evaluate each review to determine the effectiveness of the program and shall make modifications as needed to comply with the provisions of this section.

5. A registrant shall:

(a) Within 30 days after the discovery of a reportable event:

(1) Assemble the relevant facts, including, without limitation, the cause of the reportable event; and

(2) Identify any corrective action which is required to prevent a reoccurrence of the reportable event; and

(b) Retain a record of the facts and corrective action taken for at least 3 years.

6. A registrant shall maintain each written directive for at least 3 years.

7. A registrant may modify a program specified in subsection 1, so long as the effectiveness of the program is not decreased. Any such modification must be submitted to the Division within 30 days after the modification is made.

8. Each applicant for a new registration shall submit to the Division a written program specified in subsection 1 as part of the application for registration and shall carry out the program upon issuance of the registration.

9. A registrant shall keep records of each medical event until the termination of the registration.

Sec. 44. *1. A facility which uses an electronic brachytherapy system must develop and implement a quality assurance program in compliance with the approval of the system by the United States Food and Drug Administration. The program must be used to minimize deviations from facility procedures and to document preventative measures taken before any serious injury of a patient or medical event involving a therapeutic dose occurred. The program must include, without limitation:*

(a) Treatment planning, chart and treatment field parameters;

(b) Patient simulation, verification of catheter placement and device exchange procedures;

(c) Dose calculation and review procedures; and

(d) Reviews of daily treatment records.

2. Any deviation from a prescribed treatment or from the program and operating procedures of the facility must be investigated and brought to the attention of the authorized user, the authorized medical physicist for electronic brachytherapy and the radiation safety officer specified in section 33 of this regulation.

3. A review of the program must be conducted at least every 3 months and must include all deviations from any prescribed treatment. A signed and dated record of each review detailing the evaluation and findings of the review must be kept and made available for inspection by the Division for at least 3 years.

Sec. 45. *In addition to the requirements of NAC 459.400 to 459.624, inclusive, and sections 20 to 45, inclusive, of this regulation, registrants of portable equipment which is hand-held and facilities which house such equipment must meet the following requirements:*

1. A registrant shall establish a safe operating policy, and all operators shall sign a form acknowledging that they understand the policy. The policy must, at a minimum:

(a) Require proper operation of the unit, consistent with the manufacturer's manual;

(b) Ensure that the device is not used in an uncontrolled area, such as a waiting room or hallway;

(c) Require that the device is held without motion throughout radiography using a suitable stand or other method to immobilize portable equipment during the radiography;

(d) Require that any optional, removable secondary radiation block or protection features be installed and used during radiography, if the unit was designed with those features;

(e) Ensure that there are no ancillary persons within a radius of at least 2 meters from the tube head when using the portable equipment which is hand-held; and

(f) Require an operator to comply with the provisions of NAC 459.554 and 459.556, when applicable.

2. Each operator of portable equipment which is hand-held must be specifically trained to operate the equipment. Training on the use of the device must be documented and include:

(a) Proper positioning of the device to ensure an adequate protection position;

(b) Limitations of the use of position indicating devices that require longer distances to the face of the patient;

(c) Diagrams of the protected position and location in relationship to the device;

(d) Diagrams of the effect of improper distance of removal of the shielding device; and

(e) Diagrams of common examples of improper positioning of the device or location of the operator.

3. A written security policy must be established to prevent unauthorized use of the portable equipment which is hand-held.

4. Portable equipment which is hand-held:

(a) Must be kept in a secured location when not in use;

(b) Must only be used for its designed purpose, as specified by the manufacturer;

(c) Must be maintained and serviced in accordance with the manufacturer's recommendations; and

(d) May only be used at the location where it is registered.

5. When operating portable equipment which is hand-held, an operator shall wear:

(a) A lead apron and thyroid collar; and

(b) Whole body and extremity dose monitoring devices.

6. All portable equipment which is hand-held must comply with the applicable performance standards of 21 C.F.R. §§ 1020.30 to 1020.40, inclusive, which were in effect at the time the unit was manufactured.

7. Upon prior approval of the Division, source to image distance and exposure switch locations may be adjusted to accommodate the use of portable equipment which is hand-held.

8. Any person who sells, leases, transfers, lends, disposes, assembles or acquires portable equipment which is hand-held in this State or sells, leases, transfers or disposes of or acquires a radiation machine in this State shall notify the Division within 15 days and provide the information required by NAC 459.166.

Sec. 46. NAC 459.010 is hereby amended to read as follows:

459.010 As used in NAC 459.010 to 459.950, inclusive, ***and sections 2 to 45, inclusive, of this regulation,*** unless the context otherwise requires, the words and terms defined in NAC 459.012 to 459.116, inclusive, ***and sections 2 to 19, inclusive, of this regulation*** have the meanings ascribed to them in those sections.

Sec. 47. NAC 459.0192 is hereby amended to read as follows:

459.0192 "Appendix B" means Appendix B to 10 C.F.R. §§ 20.1001 to 20.2402, inclusive, as those provisions existed on ~~[October 13, 1999.]~~ ***November 30, 2007, with the following revisions to the List of Elements:***

1. "Femium (Fm) with Atomic Number 100" shall be deemed to mean "Fermium (Fm) with Atomic Number 100";

2. "Hafniim (Hf) with Atomic Number 72" shall be deemed to mean "Hafnium (Hf) with Atomic Number 72"; and

3. "Tantaium (Ta) with Atomic Number 73" shall be deemed to mean "Tantalum (Ta) with Atomic Number 73."

Sec. 48. NAC 459.022 is hereby amended to read as follows:

459.022 "By-product material" ~~[has the meaning ascribed to it in subsection 1 of NRS 459.010.]~~ *means:*

1. Any radioactive material, except special nuclear material, yielded in or made radioactive by exposure to the radiation incident to the process of producing or making use of special nuclear material;

2. The tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore which is processed primarily for its source material content, including, without limitation, discrete surface wastes resulting from uranium solution extraction processes, except for underground ore bodies which are depleted by operations to extract such solutions;

3. Any discrete source of radium-226 that is produced, extracted or converted after extraction for use in a commercial, medical or research activity before, on or after August 8, 2005;

4. Any material which:

(a) Is an accelerator-produced radioactive material; and

(b) Is produced, extracted or converted after extraction for use in a commercial, medical or research activity before, on or after August 8, 2005; or

5. Except for source material, any discrete source of naturally occurring radioactive material which:

(a) The Nuclear Regulatory Commission, in consultation with the Administrator of the United States Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security and the head of any other appropriate federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium-226 to the public health and safety or the common defense and security; and

(b) Is extracted or converted after extraction for use in a commercial, medical or research activity before, on or after August 8, 2005.

Sec. 49. NAC 459.076 is hereby amended to read as follows:

459.076 "Radioactive material" means any solid, liquid or gaseous material which emits radiation spontaneously. ***The term includes by-product material.***

Sec. 50. NAC 459.1095 is hereby amended to read as follows:

459.1095 "Total effective dose equivalent" means the sum of the ~~[deep dose]~~ ***effective dose*** equivalent ***for external exposures*** and the committed effective dose equivalent ~~[.]~~ ***for internal exposures.***

Sec. 51. NAC 459.180 is hereby amended to read as follows:

459.180 1. The provisions of NAC 459.180 to 459.313, inclusive, provide for the licensing of radioactive materials. No person may receive, possess, use, transfer, own ***,*** ~~[or]~~ acquire ***, manufacture or produce*** radioactive material except as authorized in a specific or general license issued pursuant to NAC 459.180 to 459.313, inclusive, or as otherwise provided in those sections ~~[.]~~ ***with the following exceptions:***

(a) A specifically licensed government agency or federally recognized Indian tribe that possesses and uses accelerator-produced radioactive material or discrete sources of radium-226 for which a license amendment is required to authorize the activities in this section may

continue to use such materials for uses allowed pursuant to this section until the date of the Nuclear Regulatory Commission's final licensing determination, so long as the licensee submitted an amendment application on or before June 2, 2008.

(b) A government agency or federally recognized Indian tribe that possesses and uses accelerator-produced radioactive material or discrete sources of radium-226 for which a specific license is required by this section may continue to use such material for uses allowed pursuant to this section until the date of the Nuclear Regulatory Commission's final licensing determination, so long as the agency or Indian tribe submitted an application for a license authorizing activities involving those materials on or before December 1, 2008.

(c) Except as otherwise provided in paragraph (a), any other licensee who possesses and uses accelerator-produced radioactive material or discrete sources of radium-226 for which a license amendment is required to authorize the activities in this section may continue to use such materials for uses allowed pursuant to this section until the date of the Nuclear Regulatory Commission's final licensing determination, so long as the licensee submitted an amendment application within 6 months after the waiver expiration date of August 7, 2009, or within 6 months after the date of an earlier termination of the waiver as noticed by the Nuclear Regulatory Commission, whichever is earlier.

(d) Except as otherwise provided in paragraph (b), any other person who possesses and uses accelerator-produced radioactive material or discrete sources of radium-226 for which a specific license is required by this section may continue to use such material for uses allowed pursuant to this section until the date of the Nuclear Regulatory Commission's final licensing determination, so long as the person submits a license application within 12 months after the waiver expiration date of August 7, 2009, or within 12 months after the date of an earlier

termination of the waiver as noticed by the Nuclear Regulatory Commission, whichever is earlier.

(e) Persons exempt as provided in this section.

(f) Persons exempt pursuant to 10 C.F.R. § 150.

2. In addition to the requirements of NAC 459.180 to 459.313, inclusive, all licensees are subject to the requirements of NAC 459.010 to 459.142, inclusive, 459.320 to 459.374, inclusive, and 459.780 to 459.794, inclusive. Licensees engaged in industrial radiography are subject to the requirements of NAC 459.737 ***,*** and licensees using radioactive materials in the healing arts are subject to the requirements of NAC ~~[459.3066,]~~ 459.3801 and 459.3805.

Sec. 52. NAC 459.184 is hereby amended to read as follows:

459.184 1. Except as otherwise provided in subsection ~~[2,]~~ ***3,*** any person is exempt from NAC 459.180 to 459.313, inclusive, ***and section 25 of this regulation*** to the extent that he receives, possesses, uses, transfers, owns or acquires products or materials containing:

(a) Radioactive material in concentrations not in excess of those listed in NAC 459.186; or

(b) Naturally occurring radioactive material that contains less than 5 picocuries ***(0.185 becquerels)*** of ~~[radium 226]~~ ***radium-226*** per gram of material.

2. ***Any person who possesses by-product material received or acquired before September 25, 1971, under the general license then provided pursuant to 10 C.F.R. § 31.4, or a similar general license of a state, is exempt from the requirements of NAC 459.180 to 459.3184, inclusive, 459.737 and 459.738 to the extent that the person possesses, uses, transfers or owns such by-product material.***

3. A person shall not introduce radioactive material into a product or material knowing or having reason to believe that it will be transferred to persons exempt under subsection 1 or the

equivalent regulations of the Nuclear Regulatory Commission or any agreement state, except in accordance with a specific license issued pursuant to NAC 459.276 or the general licenses provided in NAC 459.210.

~~[3.]~~ ***4. A manufacturer, processor or producer of a product or material is exempt from the requirements for a license set forth in 10 C.F.R. § 81 and from NAC 459.180 to 459.313, inclusive, to the extent that the person transfers by-product material contained in a product or material:***

(a) In concentrations not in excess of those specified in NAC 459.186; and

(b) Introduced into the product or material by a licensee holding a specific license issued by the Division expressly authorizing such introduction.

➥ This exemption does not apply to the transfer of by-product material contained in any food, beverage, cosmetic, drug or other product designed for ingestion or inhalation by, or application to, a human being.

5. Except as otherwise provided in subsections ~~[4]~~ ***6*** and ~~[5,]~~ ***7,*** any person is exempt from the provisions of NAC 459.010 to 459.950, inclusive, ***and sections 2 to 45, inclusive, of this regulation*** to the extent that he receives, possesses, uses, transfers, owns or acquires radioactive material in individual quantities each of which does not exceed the applicable quantity set forth in NAC 459.188.

~~[4.]~~ ***6.*** The provisions of NAC 459.180 to 459.313, inclusive, ***and section 26 of this regulation*** do not authorize the production, packaging or repackaging of radioactive material for purposes of commercial distribution or the incorporation of radioactive material into products intended for commercial distribution.

~~[5.]~~ ***7.*** A person shall not, for purposes of commercial distribution, transfer radioactive material in the individual quantities in NAC 459.188, knowing or having reason to believe that such quantities of radioactive material will be transferred to persons exempt under subsections ~~[3]~~ ***5*** and ~~[4]~~ ***6*** or the equivalent regulations of the Nuclear Regulatory Commission or any agreement state, except in accordance with a specific license issued by the Nuclear Regulatory Commission pursuant to 10 C.F.R. § 32.18 or by the Division pursuant to NAC 459.278. The license must state that the radioactive material may be transferred by the licensee to persons exempt under subsections ~~[3]~~ ***5*** and ~~[4]~~ ***6*** or the equivalent regulations of the Nuclear Regulatory Commission or any agreement state.

8. Except for by-product material combined within a device placed in use before May 3, 1999, or as otherwise authorized by this chapter, no person may combine quantities of by-product material covered by this exemption in such a manner that the aggregate quantity exceeds the limits set forth in NAC 459.188 for purposes of producing an increased radiation level.

Sec. 53. NAC 459.188 is hereby amended to read as follows:

459.188 Exempt quantities are:

Radioactive material	Microcuries	Radioactive material	Microcuries
Antimony - 122 (Sb 122)	100	Antimony - 125 (Sb 125)	10
Antimony - 124 (Sb 124)	10	Arsenic - 73 (As 73)	100

Radioactive material	Microcuries	Radioactive material	Microcuries
Arsenic - 74 (As 74)	10	Cesium - 134m (Cs 134m)	100
Arsenic - 76 (As 76)	10	Cesium - 134 (Cs 134)	1
Arsenic - 77 (As 77)	100	Cesium - 135 (Cs 135)	10
Barium - 131 (Ba 131)	10	Cesium - 136 (Cs 136)	10
Barium - 133 (Ba 133)	10	Cesium - 137 (Cs 137)	10
Barium - 140 (Ba 140)	10	Chlorine - 36 (Cl 36)	10
Bismuth - 210 (Bi 210)	1	Chlorine - 38 (Cl 38)	10
Bromine - 82 (Br 82)	10	Chromium - 51 (Cr 51)	1,000
Cadmium - 109 (Cd 109)	10	Cobalt - 57 (Co 57)	100
Cadmium - 115m (Cd 115m)	10	Cobalt - 58m (Co 58m)	10
Cadmium - 115 (Cd 115)	100	Cobalt - 58 (Co 58)	10
Calcium - 45 (Ca 45)	10	Cobalt - 60 (Co 60)	1
Calcium - 47 (Ca 47)	10	Copper - 64 (Cu 64)	100
Carbon - 14 (C 14)	100	Dysprosium - 165 (Dy 165)	10
Cerium - 141 (Ce 141)	100	Dysprosium - 166 (Dy 166)	100
Cerium - 143 (Ce 143)	100	Erbium - 169 (Er 169)	100
Cerium - 144 (Ce 144)	1	Erbium - 171 (Er 171)	100
Cesium - 129 (Cs 129)	100	Europium - 152 (Eu 152)9.2h	100
Cesium - 131 (Cs 131)	1,000		

Radioactive material	Microcuries	Radioactive material	Microcuries
Europium - 152 (Eu 152)13 yr	1	Indium - 114m (In 114m)	10
		Indium - 115m (In 115m)	100
Europium - 154 (Eu 154)	1	Indium - 115 (In 115)	10
Europium - 155 (Eu 155)	10	Iodine - 123 (I 123)	100
Fluorine - 18 (F 18)	1,000	Iodine - 125 (I 125)	1
Gadolinium - 153 (Gd 153)	10	Iodine - 126 (I 126)	1
Gadolinium - 159 (Gd 159)	100	Iodine - 129 (I 129)	0.1
Gallium - 67 (Ga 67)	100	Iodine - 131 (I 131)	1
Gallium - 72 (Ga 72)	10	Iodine - 132 (I 132)	10
Germanium-68 (Ge 68)	***10***	Iodine - 133 (I 133)	1
Germanium - 71 (Ge 71)	100	Iodine - 134 (I 134)	10
Gold-195 (Au 195)	***10***	Iodine - 135 (I 135)	10
Gold - 198 (Au 198)	100	Iridium - 192 (Ir 192)	10
Gold - 199 (Au 199)	100	Iridium - 194 (Ir 194)	100
Hafnium - 181 (Hf 181)	10	Iron - 52 (Fe 52)	10
Holmium - 166 (Ho 166)	100	Iron - 55 (Fe 55)	100
Hydrogen - 3 (H 3)	1,000	Iron - 59 (Fe 59)	10
Indium - 111 (In 111)	100	Krypton - 85 (Kr 85)	100
Indium - 113m (In 113m)	100	Krypton - 87 (Kr 87)	10

Radioactive material	Microcuries	Radioactive material	Microcuries
Lanthanum - 140 (La 140)	10	Osmium - 191 (Os 191)	100
Lutetium - 177 (Lu 177)	100	Osmium - 193 (Os 193)	100
Manganese - 52 (Mn 52)	10	Palladium - 103 (Pd 103)	100
Manganese - 54 (Mn 54)	10	Palladium - 109 (Pd 109)	100
Manganese - 56 (Mn 56)	10	Phosphorus - 32 (P 32)	10
Mercury - 197m (Hg 197m)	100	Platinum - 191 (Pt 191)	100
Mercury - 197 (Hg 197)	100	Platinum - 193m (Pt 193m)	100
Mercury - 203 (Hg 203)	10	Platinum - 193 (Pt 193)	100
Molybdenum - 99 (Mo 99)	100	Platinum - 197m (Pt 197m)	100
Neodymium - 147 (Nd 147)	100	Platinum - 197 (Pt 197)	100
Neodymium - 149 (Nd 149)	100	Polonium - 210 (Po 210)	0.1
Nickel - 59 (Ni 59)	100	Potassium - 42 (K 42)	10
Nickel - 63 (Ni 63)	10	Potassium - 43 (K 43)	10
Nickel - 65 (Ni 65)	100	Praseodymium - 142 (Pr 142)	100
Niobium - 93m (Nb 93m)	10		
Niobium - 95 (Nb 95)	10	Praseodymium - 143 (Pr 143)	100
Niobium - 97 (Nb 97)	10		
Osmium - 185 (Os 185)	10	Promethium - 147 (Pm 147)	10
Osmium - 191m (Os 191m)	100	Promethium - 149 (Pm 149)	10

Radioactive material	Microcuries	Radioactive material	Microcuries
Rhenium - 186 (Re 186)	100	Silver - 110m (Ag 110m)	1
Rhenium - 188 (Re 188)	100	Silver - 111 (Ag 111)	100
Rhodium - 103m (Rh 103m)	100	Sodium - 22 (Na 22)	10
Rhodium - 105 (Rh 105)	100	Sodium - 24 (Na 24)	10
Rubidium - 81 (Rb 81)	10	Strontium - 85 (Sr 85)	10
Rubidium - 86 (Rb 86)	10	Strontium - 89 (Sr 89)	1
Rubidium - 87 (Rb 87)	10	Strontium - 90 (Sr 90)	0.1
Ruthenium - 97 (Ru 97)	100	Strontium - 91 (Sr 91)	10
Ruthenium - 103 (Ru 103)	10	Strontium - 92 (Sr 92)	10
Ruthenium - 105 (Ru 105)	10	Sulphur - 35 (S 35)	100
Ruthenium - 106 (Ru 106)	1	Tantalum - 182 (Ta 182)	10
Samarium - 151 (Sm 151)	10	Technetium - 96 (Tc 96)	10
Samarium - 153 (Sm 153)	100	Technetium - 97m (Tc 97m)	100
Scandium - 46 (Sc 46)	10	Technetium - 97 (Tc 97)	100
Scandium - 47 (Sc 47)	100	Technetium - 99m (Tc 99m)	100
Scandium - 48 (Sc 48)	10	Technetium - 99 (Tc 99)	10
Selenium - 75 (Se 75)	10	Tellurium - 125m (Te 125m)	10
Silicon - 31 (Si 31)	100	Tellurium - 127m (Te 127m)	10
Silver - 105 (Ag 105)	10	Tellurium - 127 (Te 127)	100

Radioactive material	Microcuries	Radioactive material	Microcuries
Tellurium - 129m (Te 129m)	10	Xenon - 135 (Xe 135)	100
Tellurium - 129 (Te 129)	100	Ytterbium - 175 (Yb 175)	100
Tellurium - 131m (Te 131m)	10	Yttrium - 87 (Y 87)	10
Tellurium - 132 (Te 132)	10	***Yttrium - 88 (Y88)***	***10***
Terbium - 160 (Tb 160)	10	Yttrium - 90 (Y 90)	10
Thallium - 200 (Tl 200)	100	Yttrium - 91 (Y 91)	10
Thallium - 201 (Tl 201)	100	Yttrium - 92 (Y 92)	100
Thallium - 202 (Tl 202)	100	Yttrium - 93 (Y 93)	100
Thallium - 204 (Tl 204)	10	Zinc - 65 (Zn 65)	10
Thulium - 170 (Tm 170)	10	Zinc - 69m (Zn 69m)	100
Thulium - 171 (Tm 171)	10	Zinc - 69 (Zn 69)	1,000
Tin - 113 (Sn 113)	10	Zirconium - 93 (Zr 93)	10
Tin - 125 (Sn 125)	10	Zirconium - 95 (Zr 95)	10
Tungsten - 181 (W 181)	10	Zirconium - 97 (Zr 97)	10
Tungsten - 185 (W 185)	10	Any radioactive material not listed above other than alpha emitting radioactive material ~~[.]~~	***0.1***
Tungsten - 187 (W 187)	100		
Vanadium - 48 (V 48)	10		
Xenon - 131m (Xe 131m)	1,000		
Xenon - 133 (Xe 133)	100		

Sec. 54. NAC 459.190 is hereby amended to read as follows:

459.190 1. Except for persons who apply radioactive material to, or persons who incorporate radioactive material into, the following products, any person is exempt from NAC 459.010 to 459.950, inclusive, ***and sections 2 to 45, inclusive, of this regulation*** to the extent that he receives, possesses, uses, transfers, owns or acquires the following products:

(a) Timepieces, hands or dials containing not more than the following specified quantities of radioactive material and not exceeding the following specified levels of radiation:

(1) Twenty-five millicuries (925 megabecquerels) of tritium per timepiece.

(2) Five millicuries (185 megabecquerels) of tritium per hand.

(3) Fifteen millicuries (555 megabecquerels) of tritium per dial. If bezels are used, they are considered part of the dial.

(4) One hundred microcuries (3.7 megabecquerels) of ~~[promethium 147]~~ ***promethium-147*** per watch or 200 microcuries (7.4 megabecquerels) of ~~[promethium 147]~~ ***promethium-147*** per other timepiece.

(5) Twenty microcuries (740 kilobecquerels) of ~~[promethium 147]~~ ***promethium-147*** per watch hand or 40 microcuries (1.48 megabecquerels) of ~~[promethium 147]~~ ***promethium-147*** per other timepiece hand.

(6) Sixty microcuries (2.22 megabecquerels) of ~~[promethium 147]~~ ***promethium-147*** per watch dial or 120 microcuries (4.44 megabecquerels) of ~~[promethium 147]~~ ***promethium-147*** per other timepiece dial. If bezels are used, they are considered part of the dial.

(7) ~~[Fifteen-hundredths microcurie (5.55 kilobecquerels) of radium per timepiece.~~

~~(8) Three-hundredths microcurie (1.11 kilobecquerels) of radium per hand.~~

~~(9) Nine-hundredths microcurie (3.33 kilobecquerels) of radium per dial. If bezels are used, they are considered part of the dial.~~

~~(10)]~~ Notwithstanding these quantities, the levels of radiation from hands and dials containing ~~[promethium 147]~~ ***promethium-147*** or ~~[radium 226]~~ ***radium-226*** must not exceed, when measured through 50 milligrams per square centimeter of absorber:

(I) For wrist watches, 0.1 millirad (1 microgray) per hour at 10 centimeters from any surface;

(II) For pocket watches, 0.1 millirad (1 microgray) per hour at 1 centimeter from any surface, also radium must not be used for pocket watches; and

(III) For any other timepiece, 0.2 millirad (2 micrograys) per hour at 10 centimeters from any surface.

~~[(11)]~~ ***(8)*** One microcurie (37 kilobecquerels) of ~~[radium 226]~~ ***radium-226*** per timepiece in ***intact*** timepieces ~~[acquired before February 28, 1980.]~~ ***manufactured before November 30, 2010.***

(b) Lock illuminators containing not more than 15 millicuries (555 megabecquerels) of tritium or not more than 2 millicuries (74 megabecquerels) of ~~[promethium 147]~~ ***promethium-147*** installed in automobile locks. The levels of radiation from each lock illuminator containing ~~[promethium 147]~~ ***promethium-147*** must not exceed 1 millirad (10 micrograys) per hour at 1 centimeter from any surface when measured through 50 milligrams per square centimeter of absorber.

(c) Precision balances containing ~~[no]~~ ***not*** more than 1 millicurie (37 megabecquerels) of tritium per balance or ***not more than*** 0.5 millicurie (18.5 megabecquerels) of tritium per balance part ~~[.]~~ ***which were manufactured before December 17, 2007.***

(d) Automobile shift quadrants containing not more than 25 millicuries (925 megabecquerels) of tritium.

(e) Marine compasses containing not more than 750 millicuries (27.75 gigabecquerels) of tritium gas and other marine navigational instruments containing not more than 250 millicuries (9.25 gigabecquerels) of tritium gas ~~[.]~~ ***which were manufactured before December 17, 2007.***

(f) ***Ionization chamber smoke detectors containing not more than 1 microcurie (µCi) of americium-241 per detector in the form of a foil and designed to protect life and property from fire.***

(g) Thermostat dials and pointers containing not more than 25 millicuries (925 megabecquerels) of tritium per thermostat.

~~[(g)]~~ ***(h)*** Electron tubes, if each tube does not contain more than one of the following specified quantities of radioactive material:

(1) One hundred fifty millicuries (5.55 gigabecquerels) of tritium per microwave receiver protector tube or 10 millicuries (370 megabecquerels) of tritium per any other electron tube;

(2) One microcurie (37 kilobecquerels) of ~~[cobalt 60;]~~ ***cobalt-60;***

(3) Five microcuries (185 kilobecquerels) of ~~[nickel 63;]~~ ***nickel-63;***

(4) Thirty microcuries (1.11 megabecquerels) of ~~[krypton 85;]~~ ***krypton-85;***

(5) Five microcuries (185 kilobecquerels) of ~~[cesium 137;]~~ ***cesium-137;***

(6) Thirty microcuries (1.11 megabecquerels) of ~~[promethium 147;]~~ ***promethium-147;*** or

(7) One microcurie (37 kilobecquerels) of ~~[radium 226,]~~ ***radium-226,***

➥ and if the levels of radiation from each electron tube containing radioactive material do not exceed 1 millirad (10 micrograys) per hour at 1 centimeter from any surface when measured through 7 milligrams per square centimeter of absorber.

~~[(h)]~~ ***(i)*** Ionizing radiation measuring instruments containing, for purposes of internal calibration or standardization, a source of radioactive material ~~[not exceeding]~~ ***which:***

(1) Does not exceed the applicable quantity in NAC 459.188 ~~[.]~~ ***; and***

(2) Contains not more than 10 exempt quantities.

2. For the purposes of NAC 459.180 to 459.313, inclusive, authority to transfer possession or control by the manufacturer, processor or producer of any equipment, device, commodity or other product containing source material or by-product material whose subsequent possession, use, transfer and disposal by all other persons are exempted from regulatory requirements may be obtained only from the Nuclear Regulatory Commission.

3. For the purposes of paragraph ~~[(g)]~~ ***(h)*** of subsection 1, electron tubes include spark gap tubes, power tubes, gas tubes including glow lamps, receiving tubes, microwave tubes, indicator tubes, pick-up tubes, radiation detection tubes and any other completely sealed tube that is designed to conduct or control electrical currents.

4. For the purposes of paragraph (i) of subsection 1:

(a) The source of an instrument may contain either one type or different types of radionuclides;

(b) An individual exempt quantity may be composed of fractional parts of one or more of the exempt quantities specified in NAC 459.188; and

(c) Five hundredths of a microcurie of americium-241 shall be deemed an exempt quantity pursuant to NAC 459.188.

Sec. 55. NAC 459.192 is hereby amended to read as follows:

459.192 1. Except for persons who manufacture, process or produce self-luminous products containing tritium, ~~[krypton 85]~~ ***krypton-85*** or ~~[promethium 147,]~~ ***promethium-147,***

any person is exempt from the provisions of NAC 459.010 to 459.950, inclusive, ***and sections 2 to 45, inclusive, of this regulation*** to the extent that he receives, possesses, uses, transfers, owns or acquires tritium, ~~[krypton 85]~~ ***krypton-85*** or ~~[promethium 147]~~ ***promethium-147*** in self-luminous products manufactured, processed, produced, imported or transferred in accordance with a specific license issued by the Nuclear Regulatory Commission pursuant to 10 C.F.R. § 32.22 which license authorizes the transfer of the product to persons who are exempt from regulatory requirements. The exemption in this subsection for self-luminous products does not apply to tritium, ~~[krypton 85]~~ ***krypton-85*** or ~~[promethium 147]~~ ***promethium-147*** used in products for frivolous purposes or in toys or adornments.

2. Any person is exempt from the provisions of NAC 459.010 to 459.950, inclusive, ***and sections 2 to 45, inclusive, of this regulation*** to the extent that he receives, possesses, uses, transfers or owns articles containing less than 0.1 microcurie (3.7 ~~[kilobequerels)]~~ ***kilobecquerels)*** of ~~[radium 226]~~ ***radium-226*** which were acquired before February 28, 1980.

3. Except for persons who manufacture, process ***,*** ~~[or]~~ produce ***or initially transfer for sale or distribution*** gas and aerosol detectors containing radioactive material, any person is exempt from the provisions of NAC 459.010 to 459.950, inclusive, ***and sections 2 to 45, inclusive, of this regulation*** to the extent that he receives, possesses, uses, transfers, owns or acquires radioactive material in gas and aerosol detectors designed to protect life or property from fires and airborne hazards if the detectors containing radioactive material have been manufactured, ~~[imported or]~~ ***processed, produced or initially*** transferred in accordance with a specific license issued by the Division, the Nuclear Regulatory Commission or any other agreement state pursuant to 10 C.F.R. § 32.26 or its equivalent, which authorizes the ***initial*** transfer of the detectors ~~[to persons who are exempt from regulatory requirements.]~~ ***for use. This exemption***

also applies to gas and aerosol detectors manufactured or distributed before November 30, 2010, in accordance with a specific license issued by a state under comparable provisions to 10 C.F.R. § 32.26 authorizing distribution to persons exempt from regulatory requirements. The following also apply to gas and aerosol detectors containing radioactive material:

(a) The provisions of subsection 2 of NAC 459.190 apply to this subsection.

(b) Any gas and aerosol detector which contains by-product material, or naturally occurring and accelerator-produced radioactive material, and which was previously manufactured and distributed to general licensees in accordance with a specific license issued by an agreement state ***, pursuant to provisions comparable to 10 C.F.R. § 32.26,*** is exempt under this subsection if the device is labeled in accordance with the specific license and if the device meets the requirements of NAC 459.280.

4. Any person who receives, possesses, uses, transfers, owns or acquires capsules that contain carbon-14 urea is exempt from the provisions of NAC 459.180 to 459.313, inclusive, if each capsule:

(a) Is intended solely for in vivo diagnostic use in humans and is not used for research involving human subjects; and

(b) Contains, allowing for nominal variation that may occur during the manufacturing process, not more than 1 microcurie (37 kilobecquerels) of carbon-14 urea.

➥ ~~[Nothing in]~~ ***The provisions of*** this subsection ~~[relieves]~~ ***do not relieve*** a person from complying with any other federal, state or local requirement governing the receipt, administration or use of drugs.

~~[5. Any person who receives, possesses, uses, transfers, owns or acquires synthetic plastic resins containing scandium-46 which are designed for sand consolidation in oil wells is exempt~~

~~from the provisions of NAC 459.010 to 459.950, inclusive, if the resins have been manufactured or imported in accordance with a specific license issued by the Nuclear Regulatory Commission or have been manufactured in accordance with the specifications contained in a specific license issued by the Division or any agreement state to the manufacturer of resins pursuant to licensing requirements equivalent to those in 10 C.F.R. §§ 32.16 and 32.17 of the regulations of the Nuclear Regulatory Commission. This exemption does not authorize the manufacture of any resins containing scandium-46.]~~

Sec. 56. NAC 459.1951 is hereby amended to read as follows:

459.1951 ***1.*** The following table sets forth quantities of radioisotopes for the purposes of subsections 1 and 2 of NAC 459.195.

Radioactive material	Release fraction	Quantity (curies)
Actinium-228	0.001	4,000
Americium-241	.001	2
Americium-242	.001	2
Americium-243	.001	2
Antimony-124	.01	4,000
Antimony-126	.01	6,000
Barium-133	.01	10,000
Barium-140	.01	30,000
Bismuth-207	.01	5,000
Bismuth-210	.01	600
Cadmium-109	.01	1,000
Cadmium-113	.01	80
Calcium-45	.01	20,000
Californium-252	.001	9(20mg)
Carbon-14	.01	50,000
Non CO_2	~~[Non CO]~~	
Cerium-141	.01	10,000
Cerium-144	.01	300
Cesium-134	.01	2,000
Cesium-137	.01	3,000
Chlorine-36	.5	100
Chromium-51	.01	300,000
Cobalt-60	.001	5,000
Copper-64	.01	200,000
Curium-242	.001	60
Curium-243	.001	3
Curium-244	.001	4
Curium-245	.001	2
Europium-152	.01	500
Europium-154	.01	400
Europium-155	.01	3,000
Germanium-68	.01	2,000
Gadolinium-153	.01	5,000
Gold-198	.01	30,000
Hafnium-172	.01	400
Hafnium-181	.01	7,000
Holmium-166m	.01	100
Hydrogen-3	.5	20,000
Iodine-125	.5	10
Iodine-131	.5	10
Indium-114m	.01	1,000
Iridium-192	.001	40,000
Iron-55	.01	40,000
Iron-59	.01	7,000
Krypton-85	1.0	6,000,000
Lead-210	.01	8
Manganese-56	.01	60,000
Mercury-203	.01	10,000
Molybdenum-99	.01	30,000
Neptunium-237	.001	2
Nickel-63	.01	20,000
Niobium-94	.01	300
Phosphorus-32	.5	100
Phosphorus-33	.5	1,000
Polonium-210	.01	10
Potassium-42	.01	9,000
Promethium-145	.01	4,000
Promethium-147	.01	4,000
Radium-226	***.001***	***100***
Ruthenium-106	.01	200
Samarium-151	.01	4,000
Scandium-46	.01	3,000
Selenium-75	.01	10,000
Silver-110m	.01	1,000
Sodium-22	.01	9,000
Sodium-24	.01	10,000
Strontium-89	.01	3,000

Radioactive material	Release fraction	Quantity (curies)
Strontium-90	.01	90
Sulfur-35	.5	900
Technetium-99	.01	10,000
Technetium-99m	.01	400,000
Tellurium-127m	.01	5,000
Tellurium-129m	.01	5,000
Terbium-160	.01	4,000
Thulium-170	.01	4,000
Tin-113	.01	10,000
Tin-123	.01	3,000
Tin-126	.01	1,000
Titanium-44	.01	100
Vanadium-48	.01	7,000
Xenon-133	1.00	900,000
Yttrium-91	.01	2,000
Zinc-65	.01	5,000
Zirconium-93	.01	400
Zirconium-95	.01	5,000
Any other beta-gamma emitter	.01	10,000
Mixed fission products	.01	1,000
Mixed corrosion products	.01	10,000
Contaminated equipment beta-gamma	.001	10,000
Irradiated material, any form other than solid noncombustible	.01	1,000
Irradiated material, solid noncombustible	.001	10,000
Mixed radioactive waste, beta-gamma	.01	1,000
Packaged mixed waste, beta-gamma	.001	10,000
Any other alpha emitter	.001	2
Contaminated equipment, alpha	.0001	20
Packaged waste, alpha	.0001	20

2. For combinations of radioactive materials, consideration of the need for an emergency plan pursuant to NAC 459.195 is required if the sum of the ratios of the quantity of each radioactive material authorized to the quantity listed for that material in Schedule C exceeds 1.

3. Waste packaged in Type B containers does not require an emergency plan pursuant to NAC 459.195.

Sec. 57. NAC 459.1955 is hereby amended to read as follows:

459.1955 1. A plan for financing decommissioning, as described in subsection 10, must be submitted by each applicant for a license authorizing the possession and use of:

(a) Unsealed radioactive materials with a half-life of more than 120 days in quantities that exceed 10^5 times the applicable quantities set forth in NAC 459.362; or

(b) The involvement of a combination of radionuclides when R divided by 10^5 is greater than 1.

2. A plan for financing decommissioning, as described in subsection 10, must be submitted by each licensee who is authorized to possess and use, and each applicant for a specific license authorizing the possession and use of:

(a) Sealed sources of radioactive material or plated foils of radioactive material with a half-life of more than 120 days in quantities that exceed 10^{12} times the applicable quantities set forth in NAC 459.362; or

(b) The involvement of a combination of isotopes when R divided by 10^{12} is greater than 1.

3. Each applicant for a specific license that authorizes the possession and use of radioactive material with a half-life of more than 120 days and in the quantities set forth in subsection 9 must submit:

(a) A plan for financing decommissioning as described in subsection 10; or

(b) A certification which sets forth that financial assurance for decommissioning:

(1) Has been provided in the amount required by subsection 9 using one of the methods set forth in subsection 11; or

(2) Will be provided after the application has been approved and the license issued, but before the receipt of any licensed material by the licensee.

4. If an applicant:

(a) Defers the execution of the financial instrument until after the license has been issued pursuant to subparagraph (2) of paragraph (b) of subsection 3, the applicant must submit to the Division as part of the certification a signed original of the financial instrument used to comply with subsection 11 before the receipt of any licensed material.

(b) Does not defer the execution of the financial instrument until after the license has been issued, the applicant must submit to the Division as part of the certification a signed original of the financial instrument used by the applicant to comply with subsection 11.

5. An applicant for a specific license of the type described in subsection 1 or 3 must submit a plan for financing decommissioning or a certification of financial assurance for decommissioning with his application.

6. The holder of a specific license that is issued before January 26, 1999, and:

(a) Of a type described in subsection 1, shall submit a plan for financing decommissioning or a certification of financial assurance for decommissioning in an amount not less than $1,125,000. If a certification of financial assurance is submitted, the licensee shall include a plan for financing decommissioning in an application for renewal of the license.

(b) Of a type described in subsection 3 shall submit a plan for financing decommissioning or a certification of financial assurance for decommissioning.

7. A licensee who has submitted an application for renewal of his license before January 26, 1999, in accordance with NAC 459.202, shall:

(a) Provide financial assurance for decommissioning in accordance with subsections 1 and 3; and

(b) Submit a plan for financing decommissioning.

8. Waste collectors and waste processors, as defined in Appendix G, shall:

(a) Provide financial assurance for decommissioning in an amount based on a plan for financing decommissioning as described in subsection 10; and

(b) Submit a plan for financing decommissioning which must include, without limitation:

(1) The cost of disposal of the maximum amount, measured in curies, of radioactive material permitted by the license;

(2) The cost of disposal of the maximum quantity, measured by volume, of radioactive material which could be present at the licensee's facility at any time; and

(3) The cost to remediate the licensee's site to meet the license termination criteria set forth in NAC 459.200.

9. Financial assurance for decommissioning must be provided in accordance with the following amounts:

(a) Not less than $1,125,000 is required if:

(1) The amount of radioactive material is greater than 10^4, but less than or equal to 10^5 times the applicable quantities described in NAC 459.362, in unsealed form; or

(2) R, for a combination of radionuclides, divided by 10^4 is greater than 1 but R divided by 10^5 is less than or equal to 1.

(b) Not less than $225,000 is required if:

(1) The amount of radioactive material is greater than 10^3, but less than or equal to 10^4 times the applicable quantities described in NAC 459.362, in unsealed form; or

(2) R, for a combination of radionuclides, divided by 10^3 is greater than 1 but R divided by 10^4 is less than or equal to 1.

(c) Not less than $113,000 is required if:

(1) The amount of radioactive material is greater than 10^{10} times the applicable quantities described in NAC 459.362, in sealed sources or plated foils; or

(2) R, for a combination of radionuclides, divided by 10^{10} is greater than 1.

10. The plan for financing decommissioning must contain the following:

(a) An estimate of the costs of decommissioning the facility based on the decommissioning plan;

(b) A description of the method of assuring financing for decommissioning in compliance with subsection 11;

(c) A schedule for adjusting the estimate of costs, which estimates of costs must be adjusted at least every 3 years, and associated levels of funding periodically over the life of the facility; and

(d) A certification by the licensee that financial assurance for decommissioning has been provided in the amount of the cost estimate for decommissioning and a signed original of the financial instrument used to satisfy the requirements of subsection 11.

11. Financial assurance for decommissioning must be provided by one or more of the following methods:

(a) Prepayment in the form of a deposit of an amount of money in cash or liquid assets that would be sufficient to pay the costs of decommissioning before starting operations at the facility

into an account segregated from the assets of the licensee and outside the administrative control of the licensee. Prepayment may be in the form of a trust, escrow account, government fund, certificate of deposit or deposit of government securities.

(b) Provision of a surety that assures that the costs of decommissioning will be paid should the licensee fail to do so. A guarantee of money from a parent company of the licensee for the cost of decommissioning that is based on a financial test may be used if the guarantee and test meet the criteria set forth in subsection 14. Such a guarantee may not be used in combination with any other method of financing to satisfy the requirements of this subsection. A guarantee of money by the applicant or licensee for the cost of decommissioning that is based on a financial test may be used if the guarantee and test meet the criteria set forth in subsection 14. Such a guarantee must not be used in combination with any other method of financing to satisfy the requirements of this subsection or if the applicant or licensee has a parent company that holds a majority control of the voting stock of the applicant or licensee. Any surety used to provide financial assurance for decommissioning must contain the following conditions:

(1) The surety must be open-ended or, if written for a specified term, must be renewed automatically unless 90 days or more before the renewal date the issuer notifies the Division, the beneficiary and the licensee of his intention not to renew. The surety must provide that the full-face amount will be paid to the beneficiary automatically before the expiration without proof of forfeiture if the licensee fails to provide a replacement acceptable to the Division within 30 days after receipt of notification of the cancellation.

(2) The surety must be payable to a trust established for the costs of decommissioning the facility. The trustee and trust must be approved by the Division. The Division will approve as a trustee an appropriate agency of the State or Federal Government or an entity which has the

authority to act as a trustee and whose trust operations are regulated and examined by an agency of the State or Federal Government.

➥ A licensee shall maintain the surety in effect until the Division has terminated his license.

(c) Provision of an external sinking fund in which deposits are made at least annually, coupled with a surety issued in compliance with the provisions of paragraph (b) except that the value of the surety may decrease by the amount being accumulated in the external sinking fund.

(d) If the licensee is a federal, state or local governmental agency, a statement of intent containing an estimate of the costs of decommissioning or an amount required by subsection 9 and an indication that money for decommissioning will be obtained when necessary.

12. A person licensed pursuant to NAC 459.180 to 459.313, inclusive, shall maintain the following records in an identified location until the site is released for unrestricted use:

(a) Records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment or site. Such records must include, without limitation, the name, quantity, form and concentration of a nuclide involved in the spill or unusual occurrence.

(b) Drawings and other documents relating to:

(1) The modification of structures and equipment in restricted areas where radioactive materials are used and stored; and

(2) Locations where it is possible that contamination which is inaccessible has occurred, including, without limitation, areas of seepage into concrete and other porous materials.

(c) A list of all the areas:

(1) Designated and formerly designated as restricted areas;

(2) Outside of restricted areas that require documentation pursuant to paragraph (a);

(3) Outside of restricted areas where waste has been buried; and

(4) Outside of restricted areas which contain material that, if the license expired, the licensee would be required to decontaminate the area to unrestricted release levels or apply for approval for disposal pursuant to NAC 459.3595.

(d) Except for areas containing only sealed sources which have not leaked or where no contamination remains after any leak, or for by-product material having only a half-life of less than 65 days, a list contained in a single document and updated every 2 years which sets forth the following:

(1) All areas designated or formerly designated as restricted areas as defined in 10 C.F.R. § 20.1003, or for requirements before January 1, 1994, 10 C.F.R. § 20.3 as contained in the C.F.R. edition revised as of January 1, 1993;

(2) All areas outside of restricted areas that require documentation pursuant to paragraph (a);

(3) All areas outside of restricted areas where current and previous wastes have been buried as documented pursuant to 10 C.F.R. § 20.2108; and

(4) All areas outside of restricted areas that contain material such that, if the license expired, the licensee would be required to either decontaminate the area to meet the criteria for decommissioning set forth in 10 C.F.R. Part 20, Subpart E, or apply for approval for disposal under 10 C.F.R. § 20.2002.

➥ If records important to the decommissioning of a facility are kept for other purposes, reference to these records and their locations may be used.

13. Before licensed activities are transferred or assigned pursuant to subsection 2 of NAC 459.198, the licensee must transfer all the records described in paragraphs (a), (b) ***,*** ~~[and]~~ (c) ***and (d)*** of subsection 12 to the licensee to whom the activities have been transferred or assigned.

Such records become, upon receipt, the responsibility of the licensee to whom the activities have been transferred or assigned and must be retained by that licensee until its license is terminated.

14. To pass the financial test referred to in subsection 11:

(a) A parent company must have:

(1) Two of the following three ratios:

(I) A ratio of total liabilities to net worth that is less than 2;

(II) A ratio of the sum of net income plus depreciation, depletion and amortization to total liabilities that is more than 0.1; and

(III) A ratio of current assets to current liabilities that is more than 1.5;

(2) Net working capital and tangible net worth that are each at least six times the current cost estimates for decommissioning or, if certification is used, the amount set forth in subsection 9; and

(3) Assets located in the United States that amount to at least 90 percent of the total assets of the parent company or at least six times the cost estimate for decommissioning or, if certification is used, the amount set forth in subsection 9; or

(b) A parent company must have:

(1) A rating for its most recent bond issuance of AAA, AA, A or BBB as issued by Standard and Poor's Ratings Services or a rating of Aaa, Aa, A or Baa as issued by Moody's Investors Service, Inc.;

(2) Tangible net worth of at least six times the current cost estimate for decommissioning, or, if a certification is used, the amount set forth in subsection 9; and

(3) Assets located in the United States that amount to at least 90 percent of the total assets of the parent company or at least six times the cost estimate for decommissioning.

15. The terms of a guarantee of a parent company must provide that:

(a) The guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the licensee and the Division. The guarantee may not be cancelled until 120 days after the date the notice of cancellation is received by both the licensee and the Division, as evidenced by the return receipts.

(b) If the licensee fails to provide alternate financial assurance as specified in this section within 90 days after receipt by the licensee and the Division of a notice of cancellation of the guarantee from the guarantor, the guarantor must provide such alternate financial assurance in the name of the licensee.

(c) The guarantee and financial test provisions set forth in subsection 14 must remain in effect until the Division has terminated the license.

(d) If a trust is established for the costs of decommissioning, the trustee and trust must be acceptable to the Division. An acceptable trustee includes an appropriate state or federal agency or an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

16. A licensee who guarantees the costs of decommissioning must have:

(a) A tangible net worth of at least 10 times the total estimated cost of decommissioning or the current amount required for decommissioning;

(b) Assets located in the United States that amount to at least 90 percent of its total assets or at least 10 times the cost estimate for decommissioning;

(c) A rating for its most recent bond issuance of AAA, AA or A as issued by Standard and Poor’s Ratings Service or a rating of Aaa, Aa or A as issued by Moody’s Investors Services, Inc.; and

(d) At least one class of equity securities registered pursuant to the Securities Exchange Act of 1934.

17. A licensee shall ensure that a certified public accountant who is independent of the licensee compares the data used to satisfy the financial test as set forth in subsections 14 and 16. The data must be derived from audited, year-end financial statements for the last fiscal year. A licensee shall inform the Division within 90 days after matters which cause the certified public accountant to believe that the data used to satisfy the financial test should be adjusted and that the licensee or parent company, as applicable, can no longer pass the test. After the initial financial test, the licensee or parent company, as applicable, shall repeat the test within 90 days after the close of each fiscal year. If the parent company can no longer pass the test, the licensee shall notify the Division of its intent to establish alternate financial assurance as specified in this section. The notice must be sent by certified mail within 90 days after the close of the fiscal year. The licensee shall provide alternate financial assurance within 120 days after the close of such fiscal year.

18. If a bond issuance of the licensee or parent company, as applicable, ceases to be rated in a category of A or above by either Standard and Poor's Ratings Services or Moody's Investors Service, Inc., the licensee shall notify the Division in writing within 20 days after the rating. If the bond issuance ceases to be rated in a category of A or above by both Standard and Poor's Ratings Services and Moody's Investors Service, Inc., the licensee or parent company, as applicable, no longer meets the financial test as set forth in subsection 14.

19. The licensee shall provide to the Division a written guarantee or commitment by a corporate officer which provides that the licensee will fund and complete the decommissioning

of the facility or, upon issuance of an order by the State Board of Health, the licensee shall establish a trust in the amount of the current cost estimates for decommissioning.

20. As used in this section:

(a) "External sinking fund" means a fund established and maintained by depositing money periodically in an account segregated from the licensee's assets and outside the licensee's administrative control in which the total amount of money to be accumulated before the termination of the operation is expected is sufficient to pay the costs of decommissioning. The term includes, without limitation, a trust, escrow account, government fund, certificate of deposit or deposit of government securities.

(b) "R" equals the sum of the ratios of the quantity of each radionuclide to the applicable value as set forth in NAC 459.362.

(c) "Surety" includes, without limitation, a trust fund, surety bond, letter of credit, line of credit, insurance, guarantee of performance or, except as otherwise provided in this section, any combination thereof.

Sec. 58. NAC 459.198 is hereby amended to read as follows:

459.198 1. Each license issued pursuant to NAC 459.180 to 459.950, inclusive, ***and sections 20 to 45, inclusive, of this regulation*** is subject to all the provisions of chapter 459 of NRS, now or hereafter in effect, and to all regulations and orders of the Division.

2. No license issued or granted under NAC 459.180 to 459.950, inclusive, ***and sections 20 to 45, inclusive, of this regulation*** or right to possess or utilize radioactive material granted by any license issued pursuant to those provisions, may be transferred, assigned or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of any license to any person unless the Division, after securing full information **,** finds that the

transfer is in accordance with the provisions of chapter 459 of NRS and gives its consent in writing.

3. Each person licensed by the Division pursuant to NAC 459.180 to 459.950, inclusive, ***and sections 20 to 45, inclusive, of this regulation*** or each person seeking a license, shall:

(a) Confine his use and possession of the material licensed to the locations and purposes authorized in the license.

(b) Inform the Division in writing before the sale or lease of his business if the transaction involves the transfer of a source of radiation to another person.

(c) Inform the Division, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under Title 11 of the United States Code or the appropriate chapter of NRS by or against:

(1) The licensee;

(2) An entity, as that term is defined in 11 U.S.C. § 101(15), which controls the licensee or which lists the licensee as a property of the estate of the entity; or

(3) An affiliate, as that term is defined in 11 U.S.C. § 101(2), of the licensee.

(d) Keep records of information important to the safe and effective decommissioning of the facility where the radioactive material is located in a location identified to the Division until the license is terminated by the Division. If records of information relevant to decommissioning are kept for other purposes, references to ~~[these]~~ ***those*** records and their locations may be used. Such information must include:

(1) Records of spills or other unusual occurrences involving the spread of contamination in or around the facility, the equipment of the facility or the site of the facility. ~~[These]~~ ***The*** records may be limited to instances when contamination remains after any cleanup procedures or

when there is a reasonable likelihood that contaminants may have spread to inaccessible areas ***,*** including possible seepage into porous materials such as concrete. ~~[These]~~ ***The*** records must include any information known to the licensee on the identification of nuclides, quantities, forms and concentrations involved.

(2) Any available drawings of structures and equipment of the facility, as originally built and as modified, which are located in restricted areas where radioactive materials are used or stored, and of locations of inaccessible areas to which contaminants may spread, such as buried pipes which may be subject to contamination. If drawings are not available, the licensee shall provide to the Division other appropriate records of information concerning these areas.

(3) Records of any performance of an estimate of the costs of decommissioning for incorporation in a plan for financing the decommissioning and any records of the method used for assuring the availability of money for the costs of decommissioning the facility.

4. Each person licensed by the Division pursuant to NAC 459.180 to 459.950, inclusive, ***and sections 20 to 45, inclusive, of this regulation*** who uses a portable gauge shall use a minimum of two independent physical controls that form tangible barriers to secure the portable gauge from unauthorized removal when the portable gauge is not under the control and constant surveillance of the licensee.

5. Each person licensed by the Division pursuant to NAC 459.180 to 459.950, inclusive, and sections 20 to 45, inclusive, of this regulation who prepares technetium-99m radiopharmaceuticals from molybdenum-99 and technetium-99m generators or who prepares rubidium-82 from strontium-82 and rubidium-82 generators shall:

(a) Test the generator eluates for molybdenum-99 breakthrough or contamination by strontium-82 and strontium-85, respectively, pursuant to 10 C.F.R. § 35.204; and

(b) Record the results of each test and retain each record for at least 3 years after the record is made.

6. Each licensee authorized pursuant to NAC 459.236 to produce positron emission tomography radioactive drugs for noncommercial distribution to medical use licensees in its consortium shall:

(a) Satisfy the labeling requirements in paragraph (d) of subsection 1 of NAC 459.300 for each positron emission tomography radioactive drug, transport radiation shield and each syringe, vial or other container used to hold the positron emission tomography radioactive drug;

(b) Possess and use instrumentation to measure the radioactivity of the positron emission tomography radioactive drug and meet the procedures, radioactivity measurement, instrument test, instrument check and instrument adjustment requirements pursuant to subsection 3 of NAC 459.300;

(c) If the licensee is a pharmacy, ensure that any person who prepares positron emission tomography radioactive drugs:

(1) Is an authorized nuclear pharmacist who meets the requirements of paragraph (b) of subsection 2 of NAC 459.300; or

(2) Is under the supervision of an authorized nuclear pharmacist pursuant to 10 C.F.R. § 35.27; and

(d) If the licensee is a pharmacy that allows a person to work as an authorized nuclear pharmacist, it shall meet the requirements of paragraph (d) of subsection 2 of NAC 459.300.

➥ Any authorization obtained pursuant to NAC 459.236 to produce positron emission tomography radioactive drugs for noncommercial distribution to medical use licensees in a

consortium does not relieve the licensee from the requirement to comply with any applicable regulations of the United States Food and Drug Administration, or other federal and state laws or regulations governing radioactive drugs.

Sec. 59. NAC 459.200 is hereby amended to read as follows:

459.200 1. Except as otherwise provided in subsections 2 ***, 3*** and ~~[3,]~~ ***4,*** a specific license expires at the end of the day on the date of expiration set forth on the license.

2. A specific license for which a licensee has, not less than 30 days before the date of expiration set forth on the license, filed an application for renewal pursuant to NAC 459.202 remains effective until the Division makes a final decision on the application ~~[.]~~ ***, and the license application will be considered timely.*** If the decision is to deny the application for renewal, the license expires on the date of the decision or, if the Division specifies a date of expiration in the decision to deny the application for renewal, on the date specified.

3. ***If the renewal application for a specific license is not received at least 30 days before the date of expiration set forth on the license, the licensee shall:***

(a) Pay an expedited review fee of twice the annual fee set forth in NAC 459.310, which, upon submittal, grants the licensee an administrative authorization for the license to remain effective until the Division makes an expedited decision on the application;

(b) Stop all operations involving radioactive materials and place all sources of radiation in storage until they can be transferred to persons authorized to receive them; or

(c) Stop all operations on the expiration date of the license until the Division makes a decision on the application or issues a renewed license.

4. A specific license revoked by the Division expires on the date of the decision of the Division to revoke the license or on the date specified in the decision of the Division to revoke the license.

~~[4.]~~ ***5.*** A specific license continues in effect with respect to the possession of radioactive material until the Division notifies the licensee in writing that the license is terminated. During the time the specific license continues in effect, the licensee shall:

(a) Limit actions involving radioactive material to those related to decommissioning; and

(b) Continue to control entry to restricted areas until they are suitable for release so that there is no undue hazard to public health and safety.

~~[5.]~~ ***6.*** Except as otherwise provided in subsection ~~[7,]~~ ***8,*** a licensee shall notify the Division in writing within 60 days before:

(a) The decision of the licensee to cease permanently its principal activities at the entire site or in a separate building or outdoor area that contains residual radioactivity if the building or outdoor area is unsuitable for release because of an undue hazard to public health and safety;

(b) The end of a 24-month period in which no principal activities have been conducted pursuant to the license; or

(c) The end of a 24-month period in which no principal activities have been conducted in a separate building or outdoor area that contains residual radioactivity and the building or outdoor area is unsuitable for release because of an undue hazard to public health and safety.

~~[6.]~~ ***7.*** Coincident with the notification required by subsection ~~[5,]~~ ***6,*** the licensee shall maintain in effect all financial assurances for decommissioning established by the licensee pursuant to NAC 459.1955 in conjunction with the issuance or renewal of a license as required by this section. The amount of the financial assurance must be increased, or may be decreased, as

appropriate, to meet the detailed cost estimate for decommissioning. After the Division approves the plan for decommissioning, a licensee may reduce the amount of the financial assurance as decommissioning proceeds and radiological contamination is reduced at the site with the approval of the Division.

~~[7.]~~ ***8.*** The Division may grant a request to extend the period during which notification is required pursuant to subsection ~~[5]~~ ***6*** if the Division determines that such an extension is not detrimental to the public health and safety and is otherwise in the public interest. The request must be submitted not later than 30 days before notification is required pursuant to subsection ~~[5.]~~ ***6.*** The schedule for decommissioning may not commence until the Division has made a determination on the request.

~~[8.]~~ ***9.*** A plan for decommissioning must be submitted to the Division by the licensee if it is required by a condition of the license or if the procedures for decommissioning have not been approved by the Division and these procedures could increase the potential impacts on the health and safety of workers or the public, including, without limitation, if:

(a) The procedures involve techniques not applied routinely during cleanup or maintenance operations;

(b) The workers would be entering areas not normally occupied where surface contamination and radiation levels are significantly higher than routinely encountered during normal operations;

(c) The procedures could result in a significantly greater airborne concentration of radioactive materials than is present during normal operations; or

(d) The procedures could result in a significantly greater release of radioactive material to the environment than that associated with normal operations.

➥ Such procedures may not be carried out by the licensee without being approved by the Division before they commence.

~~[9.]~~ ***10.*** A proposed plan for decommissioning will be approved by the Division if decommissioning will be completed as soon as practical, the health and safety of the workers and the public will be protected and the proposed plan for decommissioning includes:

(a) A description of the conditions of the site, separate building or outdoor area sufficient to evaluate the acceptability of the plan;

(b) A description of the decommissioning activities;

(c) A description of the methods that will be used to ensure the protection of workers and the environment against radiation hazards during decommissioning;

(d) A description of the planned final radiation survey;

(e) An updated and detailed cost estimate for decommissioning, comparison of that estimate with the money set aside for decommissioning and a plan for ensuring the availability of adequate money for completion of decommissioning; and

(f) For a plan for decommissioning in which completion of decommissioning will be later than 24 months after approval of the plan, a justification for the delay based on the criteria set forth in subsection ~~[12.]~~ ***13.***

~~[10.]~~ ***11.*** A licensee shall begin decommissioning of the site within 60 days after the plan for decommissioning is approved by the Division.

~~[11.]~~ ***12.*** Except as otherwise provided in subsection ~~[12,]~~ ***13,*** a licensee:

(a) Shall complete decommissioning of the site, separate building or outdoor area as soon as practicable, but not later than 24 months after decommissioning begins.

(b) Must, if decommissioning involves an entire site, request termination of the license as soon as practicable, but not later than 24 months after decommissioning begins.

~~[12.]~~ ***13.*** The Division may approve a request by the licensee for an extension of the period allowed for decommissioning or termination of a license if the Division determines that such an extension is necessary because:

(a) It is not technically feasible to complete decommissioning within 24 months;

(b) There is not sufficient capacity for waste disposal to allow completion of decommissioning within 24 months;

(c) A significant reduction in the volume of wastes requiring disposal will be achieved by allowing short-lived radionuclides to decay;

(d) A significant reduction in radiation exposure to workers can be achieved by allowing short-lived radionuclides to decay; or

(e) There are other site-specific factors that make decommissioning within 24 months undesirable or unfeasible, including, without limitation, the regulatory requirements of other government agencies, lawsuits, activities involving the treatment of groundwater, monitored restoration of natural groundwater, actions that could result in more environmental harm than deferred cleanup and other factors beyond the control of the licensee.

~~[13.]~~ ***14.*** As the final step in decommissioning, the licensee shall certify the disposition of all licensed material, including, without limitation, accumulated wastes, by submitting to the Division a completed NRC Form 314 or information that is equivalent to that contained in the completed form and:

(a) Demonstrate that the premises where the licensed activities were carried out satisfy the criteria for decommissioning set forth in NAC 459.316 to 459.3184, inclusive; or

(b) Conduct a radiation survey of the premises and submit to the Division a report of the results of this survey. The radiation survey must demonstrate that the premises are suitable for release and include:

(1) A description of the levels of gamma radiation in units of millirem (millisievert) per hour at 1 meter from surfaces;

(2) A description of the levels of radioactivity, including, without limitation, alpha and beta radiation, in units of:

(I) Microcuries (megabecquerels) per 100 square centimeters, removable and fixed, for surfaces;

(II) Microcuries (megabecquerels) per milliliter for water; and

(III) Picocuries (becquerels) per gram for solids, including, without limitation, soils and concrete; and

(3) A description of the survey instruments used and a statement that each instrument was properly calibrated and tested. The statement must be certified by the person who calibrated and tested the instrument.

~~[14.]~~ ***15.*** A specific license, including an expired license, will be terminated by written notice to the licensee that the Division has determined that:

(a) All radioactive material has been disposed of properly;

(b) Reasonable effort has been made by the licensee to eliminate residual radioactive contamination, if present;

(c) All records required to be maintained pursuant to subsection 12 of NAC 459.1955 have been received by the Division; and

(d) The radiation survey performed by the licensee or other information submitted by the licensee demonstrates that the premises are suitable for release in accordance with the criteria for decommissioning set forth in NAC 459.316 to 459.3184, inclusive.

Sec. 60. NAC 459.210 is hereby amended to read as follows:

459.210 1. Subject to the provisions of NAC 459.010 to 459.950, inclusive, ***and sections 2 to 45, inclusive, of this regulation,*** a person who holds a specific license from the Nuclear Regulatory Commission or an agreement state issued by the agency having jurisdiction where the licensee maintains an office for directing the licensed activity and at which radiation safety records are normally maintained is hereby granted a general license to conduct within this State the activities authorized in the specific license for a period not in excess of 180 days in any calendar year provided that:

(a) The specific license does not limit the activity authorized by the specific license to specified installations or locations.

(b) The out-of-state licensee notifies the Division in writing at least 3 business days before engaging in the proposed activity and receives written permission from the Division to proceed with the proposed activity. The notification must indicate the location, period and type of proposed possession and use within the State, and must be accompanied by a copy of the specific license. If, for a specific case, the 3-day period would impose an undue hardship on the out-of-state licensee, he may apply to the Division and obtain written permission to proceed sooner. The Division may waive the requirement for filing additional written notifications during the remainder of the calendar year following the receipt of the initial notification from a person engaging in activities under the general license.

(c) The out-of-state licensee complies with all applicable regulations of the Division and with all the terms and conditions of his specific license, except any terms and conditions which may be inconsistent with applicable regulations of the Division.

(d) The out-of-state licensee supplies such other information as the Division may request.

(e) The out-of-state licensee shall not transfer or dispose of radioactive material possessed or used under the general license provided in this section except by transfer to a person:

(1) Specifically licensed by the Division or by the Nuclear Regulatory Commission to receive such material; or

(2) Exempt from the requirements for a license for such material pursuant to NAC 459.184.

2. A licensee must determine the jurisdiction of a temporary job site at a federal facility before radioactive materials may be used at the temporary job site. If the jurisdiction is unknown, the licensee must contact the federal agency to determine whether the job site is under exclusive federal jurisdiction. The jurisdiction of the job site must be obtained in writing from the federal agency, or the name and title of the person at the federal agency who provided the determination must be recorded along with the date of the determination.

3. Before a licensee may use radioactive material at a temporary job site in another state or at a federal facility, the licensee must obtain authorization, if the job site is:

(a) In another state, from:

(1) That state, if that state is an agreement state; or

(2) The Nuclear Regulatory Commission, by filing for reciprocity or a specific license, if the state is not an agreement state or the job site is within an area of exclusive federal jurisdiction.

(b) At a federal facility, from the Nuclear Regulatory Commission by:

(1) Filing an NRC Form 241 in accordance with 10 C.F.R. § 150.20(b), as those provisions existed on ~~[January 26, 1999;]~~ ***December 17, 2007;*** or

(2) Filing for a specific license.

4. Any person who holds a specific license issued by the Nuclear Regulatory Commission or an agreement state authorizing the holder to manufacture, transfer, install or maintain a device described in NAC 459.216 within areas subject to the jurisdiction of the licensing body is hereby granted a general license to install, transfer, demonstrate or maintain such a device in this State provided that:

(a) The person shall file a report with the Division within 30 days after the end of each calendar quarter in which any such device is transferred to or installed in this State. Each such report must identify each general licensee to whom the device is transferred by name and address, the type of device transferred and the quantity and type of radioactive material contained in the device;

(b) The device has been manufactured, labeled, installed and maintained in accordance with applicable provisions of the specific license issued to the person by the Nuclear Regulatory Commission or an agreement state;

(c) The person must ensure that any labels required to be affixed to the device under regulations of the authority which licensed manufacture of the device bear a statement that: "Removal of this label is prohibited"; and

(d) The holder of the specific license must furnish to each general licensee to whom he transfers the device or on whose premises he installs such device a copy of the general license contained in NAC 459.216.

5. The Division may withdraw, limit or qualify its acceptance of any specific license or equivalent licensing document issued by another agency, or any product distributed pursuant to the licensing document, upon determining that such action is necessary in order to prevent undue hazard to public health and safety or property.

Sec. 61. NAC 459.214 is hereby amended to read as follows:

459.214 1. A general license is issued to transfer, receive, acquire, own, possess and use radioactive material incorporated in the following devices or equipment which have been manufactured, tested and labeled by the manufacturer in accordance with a specific license issued to the manufacturer by the Nuclear Regulatory Commission for use pursuant to 10 C.F.R. § 31.3. This general license is subject to the provisions of NAC 459.124 to 459.134, inclusive, subsection ~~[2]~~ ***3*** of NAC 459.184, NAC 459.198, 459.208, 459.312 and 459.320 to 459.374, inclusive, relating to the labeling of containers, and NAC 459.780 to 459.794, inclusive.

2. The devices included in this license are:

(a) Devices designed for use as static eliminators which contain, as a sealed source or sources, radioactive material consisting of a total of not more than 500 microcuries of ~~[polonium 210]~~ ***polonium-210*** per device; and

(b) Devices designed for ionization of air which contain, as a sealed source or sources, radioactive material consisting of a total of not more than 500 microcuries of ~~[polonium 210]~~ ***polonium-210*** per device or a total of not more than 50 millicuries of ~~[hydrogen 3]~~ ***hydrogen-3*** (tritium) per device.

Sec. 62. NAC 459.216 is hereby amended to read as follows:

459.216 1. A general license is issued to commercial and industrial firms, to research, educational and medical institutions, to a person engaged in the conduct of his own business, and

to the state and local governments, including the agencies of either, to own, receive, acquire, possess, use or transfer, in accordance with the provisions of subsections 2 and 3 and NAC 459.218, radioactive material, excluding special nuclear material, contained in devices designed and manufactured for the purpose of detecting, measuring, gauging or controlling thickness, density, level, interface location, radiation, leakage or qualitative or quantitative chemical composition or for producing light or an ionized atmosphere.

2. The general license in subsection 1 applies only to radioactive material contained in devices which have been manufactured or initially transferred and labeled in accordance with the specifications contained in a specific license issued by the Division pursuant to NAC 459.282, or in accordance with the specifications contained in a specific license issued by the Nuclear Regulatory Commission or an agreement state ~~[.]~~ ***or contained in an equivalent specific license issued by a state with provisions comparable to 10 C.F.R. § 32.51.***

3. A general licensee may receive a device described in this section only from a specific licensee described in subsection 2 or through a transfer made pursuant to subsection ~~[8]~~ ***9*** of NAC 459.218 and 459.2185.

4. The general license provided in subsection 1 is subject to the provisions of NAC 459.124 to 459.134, inclusive, 459.198, 459.208, 459.2185, 459.219, 459.287, 459.289, 459.2895, 459.3062 ***,*** ~~[to 459.3068, inclusive,]~~ 459.3075, 459.312 and 459.313.

5. The general license provided in subsection 1 does not authorize the manufacture or import of devices containing radioactive material.

Sec. 63. NAC 459.218 is hereby amended to read as follows:

459.218 Any person who owns, receives, acquires, possesses, uses or transfers radioactive material in a device pursuant to the general license ***specified*** in subsection 1 of NAC 459.216:

1. Shall ensure that all labels affixed to the device at the time of receipt, and bearing a statement that removal of the label is prohibited, are maintained thereon and comply with all instructions and precautions provided by the labels.

2. Shall ensure that the device is tested for leakage of radioactive material and proper operation of the on-and-off mechanism and indicator, if any, and that such tests are conducted at no longer than 6-month intervals or at such other intervals as are specified in the label, except that:

(a) Devices containing only krypton need not be tested for leakage of radioactive material; and

(b) Devices containing only tritium or not more than 100 microcuries ***(3.7 megabecquerels)*** of other beta- or gamma-emitting material, or both, or 10 microcuries of alpha-emitting material and devices held in storage in the original shipping container before initial installation need not be tested for any purpose.

3. Shall ensure that the tests required by subsection 2 and other testing, installation, servicing and removal from installation, involving the radioactive materials, its shielding or containment, are performed and recorded:

(a) In accordance with the instructions provided by the labels; or

(b) By a person holding an applicable specific license from the Division, the Nuclear Regulatory Commission or an agreement state to perform such activities.

4. Shall maintain records showing compliance with the requirements of subsections 2 and 3. The records must show the results of tests. The records also must show the dates of performance of, and the names of persons performing, testing, installing, servicing and removal from installation concerning the radioactive material, its shielding or containment. Records of tests for

leakage of radioactive material required by subsection 2 must be ~~[maintained until the sealed source is transferred or disposed of.]~~ ***retained for 3 years after the next required leak test is performed or until the sealed source is transferred or disposed of.*** Records of tests of the on-and-off mechanism and indicator required by subsection 2 must be ~~[maintained for 1 year]~~ ***retained for 3 years*** after the next required test of the on-and-off mechanism and indicator is performed or until the sealed source is transferred or disposed of. Records which are required by subsection 3 must be ~~[maintained]~~ ***retained*** for ~~[a period of 2]~~ ***3*** years from the date of the recorded event or until the device is transferred or disposed of.

5. Upon the occurrence of a failure of or damage to, or any indication of a possible failure of or damage to, the shielding of the radioactive material or the on-and-off mechanism or indicator, or upon the detection of 0.005 microcurie (185 ~~[becquerel)]~~ ***becquerels)*** or more of removable radioactive material:

(a) Shall immediately inform the ~~[Radiological Health Section of the]~~ Division by telephone;

(b) Shall immediately suspend operation of the device;

(c) Shall, within 30 days, furnish to the Division a report containing a brief description of the event and the remedial action taken;

(d) Shall, in a case of detection of 0.005 microcurie (185 ~~[becquerel)]~~ ***becquerels)*** or more of radioactive material or failure of or damage to a source likely to result in contamination of the premises or the environs, furnish to the Division a plan for ensuring that the premises and environs are acceptable for unrestricted use; and

(e) Shall not, in a case of detection of 0.005 microcurie (185 ~~[becquerel)]~~ ***becquerels)*** or more of radioactive material or failure of or damage to a source likely to result in contamination of the premises and the environs, operate the device until it has been repaired by the

manufacturer or other person holding a specific license to repair the device issued pursuant to 10 C.F.R. Parts 30 and 32 or equivalent regulations of an agreement state.

6. Shall not abandon the device containing radioactive material.

7. ***Shall not export the device containing the by-product material except in accordance with 10 C.F.R. § 110.***

8. Except as otherwise provided in subsection ~~[8.]~~ ***9,*** may transfer or dispose of the device containing radioactive material only by ***export, as provided in subsection 7, or by*** transfer to a specific licensee of the Division, the Nuclear Regulatory Commission or an agreement state whose specific license authorizes him to receive the device or whose license authorizes waste collection. Within 30 days after transfer of a device to a specific licensee, ***or export, as provided in subsection 7,*** the person shall furnish to the Division a report containing identification of the device by the manufacturer's or initial transferor's name, the model number and serial number of the device transferred, the name, address and license number of the person receiving the device and the date of the transfer. A transferor shall not transfer the device to any specific licensee not described in this subsection without first obtaining ***written*** approval of the transfer from the Division ~~[.~~

~~8.]~~ ***, except that a holder of a specific license may transfer a device for possession and use pursuant to the holder's specific license without prior approval if the holder:***

(a) Verifies that the specific license authorizes the possession and use, or applies for and obtains an amendment to the license authorizing the possession and use;

(b) Removes, alters, covers or clearly and unambiguously augments the existing label which is otherwise required by subsection 1, so that the device is labeled in compliance with 10 C.F.R. § 20.1904 and the manufacturer, model number and serial number are retained;

(c) Obtains the manufacturer's or initial transferor's information relating to maintenance that would be applicable under the specific license, including, without limitation, leak testing procedures; and

(d) Reports the transfer pursuant to this subsection.

9. May transfer the device to another general licensee only:

(a) Where the device remains in use at a particular location. In such a case the transferor shall give the transferee a copy of NAC 459.010 to 459.794, inclusive, and ***sections 2 to 45, inclusive, of this regulation and*** any safety documents identified in the label on the device and **,** within 30 days after the transfer **,** shall report to the Division the manufacturer's or initial transferor's name, the model number and serial number of the device transferred, the name, title, telephone number and address of the transferee, and the name and position of a person who may constitute a point of contact between the Division and the transferee and who has knowledge of **,** and authority to take actions to ensure compliance with **,** the appropriate regulations and requirements; or

(b) Where the device is held in storage by an intermediate person in the original shipping container at its intended location of use before initial use by a general licensee.

~~[9.]~~ ***10.*** Shall comply with the provisions of NAC 459.369 and 459.3695 for reporting radiation incidents, theft or loss of licensed material, but is exempt from the other requirements of NAC 459.320 to 459.374, inclusive, and 459.780 to 459.794, inclusive.

~~[10.]~~ ***11.*** Except as otherwise provided in this subsection, shall respond to written requests from the Division to provide information relating to the general license within 30 calendar days after the date of the request or within the time specified in the request. If the general licensee cannot provide the requested information within the allotted time, the licensee shall, within the

allotted time, request in writing additional time to comply with the request from the Division pursuant to the provisions of NAC 459.134.

~~[11.]~~ ***12.*** Shall appoint a person responsible for having knowledge of the appropriate regulations and requirements and the authority for taking required actions to comply with those regulations and requirements. The general licensee, through the person appointed pursuant to this subsection, shall ensure daily compliance with all applicable regulations and requirements. The provisions of this subsection do not relieve the licensee of any responsibility or obligation under this chapter or chapter 459 of NRS.

~~[12.]~~ ***13.*** Except for a person who holds a general license issued by the Nuclear Regulatory Commission or an agreement state and who uses a device described in paragraph (a) in areas subject to the jurisdiction of the Division for a period of less than 180 days in any calendar year, ***pursuant to the provisions of NAC 459.210,*** shall:

(a) Register any device which contains:

(1) Ten millicuries (370 megabecquerels) or more of cesium-137;

(2) One-tenth ~~[millicuries]~~ ***of a millicurie*** (3.7 megabecquerels) or more of strontium-90;

(3) One millicurie (37 megabecquerels) or more of cobalt-60;

(4) ***One-tenth of a millicurie (3.7 megabecquerels) or more of radium-226;***

(5) One millicurie (37 megabecquerels) or more of americium-241; or

~~[(5)]~~ ***(6)*** One millicurie (37 megabecquerels) or more of any other transuranic element, that is, an element with an atomic number greater than uranium-92,

➥ based on the activity indicated on the label. ***Each address for a location of use, as described in subparagraph (5) of paragraph (b), represents a separate general licensee and requires a separate registration and fee.*** The general licensee shall register the device annually with the

Division and shall pay the appropriate fee. In registering the device, the person shall verify, correct and, as appropriate, add to the information provided in a request from the Division for registration. The registration information must be submitted to the Division within 30 days after the date of the request for registration made by the Division, unless otherwise indicated in the request.

(b) In complying with the registration requirements of paragraph (a), in addition to any other information specifically requested by the Division, provide, without limitation, the following information:

(1) The name and mailing address of the general licensee;

(2) The name of the manufacturer or initial transferor of each device;

(3) The model number, serial number, radioisotope and activity, as indicated on the label, of each device;

(4) The name, title and telephone number of the responsible person designated as a representative of the general licensee pursuant to subsection ~~[11;]~~ ***12;***

(5) The address of the physical location at which each device is used and stored or, in the case of a portable device, the address of the primary place of storage;

(6) A certification by the responsible person designated as the representative of the general licensee pursuant to subsection ~~[11]~~ ***12*** that the information provided in the registration has been verified through a physical inventory and check of label information; and

(7) A certification by the responsible person designated as the representative of the general licensee pursuant to subsection ~~[11]~~ ***12*** that the responsible person is aware of the requirements of the general license.

~~[13.]~~ ***14.*** Shall report to the Division any change to the mailing address for a location of use, including any change in the name of the general licensee, within 30 days after the effective date of the change. For a portable device, the general licensee is required to report only a change in the address of the primary place of storage of the portable device.

~~[14.]~~ ***15.*** Shall not hold a device that is not in use for more than 2 years, except that a device that is kept in standby for future use is excluded from the 2-year time limit if the general licensee performs physical inventories of those devices held in standby on a quarterly basis. If a device with shutters is not being used, the shutters must be locked in the closed position. If a device is put back into service or is transferred to another person and was not tested during the required test interval, the device must be tested for leakage before use or transfer and the shutter must be tested before use. The Division may determine the eligibility for release for unrestricted use of such a device in accordance with the provisions of NAC 459.3178.

Sec. 64. NAC 459.2185 is hereby amended to read as follows:

459.2185 1. Except as otherwise provided in subsection 2, before a person may transfer a device containing radioactive material to the intended user of the device or an intermediate transferee for use by the intended user:

(a) Pursuant to a general license issued pursuant to NAC 459.216, the person must be licensed pursuant to NAC 459.216 and 459.282 to distribute such devices and shall, before the initial transfer of the device, provide to the intended user of the device and each intermediate transferee:

(1) A copy of the general license of the transferor issued pursuant to NAC 459.216, except that if subsections 2, 3, 4 and ~~[12]~~ ***13*** of NAC 459.218 do not apply to the device those provisions may be omitted;

(2) A copy of the provisions of NAC 459.124, subsection 1 of NAC 459.194 and NAC 459.369 and 459.3695;

(3) A list of the services that can be performed only by a specific licensee;

(4) Information concerning acceptable disposal options, including, without limitation, information concerning estimated costs of disposal; and

(5) Notice that it is the policy of the Division to take enforcement action for improper disposal.

(b) Pursuant to a general license which is equivalent to a license issued pursuant to NAC 459.216 and which is issued pursuant to the regulations of the Nuclear Regulatory Commission or an agreement state, the person must be licensed pursuant to NAC 459.216 and shall, before the initial transfer of the device, provide to the intended user of the device and each intermediate transferee:

(1) A copy of the provisions of NAC 459.124, subsection 1 of NAC 459.194 and NAC 459.216 and 459.369 and a copy of the equivalent regulations of the Nuclear Regulatory Commission or agreement state, except that any provisions of the regulations of the Nuclear Regulatory Commission or agreement state which do not apply to the device may be omitted;

(2) If a copy of the regulations of the Nuclear Regulatory Commission is provided in lieu of a copy of the regulations of the agreement state pursuant to subparagraph (1), a statement that the use of the device is regulated by the agreement state;

(3) A list of the services that can be performed only by a specific licensee;

(4) Information concerning acceptable disposal options, including, without limitation, information concerning estimated costs of disposal; and

(5) The name or title, address and telephone number of the contact person at the Nuclear Regulatory Commission or appropriate regulatory agency of the agreement state from whom additional information may be obtained.

2. A licensee described in paragraph (a) or (b) of subsection 1 may propose an alternative method of informing an intended user of the device or other transferee of the type of information set forth in subsection 1 and may use the proposed method upon approval by the Division.

3. A general licensee who is subject to the provisions of paragraph (b) of subsection 1 and who transfers a device containing radioactive material after November 13, 2006, must comply with the provisions of NAC 459.282 concerning the labeling of the device.

Sec. 65. NAC 459.219 is hereby amended to read as follows:

459.219 Each address for a location of use described in subparagraph (5) of paragraph (b) of subsection ~~[12]~~ ***13*** of NAC 459.218 is deemed to represent a separate general license and requires separate registration and payment of a separate fee.

Sec. 66. NAC 459.224 is hereby amended to read as follows:

459.224 1. A general license is hereby issued to those persons listed to own, receive, acquire, possess, use and transfer, in accordance with the provisions of subsections 4 and 5, ~~[americium-241]~~ ***americium-241*** in the form of calibration or reference sources:

(a) Any person who holds a specific license issued by the Division which authorizes him to receive, possess, use and transfer radioactive material; and

(b) Any person who holds a specific license issued by the Nuclear Regulatory Commission which authorizes him to receive, possess, use and transfer special nuclear material.

2. A general license is hereby issued to own, receive, possess, use and transfer plutonium in the form of calibration or reference sources in accordance with the provisions of subsections 4

and 5 to any person who holds a specific license issued by the Division which authorizes him to receive, possess, use and transfer radioactive material.

3. A general license is hereby issued to own, receive, possess, use and transfer ~~[radium 226]~~ ***radium-226*** in the form of calibration or reference sources in accordance with the provisions of subsections 4 and 5 to any person who holds a specific license issued by the Division which authorizes him to receive, possess, use and transfer radioactive material.

4. The general licenses in paragraphs (a), (b) and (d) of subsection 5 apply only to calibration or reference sources which have been manufactured ***or initially transferred*** in accordance with the specifications contained in a specific license issued to the manufacturer or importer of the sources by the Nuclear Regulatory Commission pursuant to 10 C.F.R. § 32.57 or ~~[10 C.F.R.]~~ § 70.39 or which have been manufactured in accordance with specifications contained in a specific license issued to the manufacturer by the Division or any agreement state pursuant to licensing requirements equivalent to those contained in 10 C.F.R. § 32.57 or ~~[10 C.F.R.]~~ § 70.39 of the regulations of the Nuclear Regulatory Commission.

5. The general licenses provided in subsections 1, 2 and 3 are subject to the provisions of NAC 459.124 to 459.134, inclusive, 459.198, 459.208, 459.312, 459.320 to 459.374, inclusive, and 459.780 to 459.794, inclusive. In addition, persons who own, receive, acquire, possess, use or transfer one or more calibration or reference sources pursuant to NAC 459.180 to 459.313, inclusive:

(a) Shall not possess at any one time or at any one location of storage or use more than 5 microcuries of ~~[americium 241,]~~ ***americium-241,*** 5 microcuries of plutonium and 5 microcuries of ~~[radium 226]~~ ***radium-226*** in those sources;

(b) Shall not receive, possess, use or transfer such a source unless the source or its storage container bears a label which includes the following statement or a substantially similar statement:

The receipt, possession, use and transfer of this source, Model ....., Serial No. ....., are subject to a general license and the regulations of the Nuclear Regulatory Commission or of a state with which the Commission has entered into an agreement for the exercise of regulatory authority. Do not remove this label.

CAUTION - RADIOACTIVE MATERIAL - THIS SOURCE CONTAINS ~~[(AMERICIUM 241)]~~ ***(AMERICIUM-241)*** (PLUTONIUM) ~~[(RADIUM 226).]~~ ***(RADIUM-226).*** DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE.

.....

Name of manufacturer or importer

(c) Shall ensure that the label required by paragraph (b) shows only the name of the appropriate material;

(d) Shall not transfer, abandon or dispose of such source except by transfer to a person authorized by a license from the Division, the Nuclear Regulatory Commission or an agreement state to receive the source;

(e) Shall store such source, except when the source is being used, in a closed container adequately designed and constructed to contain ~~[americium 241,]~~ ***americium-241*** plutonium or ~~[radium 226]~~ ***radium-226*** which might otherwise escape during storage; and

(f) Shall not use such source for any purpose other than the calibration of radiation detectors or the standardization of other sources.

6. These general licenses do not authorize the manufacture of calibration or reference sources containing ~~[americium 241,]~~ ***americium-241,*** plutonium or ~~[radium 226.]~~ ***radium-226.***

Sec. 67. NAC 459.236 is hereby amended to read as follows:

459.236 1. Applications for specific licenses must be filed on a form prescribed by the Division and accompanied by the appropriate fee as prescribed in NAC 459.310.

2. The Division may at any time after the filing of the original application, and before the expiration of the license, require further statements in order to enable the Division to determine whether the application should be granted or denied or whether a license should be modified or revoked.

3. Each application must be signed by the applicant or licensee or a person duly authorized to act for and on his behalf.

4. An application for a license may include a request for a license authorizing one or more activities.

5. In his application, the applicant may incorporate by reference information contained in previous applications, statements or reports filed with the Division provided such references are clear and specific.

6. Applications and documents submitted to the Division may be made available for public inspection except that the Division may withhold any document or part thereof from public

inspection if disclosure of its content is not required in the public interest and would adversely affect the interest of a person concerned.

7. An application for a specific license to use radioactive material in the form of a sealed source or in a device that contains a sealed source must:

(a) Identify the source or device by manufacturer and model number as registered with the Nuclear Regulatory Commission ***, or for a source or device which contains radium-226 or accelerator-produced radioactive material,*** pursuant to the provisions of NAC 459.289 ***,*** ~~[or]~~ 459.2895 ***or 459.3075*** or 10 C.F.R. § 32.210 or registered with an agreement state pursuant to an equivalent regulation of the agreement state; ~~[or]~~

(b) Contain the information identified in NAC 459.289 ***,*** ~~[or]~~ 459.2895 ~~[,]~~ ***or 459.3075,*** 10 C.F.R. § 32.210 or an equivalent regulation of an agreement state ~~[.]~~ ***; or***

(c) For a source or device which contains naturally occurring or accelerator-produced radioactive material which was manufactured before the effective date of this regulation, which is not registered with the Division pursuant to NAC 459.3075, the Nuclear Regulatory Commission pursuant to 10 C.F.R. § 32.210 or an agreement state pursuant to an equivalent regulation of the agreement state, and for which the applicant cannot provide all the information specified in 10 C.F.R. § 32.210(c):

(1) Include all available information identified in 10 C.F.R. § 32.210(c) which concerns the source and, if applicable, the device; and

(2) Include sufficient additional information to demonstrate with reasonable assurance that the radiation safety properties of the source or device are adequate to protect health and minimize danger to life and property, including, without limitation, a description of the source or device, a description of the radiation safety features, the intended use and associated

operating experience of the licensee and the results of a recent leak test of the source or device.

8. If applicable pursuant to NAC 459.1955, an application for a specific license must contain a proposed plan for financing decommissioning or a certification of financial assurance for decommissioning.

9. An application from a medical facility or educational institution to produce positron emission tomography radioactive drugs for noncommercial distribution to its licensees in its consortium authorized for use pursuant to the provisions of 10 C.F.R. Part 35 or an equivalent regulation of an agreement state must include:

(a) A request for authorization for the production of positron emission tomography radionuclides or evidence of an existing license for a positron emission tomography radionuclide production facility within its consortium, which is issued pursuant to NAC 459.180 to 459.313, inclusive, or an equivalent regulation in an agreement state from which it receives positron emission tomography radionuclides;

(b) Evidence that the applicant is qualified to produce radioactive drugs for medical use pursuant to NAC 459.300 or 10 C.F.R. § 32.72(a)(2);

(c) Identification of each person authorized to prepare the positron emission tomography radioactive drugs if the applicant is a pharmacy, and documentation that each meets the requirements of an authorized nuclear pharmacist pursuant to 10 C.F.R. § 32.72(b)(2); and

(d) Information set forth in 10 C.F.R. § 32.72(a)(3) concerning the positron emission tomography drugs to be noncommercially transferred to the members of its consortium.

Sec. 68. NAC 459.266 is hereby amended to read as follows:

459.266 The limits for radioactive material for broad licenses are:

Radioactive material	Column I curies	Column II curies
Antimony - 122	1.0	0.01
Antimony - 124	1.0	0.01
Antimony - 125	1.0	0.01
Arsenic - 73	10.0	0.1
Arsenic - 74	1.0	0.01
Arsenic - 76	1.0	0.01
Arsenic - 77	10.0	0.1
Barium - 131	10.0	0.1
Barium - 140	1.0	0.01
Beryllium - 7	10.0	0.1
Bismuth - 210	0.1	0.001
Bromine - 82	10.0	0.1
Cadmium - 109	1.0	0.01
Cadmium - 115m	1.0	0.01
Cadmium - 115	10.0	0.1
Calcium - 45	1.0	0.01
Calcium - 47	10.0	0.1
Carbon - 14	100.0	1.0
Cerium - 141	10.0	0.1
Cerium - 143	10.0	0.1
Cerium - 144	0.1	0.001
Cesium - 131	100.0	1.0
Cesium - 134m	100.0	1.0
Cesium - 134	0.1	0.001
Cesium - 135	1.0	0.01
Cesium - 136	10.0	0.1
Cesium - 137	0.1	0.001
Chlorine - 36	1.0	0.01
Chlorine - 38	100.0	1.0
Chromium - 51	100.0	1.0
Cobalt - 57	10.0	0.1
Cobalt - 58m	100.0	1.0
Cobalt - 58	1.0	0.01
Cobalt - 60	0.1	0.001
Copper - 64	10.0	0.1
Dysprosium - 165	100.0	1.0
Dysprosium - 166	10.0	0.1
Erbium - 169	10.0	0.1
Erbium - 171	10.0	0.1
Europium - 152 (9.2 h)	10.0	0.1
Europium - 152 (13 y)	0.1	0.001
Europium - 154	0.1	0.001
Europium - 155	1.0	0.01
Fluorine - 18	100.0	1.0
Gadolinium - 153	1.0	0.01
Gadolinium - 159	10.0	0.1
Gallium - 72	10.0	0.1
Germanium - 71	100.0	1.0
Gold - 198	10.0	0.1
Gold - 199	10.0	0.1
Hafnium - 181	1.0	0.01
Holmium - 166	10.0	0.1
Hydrogen - 3	100.0	1.0
Indium - 113m	100.0	1.0
Indium - 114m	1.0	0.01
Indium - 115m	100.0	1.0
Indium - 115	1.0	0.01
Iodine - 125	0.1	0.001
Iodine - 126	0.1	0.001
Iodine - 129	0.1	~~[0.001]~~ ***0.01***
Iodine - 131	0.1	0.001
Iodine - 132	10.0	0.1
Iodine - 133	1.0	0.01
Iodine - 134	10.0	0.1

Radioactive material	Column I curies	Column II curies
Iodine - 135	1.0	0.01
Iridium - 192	1.0	0.01
Iridium - 194	10.0	0.1
Iron - 55	10.0	0.1
Iron - 59	1.0	0.01
Krypton - 85	100.0	1.0
Krypton - 87	10.0	0.1
Lanthanum - 140	1.0	0.01
Lutetium - 177	10.0	0.1
Manganese - 52	1.0	0.01
Manganese - 54	1.0	0.01
Manganese - 56	10.0	0.1
Mercury - 197m	10.0	0.1
Mercury - 197	10.0	0.1
Mercury - 203	1.0	0.01
Molybdenum - 99	10.0	0.1
Neodymium - 147	10.0	0.1
Neodymium - 149	10.0	0.1
Nickel - 59	10.0	0.1
Nickel - 63	1.0	0.01
Nickel - 65	10.0	0.1
Niobium - 93m	1.0	0.01
Niobium - 95	1.0	0.01
Niobium - 97	100.0	1.0
Osmium - 185	1.0	0.01
Osmium - 191m	100.0	1.0
Osmium - 191	10.0	0.1
Osmium - 193	10.0	0.1
Palladium - 103	10.0	0.1
Palladium - 109	10.0	0.1
Phosphorus - 32	1.0	0.01
Platinum - 191	10.0	0.1
Platinum - 193m	100.0	1.0
Platinum - 193	10.0	0.1
Platinum - 197m	100.0	1.0
Platinum - 197	10.0	0.1
Polonium - 210	0.01	0.0001
Potassium - 42	1.0	0.01
Praseodymium - 142	10.0	0.1
Praseodymium - 143	10.0	0.1
Promethium - 147	1.0	0.01
Promethium - 149	10.0	0.1
Radium - 226	0.01	0.0001
Rhenium - 186	10.0	0.1
Rhenium - 188	10.0	0.1
Rhodium - 103m	1,000.0	10.0
Rhodium - 105	10.0	0.1
Rubidium - 86	1.0	0.01
Rubidium - 87	1.0	0.01
Ruthenium - 97	100.0	1.0
Ruthenium - 103	1.0	0.01
Ruthenium - 105	10.0	0.1
Ruthenium - 106	0.1	0.001
Samarium - 151	1.0	0.01
Samarium - 153	10.0	0.1
Scandium - 46	1.0	0.01
Scandium - 47	10.0	0.1
Scandium - 48	1.0	0.01
Selenium - 75	1.0	0.01
Silicon - 31	10.0	0.1
Silver - 105	1.0	0.01
Silver - 110m	0.1	0.001
Silver - 111	10.0	0.1
Sodium - 22	0.1	0.001

Radioactive material	Column I curies	Column II curies
Sodium - 24	1.0	0.01
Strontium - 85m	1,000.0	10.0
Strontium - 85	1.0	0.01
Strontium - 89	1.0	0.01
Strontium - 90	0.01	0.0001
Strontium - 91	10.0	0.1
Strontium - 92	10.0	0.1
Sulphur - 35	10.0	0.1
Tantalum - 182	1.0	0.01
Technetium - 96	10.0	0.1
Technetium - 97m	10.0	0.1
Technetium - 97	10.0	0.1
Technetium - 99m	100.0	1.0
Technetium - 99	1.0	0.01
Tellurium - 125m	1.0	0.01
Tellurium - 127m	1.0	0.01
Tellurium - 127	10.0	0.1
Tellurium - 129m	1.0	0.01
Tellurium - 129	100.0	1.0
Tellurium - 131m	10.0	0.1
Tellurium - 132	1.0	0.01
Terbium - 160	1.0	0.01
Thallium - 200	10.0	0.1
Thallium - 201	10.0	0.1
Thallium - 202	10.0	0.1
Thallium - 204	1.0	0.01
Thulium - 170	1.0	0.01
Thulium - 171	1.0	0.01
Tin - 113	1.0	0.01
Tin - 125	1.0	0.01
Tungsten - 181	1.0	0.01
Tungsten - 185	1.0	0.01
Tungsten - 187	10.0	0.1
Vanadium - 48	1.0	0.01
Xenon - 131m	1,000.0	10.0
Xenon - 133	100.0	1.0
Xenon - 135	100.0	1.0
Ytterbium - 175	10.0	0.1
Yttrium - 90	1.0	0.01
Yttrium - 91	1.0	0.01
Yttrium - 92	10.0	0.1
Yttrium - 93	1.0	0.01
Zinc - 65	1.0	0.01
Zinc - 69m	10.0	0.1
Zinc - 69	100.0	1.0
Zirconium - 93	1.0	0.01
Zirconium - 95	1.0	0.01
Zirconium - 97	1.0	0.01
Any radioactive material other than source material, special nuclear material, or alpha emitting radioactive material not listed above.	0.1	0.001

Sec. 69. NAC 459.274 is hereby amended to read as follows:

459.274 Specific licenses of broad scope are subject to the following conditions:

1. Unless specifically authorized, persons licensed pursuant to NAC 459.262 may not:

(a) Conduct tracer studies in the environment involving direct release of radioactive material;

(b) Receive, acquire, own, possess, use or transfer devices containing 100,000 curies or more of radioactive material in sealed sources used for irradiation of materials;

(c) Conduct activities for which a specific license issued by the Division under NAC ~~[459.2434, 459.2565 and]~~ 459.276 to 459.307, inclusive, is required; or

(d) Add or cause the addition of radioactive material to any food, beverage, cosmetic, drug, or other product designed for ingestion or inhalation by, or application to, a human being.

2. Each type A specific license of broad scope issued under NAC 459.180 to 459.274, inclusive, will be subject to the condition that radioactive material possessed under the license may only be used by, or under the direct supervision of, persons approved by the radiation safety committee of the licensee.

3. Each type B specific license of broad scope issued under this article is subject to the condition that radioactive material possessed under the license may only be used by, or under the direct supervision of, persons approved by the radiation safety officer of the licensee.

4. Each type C specific license of broad scope issued under this article is subject to the condition that radioactive material possessed under the license may only be used by, or under the direct supervision of, persons who satisfy the requirements of NAC 459.272.

Sec. 70. NAC 459.282 is hereby amended to read as follows:

459.282 An application for a specific license to manufacture or distribute devices containing radioactive material, excluding special nuclear material, to persons generally licensed under

NAC 459.216 or equivalent regulations of the Nuclear Regulatory Commission or an agreement state will be approved if:

1. The applicant satisfies the general requirements of NAC 459.238.

2. The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control, labels, proposed uses, installation, servicing, leak testing, operating and safety instructions and potential hazards of the device to provide reasonable assurance that:

(a) The device can be safely operated by persons not having training in radiological protection;

(b) Under ordinary conditions of handling, storage and use of the device, the radioactive material contained in the device will not be released or inadvertently removed from the device, and it is unlikely that any person will receive in any period of 1 year a dose in excess of 10 percent of the limits specified in NAC 459.325; and

(c) In an accident such as fire or explosion, associated with handling, storage and use of the device, it is unlikely that any person would receive an external radiation dose or dose commitment in excess of the following organ doses:

(1) Whole body, head and trunk, active blood-forming organs, gonads or lens of eye.....15 rems

(2) Hands and forearms, feet and ankles, localized areas of skin averaged over areas not larger than 1 square centimeter.....200 rems

(3) Other organs .....50 rems

3. Each device bears a durable, legible, clearly visible label or labels approved by the Division which contain in a clearly identified and separate statement:

(a) Instructions and precautions necessary to assure safe installation, operation and maintenance of the device. Documents such as operating and service manuals may be identified in the label and used to provide this information.

(b) The requirement, or lack of requirement, for leak testing, or for testing any on-and-off mechanism and indicator, including the maximum time interval for such testing, and the identification of radioactive material by isotope, quantity of radioactivity and date of determination of the quantity.

(c) The information called for in the following statement, in the same or substantially similar form:

> The receipt, possession, use and transfer of this device model, serial number, are subject to a general license or the equivalent and the regulations of the Nuclear Regulatory Commission or a state with which the Nuclear Regulatory Commission has entered into an agreement for the exercises of regulatory authority. This label must be maintained on the device in a legible condition. Removal of this label is prohibited.
>
> CAUTION - RADIOACTIVE MATERIAL
>
> .....
>
> (Name of manufacturer or distributor)

(d) The model, serial number and name of the manufacturer or distributor may be omitted from the label required by this subsection if the information is specified elsewhere and labeling is affixed to the device.

4. Each device that has a separable source housing that provides primary shielding for the source also bears, on the source housing, a durable label listing the model number and serial number of the device, the isotope and quantity, the radiation symbol described in NAC 459.355, the words "CAUTION - RADIOACTIVE MATERIAL" and the name of the manufacturer or initial distributor of the device.

5. Each device described in paragraph (a) of subsection ~~[12]~~ ***13*** of NAC 459.218 bears a permanent label, including, without limitation, an embossed, etched, engraved or a stamped label, affixed to the source housing if separable or to the device if the source housing is not separable, which contains the words "CAUTION - RADIOACTIVE MATERIAL" and the radiation symbol described in NAC 459.355, if practicable.

Sec. 71. NAC 459.296 is hereby amended to read as follows:

459.296 An application for a specific license to manufacture or distribute radioactive material for use under the general license of NAC 459.228 will be approved if:

1. The applicant satisfies the general requirements specified in NAC 459.238.

2. The radioactive material is to be prepared for distribution in prepackaged units of:

(a) ~~[Iodine 125]~~ ***Iodine-125*** in units not exceeding 10 microcuries each.

(b) ~~[Iodine 131]~~ ***Iodine-131*** in units not exceeding 10 microcuries each.

(c) ~~[Carbon 14]~~ ***Carbon-14*** in units not exceeding 10 microcuries each.

(d) ~~[Hydrogen 3]~~ ***Hydrogen-3*** (tritium) in units not exceeding 50 microcuries each.

(e) ~~[Iron 59]~~ ***Iron-59*** in units not exceeding 20 microcuries each.

(f) ~~[Cobalt 57]~~ ***Cobalt-57*** in units not exceeding 10 microcuries each.

(g) ~~[Selenium 75]~~ ***Selenium-75*** in units not exceeding 10 microcuries each.

(h) Mock ~~[iodine 125]~~ ***iodine-125*** in units not exceeding 0.05 microcurie of ~~[iodine 129]~~ ***iodine-129*** and 0.005 microcurie of ~~[americium 241]~~ ***americium-241*** each.

3. Each prepackaged unit bears a durable, clearly visible label:

(a) Identifying the radioactive contents as to chemical form and radionuclide, and indicating that the amount of radioactivity does not exceed:

(1) Ten microcuries ***(0.37 megabecquerel)*** of ~~[iodine 125, iodine 131, selenium 75, cobalt 57 or carbon 14;]~~ ***iodine-125, iodine-131, selenium-75, cobalt-57 or carbon-14;***

(2) Fifty microcuries ***(1.85 megabecquerels)*** of ~~[hydrogen 3]~~ ***hydrogen-3*** (tritium);

(3) Twenty microcuries ***(0.74 megabecquerel)*** of ~~[iron 59;]~~ ***iron-59;*** or

(4) For mock ~~[iodine 125,]~~ ***iodine-125;*** 0.05 microcurie ***(1.85 kilobecquerels)*** of ~~[iodine 129]~~ ***iodine-129*** and 0.005 microcurie ***(0.185 kilobecquerel)*** of ~~[americium 241]~~ ***americium-241*** each.

(b) Displaying the radiation caution symbol described in NAC 459.355 and the words, "CAUTION - RADIOACTIVE MATERIAL," and "Not for Internal or External Use in Humans or Animals."

4. The following statement, or a substantially similar statement which contains the information called for in the following statement, appears on a label affixed to each prepackaged unit or appears in leaflet or brochure which accompanies the package:

> This radioactive material may be received, acquired, possessed and used only by physicians, clinical laboratories or hospitals and only for in vitro clinical or

laboratory tests not involving internal or external administration of the material, or the radiation therefrom, to human beings or animals. Its receipt, acquisition, possession, use and transfer are subject to the regulations and a general license of the Nuclear Regulatory Commission or of a state with which the Commission has entered into an agreement for the exercise of regulatory authority.

.....

Name of Manufacturer

5. The label affixed to the unit, or the leaflet or brochure which accompanies the package, contains adequate information regarding the precautions to be observed in handling and storing such radioactive material. In the case of the mock ~~[iodine 125]~~ ***iodine-125*** reference or calibration source, the information accompanying the source must also contain directions to the licensee regarding the waste disposal requirements of NAC 459.3355 and 459.359 to 459.3615, inclusive.

Sec. 72. NAC 459.300 is hereby amended to read as follows:

459.300 1. An application for a specific license to manufacture, prepare or transfer for commercial distribution radioactive drugs containing radioactive material for use by persons authorized under a license issued by the Nuclear Regulatory Commission or any other agreement state will be approved if:

(a) The applicant satisfies the general requirements specified in NAC 459.238;

(b) The applicant submits evidence that the applicant is:

(1) Registered or licensed as ~~[a drug manufacturer]~~ ***the owner or operator of a drug establishment that engages in the manufacture, preparation, propagation, compounding or processing of a drug*** by:

(I) The United States Food and Drug Administration ~~[;]~~ ***pursuant to 21 C.F.R. § 207.20(a);*** or

(II) An agency of this State ~~[;]~~ ***pursuant to equivalent regulations;***

(2) Licensed as a pharmacy by the State Board of Pharmacy; ~~[or]~~

(3) Operating as a nuclear pharmacy within a medical facility; ***or***

(4) A positron emission tomography drug production facility licensed by or registered with a state agency;

(c) The applicant submits information on the radionuclide, chemical and physical form, maximum activity per vial, syringe, generator or other container of the radioactive drug and shielding provided by the packaging of the radioactive material to demonstrate that it is appropriate for safe handling and storage of radioactive drugs by licensees authorized to use radioactive material for medical use; and

(d) The applicant complies with the following labeling requirements:

(1) A label must be affixed to each transport radiation shield of the radioactive drug, including, without limitation, shields made of lead, glass or plastic, to be transferred for commercial distribution. The label must set forth or contain the radiation symbol, the words "CAUTION, RADIOACTIVE MATERIAL" or "DANGER, RADIOACTIVE MATERIAL," the name of the radioactive drug, or its abbreviation, and the quantity of radioactivity at the time and date specified on the label. For radioactive drugs with a half-life of more than 100 days, the time may be omitted from the label.

(2) A label must be affixed to each syringe, vial or other container used to hold a radioactive drug to be transferred for commercial distribution. The label must set forth the radiation symbol, the words "CAUTION, RADIOACTIVE MATERIAL" or "DANGER, RADIOACTIVE MATERIAL" and an identifier ~~[that]~~ ***which*** ensures that the syringe, vial or other container can be correlated with the information on the transport radiation shield label.

2. A licensee who is licensed as a pharmacy by the State Board of Pharmacy or who is operating as a nuclear pharmacy within a medical facility:

(a) May prepare a radioactive drug for medical use if the radioactive drug is prepared by an authorized nuclear pharmacist ~~[.]~~ ***as specified in paragraphs (b) and (c) or a person under the supervision of an authorized nuclear pharmacist as defined in 10 C.F.R. § 35.27.***

(b) May allow a pharmacist to work as an authorized nuclear pharmacist if the pharmacist ~~[is]~~ ***qualifies as*** an authorized nuclear pharmacist ~~[.]~~ ***, as defined in 10 C.F.R. § 35.2, or if the pharmacist meets the requirements of 10 C.F.R. §§ 35.55(b) and 35.59, and the licensee has received an approved license amendment which identifies the pharmacist as an authorized nuclear pharmacist.***

(c) May designate a pharmacist as an authorized nuclear pharmacist if the pharmacist ~~[is identified, as of November 13, 2006, as an authorized user on a license for a nuclear pharmacy issued by the Division, the Nuclear Regulatory Commission pursuant to 10 C.F.R. Part 32 or an agreement state.]~~ ***:***

(1) Was a nuclear pharmacist preparing only radioactive drugs containing accelerator-produced radioactive material; and

(2) Practiced at a pharmacy at a government agency or federally recognized Indian tribe before November 30, 2007, or at any other pharmacy before August 8, 2009, or an earlier date as noticed by the Nuclear Regulatory Commission.

(d) Shall provide to the Division:

(1) A copy of the certification ~~[, license or permit for each pharmacist that authorizes the pharmacist to perform any of the activities set forth in this subsection within 30 days after performing such activities;]~~ ***by a specialty board whose certification process has been recognized by the Nuclear Regulatory Commission or an agreement state as provided in 10 C.F.R. § 35.55(a) with the written attestation signed by a preceptor as required by 10 C.F.R. § 35.55(b)(2);***

(2) A copy of:

(I) The Nuclear Regulatory Commission or agreement state license;

(II) The Nuclear Regulatory Commission master materials licensee permit; or

(III) The permit issued by a licensee or Nuclear Regulatory Commission master materials permittee of broad scope;

(3) The authorization from a commercial nuclear pharmacy that is authorized to list its own authorized nuclear pharmacist or documentation which indicates that only accelerator-produced radioactive materials were used in the practice of nuclear pharmacy at a government agency or federally recognized Indian Tribe before November 30, 2007, or at all other locations of use before August 8, 2009, or an earlier date as noticed by the Nuclear Regulatory Commission; and

~~[(2)]~~ ***(4)*** A copy of the license or registration of the pharmacy or nuclear pharmacy within 30 days after the pharmacist performs any of the activities set forth in this subsection.

3. A licensee who prepares radioactive drugs for medical use pursuant to this section shall:

(a) Possess and use an instrument to measure the radioactivity of alpha-, beta- or photon-emitting radioactive drugs;

(b) Have procedures for the use of the instrument;

(c) Measure, by direct measurement or by a combination of measurements and calculations, the amount of radioactivity in dosages of alpha-, beta- or photon-emitting radioactive drugs before transfer for commercial distribution;

(d) Perform tests before initial use, periodically and following repair on each instrument for accuracy, linearity and geometry dependence, as appropriate for the instrument, and make adjustments to the instrument if necessary; and

(e) Check each instrument for constancy and proper operation at the beginning of each day of use.

4. ~~[No provision]~~ ***The provisions*** of this section ~~[relieves]~~ ***do not relieve*** a licensee of his duty to comply with any other federal, state or local requirement governing the receipt, administration or use of drugs or radioactive drugs.

Sec. 73. NAC 459.306 is hereby amended to read as follows:

459.306 An application for a specific license to manufacture and distribute sources and devices containing radioactive material to persons licensed pursuant to 10 C.F.R. Part 35 or equivalent regulations of an agreement state, for use as a calibration ***, transmission*** or reference source or for the uses listed in 10 C.F.R. §§ 35.400, 35.500 ***,*** ~~[and]~~ 35.600 ***and 35.1000*** or equivalent regulations of an agreement state, will be approved if:

1. The applicant satisfies the general requirements in NAC 459.238;

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

(a) The radioactive material contained, its chemical and physical form, and amount;

(b) Details of design and construction of the source or device;

(c) Procedures for, and results of, prototype tests to demonstrate that the source or device will maintain its integrity under stresses likely to be encountered in normal use and in accidents;

(d) For devices containing radioactive material, the radiation profile of a prototype device;

(e) Details of quality control procedures to ensure that production sources and devices meet the standards of the design and prototype tests;

(f) Procedures and standards for calibrating sources and devices;

(g) Legends and methods for labeling sources and devices as to their radioactive content; and

(h) Instructions for handling and storing the source or device from the radiation safety standpoint, which instructions must be included on a durable label attached to the source or device or attached to a permanent storage container for the source or device, provided that instructions which are too lengthy for the label may be summarized on the label and printed in detail on a brochure which is referenced on the label; and

3. The label affixed to the source, device or permanent storage container for the source or device contains information on the radionuclide, quantity and date of assay, and a statement that the source or device is approved by the Division for distribution to persons licensed to use radioactive material identified in 10 C.F.R. §§ ~~[35.57,]~~ ***35.65,*** 35.400, 35.500 and 35.600 or to persons who hold equivalent licenses of the Nuclear Regulatory Commission or an agreement state.

Sec. 74. NAC 459.3062 is hereby amended to read as follows:

459.3062 1. The provisions of 10 C.F.R. Part 35, as they existed on ~~[September 16, 2004,]~~ ***November 30, 2007,*** are hereby adopted by reference, subject to the following:

(a) 10 C.F.R. §§ 35.8, ***35.10(a), 35.11(c)(2), 35.13(a)(1), 35.13(a)(2), 35.13(b)(5), 35.14(a), 35.15(f), 35.57(b)(3),*** 35.4001 and 35.4002 are not adopted by reference.

(b) Except as otherwise provided in this chapter, the implementation date ~~[described]~~ ***specified*** in 10 C.F.R. §§ 35.10(a) and 35.10(d) is November 13, 2006.

(c) Except as otherwise provided in this chapter, the October 24, 2002, date ~~[described]~~ ***specified*** in 10 C.F.R. § 35.57(a)(1) shall be deemed to mean November 13, 2006.

(d) ***Except as otherwise provided in this chapter, the April 29, 2005, date specified in 10 C.F.R. § 35.57(a)(2) shall be deemed to mean April 29, 2008.***

(e) Except as otherwise provided in this section, any reference in 10 C.F.R. Part 35 to:

(1) "10 CFR Part 19" or "10 CFR 19" shall be deemed to mean "NAC 459.780 to 459.794, inclusive."

(2) "10 CFR 19.12" or "§ 19.12" shall be deemed to mean "NAC 459.784."

(3) "10 CFR Part 20" or "10 CFR 20" shall be deemed to mean "NAC 459.320 to 459.374, inclusive."

(4) "10 CFR 20.1101" or "§ 20.1101" shall be deemed to mean "paragraph (a) of subsection 1 of NAC 459.321."

(5) "10 CFR 20.1301(a)(1)" or "§ 20.1301(a)(1)" shall be deemed to mean "paragraph (a) of subsection 1 of NAC 459.335."

(6) "10 CFR 20.1301(c)" or "§ 20.1301(c)" shall be deemed to mean ~~["paragraph (c) of subsection 1]~~ ***"subsection 2*** of NAC 459.335."

(7) "10 CFR 20.1501" or "§ 20.1501" shall be deemed to mean "NAC 459.337."

(8) "10 CFR Part 30" or "10 CFR 30" shall be deemed to mean "NAC 459.180 to 459.313, inclusive."

(9) "10 CFR 30.34(b)" or "§ 30.34(b)" shall be deemed to mean "subsection 2 of NAC 459.198."

(10) "10 CFR 30.6" or "§ 30.6" shall be deemed to mean "NAC 459.134."

(11) "10 CFR 32.72(b)(4)" or "§ 32.72(b)(4)" shall be deemed to mean "paragraph (c) of subsection 2 of NAC 459.300."

(12) "10 CFR Part 33" or "10 CFR 33" shall be deemed to mean "NAC 459.262 to 459.274, inclusive."

(13) "10 CFR 33.13" or "§ 33.13" shall be deemed to mean "NAC 459.268."

(14) "10 CFR Part 170," "10 CFR 170," "10 CFR Part 171" or "10 CFR 171" shall be deemed to mean "NAC 459.310."

(15) "Byproduct material" shall be deemed a reference to "radioactive material."

(16) "Commission" or "NRC" shall be deemed a reference to "Division."

(17) "Commission's regulations," "federal regulations" or "NRC regulations" shall be deemed a reference to "NAC 459.010 to 459.950, inclusive ~~[."]~~ ***, and sections 2 to 45, inclusive, of this regulation."***

(18) "NRC Form 313" shall be deemed a reference to "NRC Form 5," Application for Radioactive Material License, ~~[described in NAC 459.2434.]~~ ***specified by the Division.***

(19) "NRC license" shall be deemed a reference to "license issued by the Division pursuant to NAC 459.010 to 459.950, inclusive ~~[."]~~ ***, and sections 2 to 45, inclusive, of this regulation."***

(20) "NRC Operations Center " ," "NRC Regional Office listed in § 30.6" or "Director, Office of Nuclear Safety and Safeguards" shall be deemed a reference to "the provisions of NAC 459.134 and the contact information described in the State of Nevada Radiological Emergency Response Plan."

(21) "NRC or an Agreement State," "Commission or an Agreement State" or "Commission or by an Agreement State" shall be deemed a reference to "Division, Nuclear Regulatory Commission or an agreement state."

~~[(e)]~~ ***(f) The text of 10 C.F.R. § 35.491(b)(3) shall be deemed to read "Has obtained written attestation, signed by a preceptor authorized user who meets the requirements in § 35.490 or § 35.491 or equivalent requirements of an Agreement State, that the individual has satisfactorily completed the requirements in paragraph (b)(1) and (b)(2) of this section and has achieved a level of competency sufficient to function independently as an authorized user of strontium-90 for ophthalmic use."***

(g) The full text of any sentence that contains a reference to "10 CFR Part 21," "10 CFR 21," "10 CFR 30.7," "§ 30.7," "10 CFR 30.9," "§ 30.9," "10 CFR 30.10" or "§ 30.10" shall be deemed omitted.

2. A copy of the volume containing 10 C.F.R. Part 35 may be obtained ***by mail*** from the Superintendent of Documents, United States Government Printing Office, ~~[Washington, D.C. 20402-9325,]~~ ***P.O. Box 979050, St. Louis, Missouri 63197-9000, or by toll-free telephone at (866) 512-1800,*** at a cost of ~~[$61,]~~ ***$67,*** or free of charge at the Internet address **http://www.gpoaccess.gov/cfr/index.html.**

Sec. 75. NAC 459.310 is hereby amended to read as follows:

459.310 Except as otherwise provided in NAC 459.203, the Division will not issue a new specific license or a renewed specific license to a person until the appropriate nonrefundable fee has been paid to the Division, as prescribed in the following table:

Material and use	Fee
1. Special nuclear material:	
(a) As sealed source	$2,000
(b) In unsealed form	2,000
2. Source materials for other than milling operations	$2,200
3. By-product material, artificially produced radioactive material and radium:	
(a) Manufacturing or distribution, or both	$2,200
(b) Nuclear pharmacy	6,600
(c) Industrial radiography	5,500
(d) Category 1 (self-shielded) irradiator	1,650
(e) Academic, broad scope	8,800
(f) Academic, other research and development	1,320
(g) Service or laboratory	1,760
(h) Fixed gauge	1,100
(i) Gas chromatograph	496
(j) In vitro	105
(k) Portable gauge or X-ray fluorescence analyzer	1,320

Material and use Fee

(l) All other uses of radioactive material except those set forth in subsections 4 to 8, inclusive.....1,000

4. Well logging.....$3,300

5. Medical use or veterinary use of radioactive material:

(a) Medical use or veterinary use.....$4,400

(b) General license for in vitro use.....125

6. Civil defense $276

7. Registration of devices generally licensed pursuant to paragraph (a) of subsection ~~[12]~~ ***13*** of NAC 459.218 .....$250

8. Any use of radioactive material by a person who holds a specific license issued by the Nuclear Regulatory Commission or any agreement state.....See appropriate fee category above

Sec. 76. NAC 459.313 is hereby amended to read as follows:

459.313 1. A licensee who ships radioactive waste intended for ultimate disposal at a licensed land disposal facility must document the information required on ***the*** Nuclear Regulatory ~~[Commission Form 541,]~~ ***Commission's*** Uniform Low-Level Radioactive Waste Manifest, and transfer the recorded manifest information to the intended consignee in accordance with the provisions of Appendix G.

2. Each manifest described in subsection 1 must include a certification by the waste generator as provided in section II of Appendix G.

3. Each person involved in the transfer for disposal or the disposal of radioactive waste, including, without limitation, the waste generator, waste collector, waste processor and disposal facility operator, shall comply with the requirements of section III of Appendix G.

4. A licensee who ships any by-product material specified in subsections 2 and 3 of NAC 459.022, which is intended for disposal at a land disposal facility licensed pursuant to 10 C.F.R. Part 61, shall document the information required on the Nuclear Regulatory Commission's Uniform Low-Level Radioactive Waste Manifest and transfer the recorded information to the intended consignee in accordance with Appendix G.

Sec. 77. NAC 459.325 is hereby amended to read as follows:

459.325 1. Except as otherwise provided in subsection 5, a licensee or registrant shall control occupational doses, except for planned special exposures, to ensure that no adult receives annually occupational doses in excess of the following limits:

(a) The lesser of:

(1) A total effective dose equivalent of 5 rems (50 millisieverts); or

(2) The sum of the deep-dose equivalent and the committed dose equivalent to any individual organ or tissue, other than the lens of the eye, of 50 rems (500 millisieverts);

(b) A lens dose equivalent of 15 rems (150 millisieverts); and

(c) A shallow-dose equivalent to the skin of the whole body or the skin of any extremity of 50 rems (500 millisieverts).

2. Occupational doses received in excess of the annual limits specified in subsection 1, including doses received during accidents, emergencies and planned special exposures, must be subtracted from the limits for planned special exposures that a person may receive during a current year and during his lifetime.

3. ***When the external exposure is determined by a measurement with an external personal monitoring device, the deep-dose equivalent must be used in lieu of the effective dose equivalent, unless the effective dose equivalent is determined by a dosimetry method approved by the Division.*** The assigned deep-dose equivalent must be for the portion of the body receiving the highest exposure. The assigned shallow-dose equivalent must be the dose averaged over the contiguous 10 square centimeters of skin receiving the highest exposure. The deep-dose equivalent, lens dose equivalent and shallow-dose equivalent may be assessed from surveys or other radiation measurements for the purpose of demonstrating compliance with the limits for occupational doses, if the personnel monitoring equipment was not in the region of highest potential exposure, or the results of personnel monitoring are unavailable.

4. The derived air concentration and annual limit on intake values that are set forth in table I of appendix B may be used to determine the occupational dose of a person and to demonstrate compliance with the limits for occupational doses.

5. Notwithstanding the annual limits, a licensee shall limit a person's intake of soluble uranium to 10 milligrams in 1 week.

6. The licensee or registrant shall reduce the occupational dose that a person is allowed to receive in a current year by the amount of the occupational dose that person received during the year while employed by another person.

Sec. 78. NAC 459.337 is hereby amended to read as follows:

459.337 1. Each licensee and registrant shall make, or cause to be made, surveys that:

(a) Are necessary for the licensee or registrant to comply with NAC 459.010 to 459.950, inclusive ~~[.]~~ ***, and sections 2 to 45, inclusive, of this regulation;*** and

(b) Are necessary under the circumstances to evaluate:

(1) The magnitude and extent of radiation levels;

(2) Concentrations or quantities of radioactive material; and

(3) The potential radiological hazards.

2. ***The Division may exempt a licensee or registrant from the requirements of subsection 1 if the Division determines that the exemption will not result in a significant risk to public health and safety.***

3. The licensee or registrant shall ensure that instruments and equipment used for quantitative radiation measurements are calibrated for the radiation measured at intervals not to exceed 12 months.

~~[3.]~~ ***4.*** All personnel dosimeters, except for direct and indirect reading pocket ionization chambers and those dosimeters used to measure the dose to any extremity, that require processing to determine the dose of radiation and that are used by licensees and registrants to comply with NAC 459.325, with other applicable provisions of NAC 459.010 to 459.950, inclusive, ***and sections 2 to 45, inclusive, of this regulation*** or with conditions specified in a license or registration must be processed and evaluated by a dosimetry processor who is accredited by the National Voluntary Laboratory Accreditation Program of the National Institute of Standards and Technology for the type of radiation or radiations included in the program that most closely approximate the type of radiation for which the person wearing the dosimeter is monitored.

~~[4.]~~ ***5.*** The licensee or registrant shall ensure that adequate precautions are taken to prevent a deceptive exposure of personnel monitoring equipment.

Sec. 79. NAC 459.3585 is hereby amended to read as follows:

459.3585 1. Each licensee who expects to receive a package containing quantities of radioactive material in excess of a type A quantity, as defined in 10 C.F.R. § 71.4, as that section existed on ~~[January 1, 1993,]~~ ***November 14, 2007,*** shall make arrangements to receive:

(a) The package when the carrier offers it for delivery; or

(b) Notification of the arrival of the package at the terminal of the carrier and to take possession of the package expeditiously.

2. Except as otherwise provided in subsection 6, each licensee shall monitor the external surfaces of a package known to contain radioactive material for radioactive contamination and radiation levels if the package:

(a) Is labeled as containing radioactive material; or

(b) Has evidence of potential contamination.

3. The licensee shall perform the monitoring required ~~[pursuant to]~~ ***by*** subsection 2 as soon as practicable after receipt of the package, but not later than 3 hours after the package is received at the facility of the licensee if the package is received during the normal working hours of the licensee. If the package is received after the normal working hours of the licensee, the monitoring must be performed not later than 3 hours after the beginning of the next normal working day of the licensee.

4. A licensee shall immediately notify the carrier who made the final delivery of a package and, by telephone and telegram, mailgram or facsimile, the Division ~~[,]~~ if:

(a) Removable radioactive contamination on the surface of the package is detected that exceeds 22,000 disintegrations per minute per 100 square centimeters of package surface; or

(b) The radiation level at 1 meter from the surface of the package exceeds 10 milliroentgens per hour.

5. Each licensee shall:

(a) Establish, maintain and retain written procedures for safely opening packages in which radioactive material is received; and

(b) Ensure that the procedures established pursuant to paragraph (a) are followed and that consideration is given to any special instructions for the type of package being opened.

6. A licensee transferring a source of radiation in a special form in a motor vehicle owned or operated by the licensee to and from a work site is not required to comply with the requirements of subsection 2, but shall ensure that the source of radiation is still properly lodged in its shield.

~~[7. For the purposes of this section, the State Board of Health hereby adopts by reference 10 C.F.R. § 71.4, as that section existed on January 1, 1993. A copy of the volume containing that section may be purchased from the Superintendent of Documents, United States Government Printing Office, Washington, D.C. 20402, for the price of $21.]~~

Sec. 80. NAC 459.368 is hereby amended to read as follows:

459.368 1. Requirements for notification and reports to persons of exposure to radiation or radioactive material are specified in NAC 459.786.

2. When a licensee or registrant is required by NAC 459.371 ***or 459.3715*** to report to the Division any exposure of ~~[a]~~ ***an identified occupationally exposed*** person ***or an identified member of the public*** to radiation or radioactive material, the licensee or registrant shall also notify the person ***or member of the public*** who was exposed. The notice must be transmitted at a time not later than the transmittal to the Division, and the notice must comply with the provisions of subsection 1 of NAC 459.786.

Sec. 81. NAC 459.400 is hereby amended to read as follows:

459.400 As used in NAC 459.400 to 459.624, inclusive, ***and sections 20 to 45, inclusive, of this regulation,*** unless the context otherwise requires, the words and terms defined in NAC 459.402 to 459.546, inclusive, have the meanings ascribed to them in those sections.

Sec. 82. NAC 459.476 is hereby amended to read as follows:

459.476 "Portable equipment" means X-ray equipment designed ***by a manufacturer*** to be ~~[hand carried.]~~ ***hand-held or hand-carried.***

Sec. 83. NAC 459.580 is hereby amended to read as follows:

459.580 1. In addition to the provisions of NAC 459.552 to 459.558, inclusive, and 459.564, these requirements apply to X-ray equipment and associated facilities used for dental radiography. The criteria for extraoral dental radiographic systems are covered in NAC 459.616 to 459.624, inclusive.

2. X-ray systems designed for use with an intraoral image receptor must be provided with means to limit source-to-skin distance of not less than ~~[:~~

~~(a) Eighteen]~~ ***18*** centimeters ***.*** ~~[if operable above 50 kilovolts peak; or~~

~~(b) Ten centimeters if not operable above 50 kilovolts peak.]~~

3. Radiographic systems which are designed for use with an intraoral image receptor must be provided with means to limit the X-ray beam so that:

(a) If the minimum source-to-skin distance is 18 centimeters or more, the X-ray field at the minimum source-to-skin distance is containable in a circle having a diameter of no more than 7 centimeters; and

(b) If the minimum source-to-skin distance is less than 18 centimeters, the X-ray field at the minimum source-to-skin distance is containable in a circle having a diameter of no more than 6 centimeters.

4. A means must be provided to terminate the exposure at a preset time interval, a preset product of current and time, a preset number of pulses, or a preset radiation exposure to the image receptor. In addition:

(a) Termination of exposure must cause automatic resetting of the timer to its initial setting or to zero; and

(b) It must not be possible to make an exposure when the timer is set to a zero or off position if either position is provided.

5. When four timer tests taken at identical timer settings equal 0.5 seconds or less, the average time period (T) must be greater than or equal to five times the difference between the maximum period (T max) and the minimum period (T min) in accordance with the formula: T 5 (T max-T min).

6. ***Deviation of measured technique factors from indicated values of kVp and exposure time must not exceed the limits specified for that system by its manufacturer. In the absence of the manufacturer's specifications, the deviation must not exceed 10 percent of the indicated value for kVp and 20 percent for exposure.*** All timers must be accurate to within ±20 percent of the selected value.

7. A control must be incorporated into each X-ray system so that an exposure can be terminated at any time, except for exposures of one-half second or less. The control switch must be of the dead-man type.

8. Each X-ray control must be located to meet the following criteria:

(a) Each installation must be provided with a protective barrier for the operator or must be so arranged that the operator can stand at least 6 feet from the patient and well away from the useful beam; and

(b) The X-ray control must provide visual indication observable at or from the operator's protected position whenever X rays are produced. In addition, a signal audible to the operator must indicate that the exposure has terminated.

9. The exposure produced must be reproducible to within the following criteria: When all technique factors are held constant, the coefficient of variation must not exceed 0.10. This requirement is met if, when four exposures at identical technique factors are made, the value of the average exposure (E) is greater than or equal to five times the difference between the maximum exposure (E max) and the minimum exposure (E min) in accordance with the formula: E 5 (E max-E min).

10. Patient and film holding devices must be used when the techniques permit.

11. Neither the tube housing nor the position indicating device may be handheld during an exposure.

12. The X-ray system must be arranged and operated in such a manner that the useful beam at the patient's skin does not exceed the dimensions specified in subsection 3.

13. Dental fluoroscopy without image intensification must not be used.

14. Each patient undergoing dental radiography must be draped with a protective apron of not less than 0.25 millimeters lead-equivalent to cover the gonadal area.

15. Dental X-ray machines with a nominal fixed kVp of less than 50 kVp must not be used to make diagnostic dental radiographs of humans.

Sec. 84. NAC 459.622 is hereby amended to read as follows:

459.622 1. A means must be provided to terminate the exposure at a preset time interval, preset product of current and time, a preset number of pulses or a preset radiation exposure to the image receptor. In addition:

(a) Termination of exposure must cause automatic resetting of the timer to its initial setting or to zero; and

(b) It must not be possible to make an exposure when the timer is set to a zero or off position if either position is provided.

2. A control must be incorporated into each X-ray system so an exposure can be terminated at any time except for:

(a) Exposure of one-half second or less; or

(b) During serial radiography when means must be provided to permit completion of any single exposure of the series in process.

3. Each X-ray control must be located so that it meets the following criteria:

(a) For stationary X-ray systems, and mobile and portable X-ray systems used as stationary X-ray systems, the control must be permanently mounted in a protected area. The operator shall remain in the protected area during the entire exposure.

(b) For mobile and portable X-ray systems, the exposure switch cord must be at least 6 feet long.

(c) The X-ray control must provide visual indication observable at or from the operator's protected position whenever X rays are produced. In addition, a signal audible to the operator must indicate that the exposure has terminated.

4. When an automatic exposure control is provided:

(a) Indication must be made on the control panel when this mode of operation is selected;

(b) When the X-ray tube potential is equal to or greater than 50 kVp, the minimum exposure time for field emission equipment rated for pulsed operation must be equal to or less than a time interval equivalent to two pulses;

(c) The minimum exposure time for all equipment other than that specified in paragraph (b) ~~[of this subsection]~~ must be equal to or less than one-sixtieth of a second or a time interval required to deliver 5 mAs, whichever is greater;

(d) Either the product of peak X-ray tube potential, current, and exposure time must be limited to not more than 60 kWs per exposure or the product of X-ray tube current and exposure time must be limited to not more than 600 mAs per exposure except when the X-ray tube potential is less than 50 kVp, in which case the product of X-ray tube current and exposure time must be limited to not more than 2000 mAs per exposure; and

(e) A visible signal must indicate when an exposure has been terminated at the limits described in paragraph (d), and manual resetting must be required before further automatically timed exposures can be made.

5. With a timer setting of 0.5 seconds or less, the average exposure period (T) must be greater than or equal to five times the maximum exposure period (T max) minus the minimum exposure period (T min) when four timer tests are performed, for example, T 5 (T max-T min).

6. ***Deviation of measured technique factors from indicated values of kVp and exposure time must not exceed the limits specified for that system by its manufacturer. In the absence of the manufacturer's specifications, the deviation must not exceed 10 percent of the indicated value for kVp and 20 percent for exposure.*** All timers must be accurate to within ±20 percent of the selected value.

Sec. 85. NAC 459.624 is hereby amended to read as follows:

459.624 1. ~~[All]~~ ***Except as otherwise provided in section 45 of this regulation, all*** mobile or portable radiographic systems must be provided with a means to limit the source to skin distance to not less than 30 centimeters.

2. The exposure produced must be reproducible to the following criteria: When all technique factors are held constant, the coefficient of variation must not exceed 0.10. This requirement is met if, when four exposures at identical technique factors are made, the value of the average exposure (E) is greater than or equal to five times the maximum exposure (E max) minus the minimum exposure (E min) in accordance with the formula: E 5 (E max-E min).

3. Radiation emitted from the X-ray tube when the exposure switch or timer is not activated must not exceed a rate of 2 milliroentgens per hour at 5 centimeters from any accessible surface of the diagnostic source assembly, with the beam-limiting device fully open.

Sec. 86. NAC 459.737 is hereby amended to read as follows:

459.737 1. In addition to any applicable requirement of NAC 459.010 to 459.794, inclusive, ***and sections 2 to 45, inclusive, of this regulation,*** a person licensed by the Division to use a sealed source to engage in industrial radiography shall comply with all applicable requirements of, and may rely on all applicable exclusions or exemptions included in, the provisions of Part 34 of Title 10 of the Code of Federal Regulations, as adopted by reference in this section. ***The provisions of this subsection do not apply to a person using an electronic source of radiation to conduct industrial radiography.***

2. Part 34 of Title 10 of the Code of Federal Regulations, as those provisions existed on January ~~[1, 2001,]~~ ***31, 2008,*** is hereby adopted by reference, subject to the following:

(a) ~~[Except as otherwise provided in this section, any reference to "Commission's regulations," "federal regulations" or "NRC regulations" shall be deemed a reference to "NAC 459.010 to 459.950, inclusive";~~

~~(b) Except in 10 C.F.R. § 34.20 and as otherwise provided in this section, any reference to the "Commission" or "NRC" shall be deemed a reference to the "Division";~~

~~(c) Except as otherwise provided in this section, any reference to "NRC or an Agreement State," "Commission or an Agreement State" or "Commission or by an Agreement State" shall be deemed a reference to "Division, Nuclear Regulatory Commission or an agreement state";~~

~~(d) Except as otherwise provided in this section, any reference to "NRC license" shall be deemed a reference to "license issued by the Division pursuant to NAC 459.010 to 459.950, inclusive";~~

~~(e) Any reference to "10 CFR part 19" or "10 CFR 19" shall be deemed a reference to "NAC 459.780 to 459.794, inclusive";~~

~~(f) Any reference to "10 CFR part 20" or "10 CFR 20" shall be deemed a reference to "NAC 459.320 to 459.374, inclusive";~~

~~(g) Any reference to "10 CFR 20.1601(a)(1)" or "§ 20.1601(a)(1)" shall be deemed a reference to "paragraph (a) of subsection 1 of NAC 459.341";~~

~~(h) Any reference to "10 CFR 20.1902" or "§ 20.1902" shall be deemed a reference to "NAC 459.3555";~~

~~(i) Any reference to "10 CFR 20.1903" or "§ 20.1903" shall be deemed a reference to "NAC 459.3565";~~

~~(j) Any reference to "10 CFR 20.2203" or "§ 20.2203" shall be deemed a reference to "NAC 459.371";~~

~~(k) The full text of a sentence that contains any reference to "10 CFR part 21" or "10 CFR 21" shall be deemed omitted;~~

~~(l) The full text of a sentence that contains any reference to "10 CFR 30.7," "§ 30.7," "10 CFR 30.9," "§ 30.9," "10 CFR 30.10" or "§ 30.10" shall be deemed omitted;~~

~~(m) Any reference to "10 CFR 30.33" or "§ 30.33" shall be deemed a reference to "NAC 459.238";~~

~~(n) Any reference to "10 CFR 30.50" or "§ 30.50" shall be deemed a reference to "NAC 459.373";~~

~~(o) Any reference to "10 CFR part 34" or "10 CFR 34" shall be deemed a reference to "this section";~~

~~(p) Any reference to "10 CFR 34.111" shall be deemed a reference to "NAC 459.120";~~

~~(q) Any reference to "10 CFR 150.20" or "§ 150.20" shall be deemed a reference to "NAC 459.210";~~

~~(r) In 10 C.F.R. § 34.3, any reference to "offshore platform radiography" shall be deemed a reference to "platform radiography";~~

~~(s) In 10 C.F.R. § 34.27(d), any reference to:~~

~~(1) "Commission regulations" shall be deemed a reference to "NAC 459.307"; and~~

~~(2) "Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001" or "Administrator of the appropriate Nuclear Regulatory Commission's Regional Office listed in appendix D of 10 CFR part 20 of this chapter 'Standards for Protection Against Radiation' " shall be deemed a reference to "Division pursuant to NAC 459.307";~~

~~(t) In 10 C.F.R. § 34.43(a)(2), any reference to "Commission" shall be deemed a reference to "Division, Nuclear Regulatory Commission or an agreement state";~~

~~(u) In 10 C.F.R. § 34.89, any reference to "Agreement State" shall be deemed a reference to "Nuclear Regulatory Commission or an agreement state";~~

~~(v) In 10 C.F.R. § 34.101(a), any reference to "U.S. Nuclear Regulatory Commission, Division of Industrial and Medical Nuclear Safety, Washington, D.C. 20555-0001, with a copy to the Director, Office for Analysis and Evaluation of Operation Data, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001," shall be deemed a reference to "Division";~~

~~(w) In 10 C.F.R. § 34.101(c), any reference to "appropriate NRC regional office listed in § 30.6(a)(2) of this chapter" shall be deemed a reference to "Division"; and~~

~~(x) In Appendix A to Part 34 of Title 10 of the Code of Federal Regulations:~~

~~(1) The reference in item 12 of section I to "Commission and other independent certifying organizations and/or Agreement States" shall be deemed a reference to "Division, Nuclear Regulatory Commission, other independent certifying organizations and agreement states";~~

~~(2) The reference in item 1 of section II to "Agreement State regulations" shall be deemed a reference to "regulations of the Nuclear Regulatory Commission or an agreement state"; and~~

~~(3) The reference in item 2 of section II to "an Agreement State or a NRC licensee" shall be deemed a reference to "a person that holds a license issued pursuant to NAC 459.010 to 459.950, inclusive, by the Nuclear Regulatory Commission or an agreement state."~~ ***The exclusion of references within 10 C.F.R. Part 34 to Part "21" and to 10 C.F.R. §§ "21.21," "30.7," "30.9" and "30.10";***

(b) The exclusion of "offshore" specified in the definition of "offshore platform radiography" set forth in 10 C.F.R. § 34.3;

(c) The substitution of the following wording:

(1) "Chapter 459 of the Nevada Administrative Code" for a reference to:

(I) "Commission's regulations," except as stated in subparagraph 6;

(II) "Federal regulations";

(III) "NRC regulations"; and

(IV) "This chapter" as stated in 10 C.F.R. § 34.101(a);

(2) "Division" for the reference to "Commission," except as stated in 10 C.F.R. § 34.20 and subsubparagraph (IV) of subparagraph 3;

(3) "Division, Nuclear Regulatory Commission or an agreement state" for references to:

(I) "NRC or an Agreement State";

(II) "Commission or by an Agreement State";

(III) "Commission or an Agreement State"; and

(IV) "Commission" in 10 C.F.R. § 34.43(a)(2);

(4) "License" for reference to "NRC license(s)";

(5) In 10 C.F.R. § 34.27(d), "reports of test results for leaking or contaminated sealed sources shall be made pursuant to NAC 459.307" for a reference to the following statement, "A report must be filed with the Director of Nuclear Material Safety and Safeguards, by an appropriate method listed in § 30.6(a) of this chapter, the report to be filed within 5 days of any test with results that exceed the threshold in this paragraph (d), and to describe the equipment involved, the test results, and the corrective action taken. A copy of the report must be sent to the Administrator of the appropriate Nuclear Regulatory Commission's Regional Office listed in appendix D of 10 C.F.R. part 20 of this chapter 'Standards for Protection Against Radiation.'";

(6) In 10 C.F.R. § 34.27(d), "subsection 3 of NAC 459.307" for the reference to "Commission regulations";

(7) In 10 C.F.R. § 34.43(a)(1), "10 C.F.R. § 30.6" for the reference to "§ 30.6(a) of this chapter";

(8) In 10 C.F.R. § 34.89, "a Nuclear Regulatory Commission or an agreement state" for the reference to "the Agreement State";

(9) In 10 C.F.R. § 34.101(a), "Division" for the reference to "NRC's Office of Federal and State Materials and Environmental Management Programs, by an appropriate method listed in § 30.6(a) of this chapter";

(10) In 10 C.F.R. § 34.101(c), "Division" for the reference to "appropriate NRC regional office listed in § 30.6(a)(2) of this chapter";

(11) In Item 12, Section I of Appendix A to 10 C.F.R. Part 34, "Division, the United States Nuclear Regulatory Commission and other independent certifying organizations or agreement states" for the reference to "Commission and other independent certifying organizations and/or Agreement States";

(12) In Item 1, Section II of Appendix A to 10 C.F.R. Part 34, "equivalent Nuclear Regulatory Commission or agreement state regulations" for the reference to "equivalent Agreement State regulations"; and

(13) In Item 2(c), Section II of Appendix A to 10 C.F.R. Part 34, "a Nevada, Nuclear Regulatory Commission or an agreement state licensee" for the reference to "an Agreement State or a NRC licensee"; and

(d) The substitution of the following:

(1) "Subsection 1 of NAC 459.120" for the reference to "10 CFR 34.111";

(2) "NAC 459.320 to 459.374, inclusive," for the reference to "10 CFR 20";

(3) "Paragraph (a) of subsection 1 of NAC 459.341" for the reference to "10 CFR 20.1601(a)(1)";

(4) "Subsections 1 and 2 of NAC 459.3555" for the reference to "10 CFR 20.1902(a) and (b)";

(5) "NAC 459.3565" for the reference to "10 CFR 20.1903";

(6) "NAC 459.371" for the reference to "10 CFR 20.2203";

(7) "NAC 459.780 to 459.794, inclusive," for the reference to "10 CFR 19";

(8) "NAC 459.210" for the reference to "10 CFR 150.20";

(9) "NAC 459.373" for the reference to "§ 30.50";

(10) "NAC 459.238" for the reference to "10 CFR 30.33"; and

(11) "NAC 459.737" for the reference to "10 CFR 34."

3. The following sections of Part 34 of Title 10 of the Code of Federal Regulations, as those provisions existed on January ~~[1, 2001,]~~ ***31, 2008,*** are not adopted by reference:

(a) Section 34.1;

(b) Section 34.5;

(c) Section 34.8;

(d) Section 34.11;

(e) Section 34.45(a)(9);

(f) Section 34.121; and

(g) Section 34.123.

4. A copy of a publication that contains Part 34 of Title 10 of the Code of Federal Regulations may be obtained ***by mail*** from the Superintendent of Documents, United States Government Printing Office, ~~[Washington, D.C. 20402,]~~ ***P.O. Box 979050, St. Louis, Missouri***

63197-9000, or by toll-free telephone at (866) 512-1800, at the price of ~~[$55.]~~ ***$67, or free of charge at the Internet address http://www.gpoaccess.gov/cfr/index.html.***

Sec. 87. NAC 459.786 is hereby amended to read as follows:

459.786 1. Data concerning a person's exposure to radiation and the results of any measurements, analyses and calculations of radioactive material deposited or retained in the body of a person must be reported to him, as specified in this section. The information reported must include data and results obtained pursuant to NAC 459.010 to 459.794, inclusive, ***and sections 2 to 45, inclusive, of this regulation,*** orders or conditions set forth in the license or registration, as shown in records maintained by the licensee or registrant pursuant to those sections. Each notification and report must:

(a) Be in writing;

(b) Include the name of the registrant or licensee, the name of the person and his social security number;

(c) Include the information relating to the person's exposure; and

(d) Contain the following statement:

This report is furnished to you pursuant to NAC 459.780 to 459.794, inclusive, adopted by the State Board of Health. You should preserve this report for further reference.

2. Each licensee and registrant shall advise each of its workers annually of their exposure to radiation or radioactive material as shown in records maintained by the licensee or registrant pursuant to NAC 459.3665. ***An annual report of the exposure in that monitoring year must be provided to each person monitored pursuant to NAC 459.339 if:***

(a) The person's occupational dose exceeds 1 mSv (100 mrem) total effective dose equivalent or 1 mSv (100 mrem) to any individual organ or tissue; or

(b) The person requests his or her annual dose report.

3. At the request of a worker formerly engaged in work controlled by the licensee or the registrant, the licensee or registrant shall furnish to the worker a report of his exposure to radiation or radioactive material. The report must be furnished within 30 days after the time the request is made or within 30 days after his exposure has been determined, whichever is later. The report must cover, within the period specified in the request, each calendar quarter in which the worker's activities involved exposure to radiation from radioactive material licensed by or radiation machines registered with the Division and must include the dates and locations of work under the license or registration in which the worker participated during this period.

4. When a licensee or registrant is required pursuant to NAC 459.3695 ***, 459.371 or 459.3715*** to report to the Division any exposure of a person to radiation or radioactive material, the licensee or registrant shall also provide the person with a report on his exposure data. The report to the person must be transmitted to him before transmittal of the report to the Division.

5. At the request of a worker who is terminating employment with a licensee or registrant in work involving exposure to radiation in a calendar quarter or of a worker who, while employed by another person, is terminating an assignment to work involving exposure to radiation in the licensee's or registrant's facility in a calendar quarter, the licensee or registrant shall provide the worker at the time of the termination a written report specifying the dose of radiation which he received from the operations of the licensee or registrant during the calendar quarter or fraction thereof or shall provide him a written estimate of that dose if the results of personnel monitoring

have not been finally determined and are not available at that time. An estimated dose must be clearly indicated as such.

Sec. 88. NAC 459.014, 459.2434, 459.2565, 459.3064, 459.3066 and 459.3068 and Section 9 of LCB File No. R149-07 are hereby repealed.

TEXT OF REPEALED SECTIONS

459.014 "Accelerator produced material" defined. "Accelerator produced material" means any material made radioactive by exposing it in a particle accelerator.

459.2434 Specific licenses: Application, amendment or renewal of license for medical use of radioactive material.

1. An application for a license for medical use of radioactive material must be made by submitting an original and one copy of NRC Form 5 to the Division. NRC Form 5 and its instructions may be obtained at no charge from the Division.

2. An application for amendment to a license or renewal of a license for medical use of radioactive material must be made by submitting an original and one copy of a letter of request to the Division.

459.2565 Specific licenses: Use of sealed sources for diagnosis.

1. A licensee may use the following sealed sources for diagnosis in accordance with the radiation safety and handling instructions of the manufacturer:

(a) Iodine-125, americium-241 and gadolinium-153 in a device for bone mineral analysis; and

(b) Iodine-125 in a portable imaging device.

2. A licensee who uses radioactive material as a sealed source for diagnosis shall have in his possession a portable radiation detection survey instrument capable of:

(a) Detecting dose rates that range from 0.1 millirem per hour to 100 millirem per hour; or

(b) Measuring dose rates that range from 1 millirem per hour to 1000 millirem per hour.

459.3064 Written attestations not required for authorized users who have license issued by Nuclear Regulatory Commission or agreement state. The written attestations described in 10 C.F.R. §§ 35.14(a), 35.50(d), 35.51(b)(2), 35.55(b)(2), 35.190(c)(2), 35.290(c)(2), 35.390(b)(2), 35.392(c)(3), 35.394(c)(3), 35.396(d)(3), 35.490(b)(3), 35.491(b)(3) and 35.690(b)(3) are not required for authorized users who have been named on a radioactive material license issued by the Nuclear Regulatory Commission or an agreement state before November 13, 2006.

459.3066 Satisfaction of training requirements for radiation safety officer, authorized medical physicist, authorized nuclear pharmacist or authorized user.

1. Before April 29, 2008, a licensee shall satisfy the training requirements for a radiation safety officer, an authorized medical physicist, an authorized nuclear pharmacist or an authorized user by complying with:

(a) The appropriate provisions of 10 C.F.R. Part 35, Subpart J; or

(b) The appropriate provisions of 10 C.F.R. Part 35, Subpart B or Subparts D to H, inclusive.

2. On or after April 29, 2008, a licensee shall satisfy the training requirements for a radiation safety officer, an authorized medical physicist, an authorized nuclear pharmacist or an authorized

user by complying with the provisions of 10 C.F.R. Part 35, Subpart B or Subparts D to H, inclusive.

459.3068 Additional requirements for persons registered to use sealed source to engage in medical use. Except as otherwise provided in NAC 459.3064 and 459.3066, in addition to any applicable requirement of NAC 459.010 to 459.794, inclusive, a person registered with the Division to use a sealed source to engage in medical use of a radioactive material shall comply with all applicable requirements of, and may rely on all applicable exclusions or exemptions included in, the provisions of 10 C.F.R. Part 35, as adopted by reference pursuant to NAC 459.3062.

Section 9 of LCB File No. R149-07

Sec. 9. The provisions of 10 C.F.R. Part 71, as those provisions existed on January 26, 2004, are hereby adopted by reference, subject to the following:

1. "Byproduct material" as described in 10 C.F.R. § 71.4 shall be deemed to include naturally occurring and accelerator-produced radioactive material.

2. The provisions of 10 C.F.R. §§ 71.6, 71.65 and 71.100 are not adopted by reference.

3. The references in 10 C.F.R. §§ 71.9(e)(1) and 71.9(e)(2) to "NRC Form 3" shall be deemed to be references to Form NRC-1, "Notice to Employees."

4. The reference in 10 C.F.R. § 71.9(e)(1) to "§ 19.11(c)" shall be deemed to be a reference to "subsection 3 of NAC 459.782."

5. The provisions of 10 C.F.R. § 71.9(f) are not adopted by reference.

6. Any reference to "licensee," "applicant," "applicant for a license," "NRC licensee," "NRC applicant," "Commission licensee," "Commission applicant" or "licensee of the

Commission" shall be deemed to be a reference to "licensee of the Division" or "applicant for a license issued by the Division," except that the references in 10 C.F.R. § 71.37 to "the applicant" refer to an applicant to the Nuclear Regulatory Commission. Any reference to "license," "NRC license," "Commission license" or "license issued by the Commission" shall be deemed to be a reference to "license issued by the Division."

7. Any reference to "the Commission," "the Nuclear Regulatory Commission" or "the NRC" shall be deemed to be a reference to "the Division," except that any reference to "the Commission," "the Nuclear Regulatory Commission" or "the NRC" described in paragraphs (a) to (v), inclusive, shall not be deemed to be a reference to the Division:

(a) 10 C.F.R. §§ 71.0(a)(2), 71.0(d)(1) and 71.0(g);

(b) 10 C.F.R. § 71.1(a);

(c) 10 C.F.R § 71.4, definition of "certificate holder";

(d) 10 C.F.R. § 71.4(3);

(e) 10 C.F.R. § 71.8(b)(2);

(f) 10 C.F.R. § 71.10;

(g) 10 C.F.R. § 71.12;

(h) The reference in 10 C.F.R. § 71.17(a) to "the NRC";

(i) The reference in 10 C.F.R. § 71.17(b) to "the Commission";

(j) 10 C.F.R. § 71.17(c)(3);

(k) 10 C.F.R. § 71.17(e);

(l) 10 C.F.R. §§ 71.19(a), 71.19(c), 71.19(d) and 71.19(e);

(m) The reference in 10 C.F.R. § 71.23(b) to "the Commission";

(n) 10 C.F.R. § 71.38(b);

(o) 10 C.F.R. § 71.39;

(p) 10 C.F.R. §§ 71.41(a), 71.41(b) and 71.41(c);

(q) 10 C.F.R. § 71.55(c);

(r) The reference in 10 C.F.R. § 71.85(c) to "the Commission";

(s) The reference in 10 C.F.R. § 71.93(c) to "the NRC";

(t) The reference in 10 C.F.R. § 71.95(a)(1) to "the NRC";

(u) 10 C.F.R. § 71.99; and

(v) 10 C.F.R. § 71.101(g).

8. The provisions of 10 C.F.R. § 71.100 are not adopted by reference.

HEALTH DIVISION
BUREAU OF HEALTH CARE QUALITY AND COMPLIANCE
RADIATION CONTROL PROGRAM
APRIL 16, 2010
LCB FILE # R184-08 & # R185-08

INFORMATION STATEMENT PER NRS 233B.066

R184-08
A regulation relating to mammography; prescribing the grounds for the denial of renewal or the suspension or withdrawal of a certificate of authorization for the operation of a radiation machine for mammography or for a certificate of authorization for a radiation machine for mammography; revising the duties of mammographers and the physicians who supervise the operation of a machine at a facility for mammography; and providing other matters properly relating thereto.

R185-08
A regulation relating to radioactive material; regulating the possession or transfer of radium-226 and americium-241; adopting by reference certain federal regulations; requiring the registration of any new X-ray system, including fees to be paid; regulating the operation, maintenance and use of therapeutic X-ray systems to include electronic brachytherapy systems; setting forth the training requirements and duties of authorized users, authorized medical physicists for electronic brachytherapy and certain radiation safety officers; requiring a registrant who uses a therapeutic X-ray system to provide annual safety training for that system; setting forth proper operating procedures, including various safety and calibration checks, for facilities with therapeutic X-ray systems; requiring a registrant to establish and maintain a quality management program and a quality assurance program; setting forth the requirements which must be followed by operators of portable equipment which is hand-held; revising certain exemptions in the handling of by-product material for certain licensees; revising certain provisions to include exempt quantities of radioactive materials; setting forth certain procedures for the production of radioactive drugs, including reporting to the Health Division of the Department of Health and Human Services; requiring certain annual reports regarding exposure to radioactive material; repealing certain provisions relating to medical uses of radiation; and providing other matters properly relating thereto.

1. **A description of how public comment was solicited, a summary of public response, and an explanation how other interested persons may obtain a copy of the summary.**

   - **How public comment was solicited:**

   Pursuant to NRS.233B.0608 (2) (a), BHCQC consulted with owners and officers of all small businesses that are likely to be affected by the proposed regulation via telephone and written correspondence.

Comment was solicited from the regulated community, in that each radioactive material licensee, X-ray registrant and mammography technologist was sent a copy of the proposed regulations and the small business impact questionnaire. Additionally, all known interested persons were provided with copies of the proposed regulations. Notice of proposed changes were sent to all Bureau offices, main county libraries and facilities on the Health Division listing for posting of proposed regulations. All the above were notified by direct mailing of scheduled workshops. Notice of proposed workshop was published in the Reno Gazette-Journal on December 23, 2008 and January 20, 2010 and in the Las Vegas Review-Journal and Las Vegas Sun on December 22, 2008 and January 22, 2010. Public workshops were held at 9.00 a.m. on January 29, 2009 and February 25, 2010, by videoconference between Bureau of Licensure and Certification, 1550 East College Parkway, Suite 158, Carson City, Nevada and Bureau of Licensure and Certification, 4220 South Maryland Parkway, Suite 810, Las Vegas, Nevada.

- **Summary of Response**

Public Workshop 2009:

Four individuals expressed concerns during the public workshop that were subsequently addressed by Dr. Ed Sweeten, Radiation Physicist, and Radiation Control Program.

No comments were received by mail or telephone, aside from comments in the Small Business Impact Questionnaire.

The Radiation Control Program estimates that there are approximately 1,600 unique entities holding x-ray registrations and approximately 193 unique entities holding radiological material licenses. The Radiation Control Program estimates that approximately 1,300 of these X-ray registrants qualify as State of Nevada small businesses and approximately 149 radiological materials license holders qualify as small businesses.

In accordance with NRS 233B.0608, the RCP sent a five question survey to potentially affected parties of its proposed regulatory changes. To clarify the data collected from the small business impact survey, the results have been summarized in the table below.

Two hundred twenty-five (225) Small Business Impact Questionnaires (SBIQ) were received. One hundred eighty-two (182) of those were from small businesses as defined in NRS 233B. Fifty-six (56) of them had comments written in the questionnaire. The rest answered just yes or no.

Small Business Impact Survey Questions	Yes	No	Did Not Answer	Total Responses
Will a specific regulation have an adverse economic effect upon your business?	50	107	25	182
Will the regulation(s) have any beneficial effect upon your business?	4	152	26	182
Do you anticipate any indirect adverse effects upon your business?	35	116	31	182
Do you anticipate any indirect beneficial effects upon you business?	4	148	31	182

1. 50 (27%) respondents to the SBIQ indicated the proposed regulation would have an adverse economic impact on their business.

2. 4 (2%) respondents to the SBIQ indicated the proposed regulation would have a beneficial economic impact on their business.

3. 35 (19%) respondents to the SBIQ indicated the proposed regulation would have an indirect adverse effect on their business.

4. 4 (2 %) respondents to the SBIQ indicated the proposed regulation would have an indirect beneficial effect on their business.

5. 16 (9%) gave no indication of any adverse or beneficial impact on their businesses.

No changes were made to the proposed regulations which were based on public comment received.

Public Workshop 2010

No comments were received by mail or telephone, aside from comments in the Small Business Impact Questionnaire. No comments were received during the Public Workshop.

The Radiation Control Program estimates that there are approximately 2,400 unique entities holding X-ray registrations and approximately 220 unique entities holding radiological material licenses. The Radiation Control Program estimates that approximately 2,000 of these X-ray registrants qualify as State of Nevada small businesses and approximately 170 radiological materials license holders qualify as small businesses.

In accordance with NRS 233B.0608, the RCP sent a five question survey to potentially affected parties of its proposed regulatory changes.

- **Questions asked in the Small Business Impact Questionnaire:**

2. Will a specific regulation have an adverse economic effect upon your business?
3. Will the regulation(s) have any beneficial effect upon your business?
4. Do you anticipate any indirect adverse effects upon your business?
5. Do you anticipate any indirect beneficial effects upon your business?

To clarify the data collected from the small business impact survey, the results have been summarized in the table below.

214 Small Business Impact Questionnaires (SBIQ) were received.
178 of those were from small businesses as defined in NRS 233B.0382.
77 of them had comments written in the questionnaire.
The rest answered just yes or no.

Small Business Impact Survey Questions	Yes	No	Did Not Answer	Total Responses
Will a specific regulation have an adverse economic effect upon your business?	52	100	26	178
Will the regulation(s) have any beneficial effect upon your business?	5	101	72	178
Do you anticipate any indirect adverse effects upon your business?	35	97	46	178
Do you anticipate any indirect beneficial effects upon you business?	4	128	46	178

1. 52(29%) respondents to the SBIQ indicated the proposed regulation would have an adverse economic impact on their business.
2. 5 (3%) respondents to the SBIQ indicated the proposed regulation would have a beneficial economic impact on their business.
3. 35 (19%) respondents to the SBIQ indicated the proposed regulation would have an indirect adverse effect on their business.
4. 4 (2 %) respondents to the SBIQ indicated the proposed regulation would have an indirect beneficial effect on their business.

No changes were made to the proposed regulations based on public comment received.

- **How other interested persons may obtain a copy of the summary:**

A summary of the response can be obtained by contacting:
Dorothy Rink
Radiation Control Program, Bureau of Health Care Quality and Compliance
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2. The number of persons who:

(a) Attended the hearing:

Six members of the regulated community attended the Public Workshop in 2009 and four of them commented. The comments were subsequently addressed by Dr. Sweeten and Larry Boschult of the Radiation Control Program.
Seven members of the regulated community attended the Public Workshop in 2010. No comments were received.

(b) Testified at each hearing:

Four people sought clarifications in the 2009 Public Workshop. No comments were received during the 2010 Public Workshop. No changes were made to the proposed regulations based on any comments.

(c) Submitted to the agency written statements:

No comments were received by mail in 2009, except for the response to the Small Business Impact Questionnaire. Twenty-seven percent (27%) indicated an adverse economic impact. No comments were received by mail in 2010, except for the responses to the Small Business Impact Questionnaire. Twenty-nine percent (29%) indicated that the regulations would have an adverse effect. No changes were made to the proposed regulations based on these responses.

3. A description of how comment was solicited from affected businesses, a summary of their response, and an explanation how other interested persons may obtain a copy of the summary.

Comment was solicited from the regulated community, such that each radioactive material licensee, X-ray registrant and mammography technologist was sent a copy of the proposed regulations and the small business impact questionnaire. Additionally, all known interested persons were provided with copies of the proposed regulations. Notice of proposed changes were sent to all Bureau offices, main county libraries and facilities on the Health Division listing for posting of proposed regulations. All the above were notified by direct mailing of scheduled workshops.

2009

1. 50 (27%) respondents to the SBIQ indicated the proposed regulation would have an adverse economic impact on their business.

2. 4 (2%) respondents to the SBIQ indicated the proposed regulation would have a beneficial economic impact on their business.

3. 35 (19%) respondents to the SBIQ indicated the proposed regulation would have an indirect adverse effect on their business.

4. 4 (2 %) respondents to the SBIQ indicated the proposed regulation would have an indirect beneficial effect on their business.

6. 16 (9%) gave no indication of any adverse or beneficial impact on their businesses.

2010

1. 52(29%) respondents to the SBIQ indicated the proposed regulation would have an adverse economic impact on their business.

2. 5 (3%) respondents to the SBIQ indicated the proposed regulation would have a beneficial economic impact on their business.

3. 35 (19%) respondents to the SBIQ indicated the proposed regulation would have an indirect adverse effect on their business.

4. (2 %) respondents to the SBIQ indicated the proposed regulation would have an indirect beneficial effect on their business.

No changes were made to the proposed regulations based on public comment received.

4. If the regulation was adopted without changing any part of the proposed regulation, a summary of the reasons for adopting the regulation without change. The statement should also explain the reasons for making any changes to the regulation as proposed.

Changes and suggestions made by the Legislative Counsel Bureau and the U.S Nuclear Regulatory Commission were incorporated into the drafting of these regulations. Public comment received did not justify any change. The Nevada State Board of Health adopted them as they were without seeking any additional changes.

5. The estimated economic effect of the regulation on the business which it is to regulate and on the public. These must be stated separately, and in each case must include:

(a) Both adverse and beneficial effects; and

(b) Both immediate and long term effects.

(a) Adverse and Beneficial Effects:

On Regulated Businesses:

There are no proposed increases in fee and no anticipated adverse effects. A better regulatory framework contributes to greater compliance with the U.S NRC, decreasing the probability of audit findings and consequently heightened oversight.

On the Public:

Indirectly ensures better safety. No anticipated adverse effects.

(b) Immediate and Long Term Effects:

On Regulated Businesses:

Both immediately and in the long run, this will lead to increased awareness, control and security in working with radiation and radioactive materials.

On the Public:

A good regulatory framework leads to increased safety for the public, contributing to the greater good in the short term and in the long term.

6. The estimated cost to the agency for enforcement of the proposed regulation.

No additional expense anticipated.

7. A description of any regulations of other state or government agencies which the proposed regulation overlaps or duplicates and a statement explaining why the duplication or overlapping is necessary. If the regulation overlaps or duplicates a federal regulation, name the regulating federal agency.

No overlap or duplication.

8. If the regulation includes provisions which are more stringent than a federal regulation which regulates the same activity, a summary of such provisions.

Does not include provisions that are more stringent than federal regulations for the same activity.

9. If the regulation provides a new fee or increases an existing fee, the total annual amount the agency expects to collect and the manner in which the money will be used.

No increases in fee.

10. If the proposed regulation is likely to impose a direct and significant economic burden upon a small business or directly restrict the formulation, operation or expansion of a small business. What methods did the agency use in determining the impact of the regulation on a small business?

The proposed regulations neither impose a burden on nor restrict the formation, operation or expansion of a small business. The agency used the output from Small Business Impact Questionnaires and Public Workshops to arrive at this conclusion.

SMALL BUSINESS IMPACT STATEMENT - 2010

PROPOSED AMENDMENTS TO NAC 457 and NAC 459

The Bureau of Health Care Quality and Compliance (BHCQC) has determined that the proposed amendments should not impose a direct and significant economic burden upon a small business or directly restrict the formation, operation or expansion of a small business in Nevada.

A small business is defined in Nevada Revised Statutes NRS 233B.0382 as a "business conducted for profit which employs fewer than 150 full-time or part-time employees."

This small business impact statement complies with the requirements of NRS 233B.0609.

1. A description of the manner in which comment was solicited from affected small businesses, a summary of their response and an explanation of the manner in which other interested persons may obtain a copy of the summary.

Pursuant to NRS.233B.0608(2)(a), BHCQC has consulted with owners and officers of all small businesses that are likely to be affected by the proposed regulation via telephone and written correspondence.

Comment was solicited from the regulated community, in that each radioactive material licensee, x-ray registrant and mammography technologist was sent a copy of the proposed regulations and the small business impact questionnaire. Additionally, all known interested persons were provided with copies of the proposed regulations. Notice of proposed changes were sent to all Bureau offices, main county libraries and facilities on the Health Division listing for posting of proposed regulations. All the above were notified by direct mailing of scheduled workshops. Notice of proposed workshop was published in the Reno Gazette-Journal on January 20, 2010 and the Las Vegas Review-Journal and Las Vegas Sun on January 22, 2010. Public workshop will be held at 9.00 a.m. on February 25, 2010, by videoconference between Bureau of Licensure and Certification, 1550 East College Parkway, Suite 158, Carson City, Nevada and Bureau of Licensure and Certification, 4220 South Maryland Parkway, Suite 810, Las Vegas, Nevada.

Summary of Response

No comments were received by mail or telephone, aside from comments in the Small Business Impact Questionnaire.

The Radiation Control Program estimates that there are approximately 2400 unique entities holding x-ray registrations and approximately 220 unique entities holding radiological material licenses. The Radiation Control Program estimates that approximately 2000 of these x-ray registrants qualify as State of Nevada small businesses and approximately 170 radiological materials license holders qualify as small businesses.

In accordance with NRS 233B.0608, the RCP sent a five question survey to potentially affected parties of its proposed regulatory changes.

Questions asked in the Small Business Impact Questionnaire:

2. Will a specific regulation have an adverse economic effect upon your business?
7. Will the regulation(s) have any beneficial effect upon your business?
8. Do you anticipate any indirect adverse effects upon your business?
9. Do you anticipate any indirect beneficial effects upon your business?

To clarify the data collected from the small business impact survey, the results have been summarized in the table below.

214 Small Business Impact Questionnaires (SBIQ) were received.
178 of those were from small businesses as defined in NRS 233B.0382.
77 of them had comments written in the questionnaire.
The rest answered just yes or no.

Small Business Impact Survey Questions	Yes	No	Did Not Answer	Total Responses
Will a specific regulation have an adverse economic effect upon your business?	52	100	26	178
Will the regulation(s) have any beneficial effect upon your business?	5	101	72	178
Do you anticipate any indirect adverse effects upon your business?	35	97	46	178
Do you anticipate any indirect beneficial effects upon you business?	4	128	46	178

1. 52(29%) respondents to the SBIQ indicated the proposed regulation would have an adverse economic impact on their business.

2. 5 (3%) respondents to the SBIQ indicated the proposed regulation would have a beneficial economic impact on their business.

3. 35 (19%) respondents to the SBIQ indicated the proposed regulation would have an indirect adverse effect on their business.

4. 4 (2 %) respondents to the SBIQ indicated the proposed regulation would have an indirect beneficial effect on their business.

No changes were made to the proposed regulations which were based on public comment received.

A summary of the response can be obtained by contacting:

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2. The estimated economic effect of the proposed regulation on the small business which it is to regulate including, without limitation both adverse and beneficial effects and both direct and indirect effects.

Estimated economic effect:

Regulated Businesses:

There is no imposition of new fees. However, there is an extension of the existing fee structure and a clarification relating to the fees imposed.

The fee for expedited review of licenses may be completely avoided by filing an application for timely renewal of the license 30 days before the date of expiration set forth on the license. The RCP sends out a reminder 60 days prior to the expiration date. (Sec.59 – NAC 459.200)

There is an extension of the existing fee structure to cover new technology. The existing fee category is appropriate and adequate for this technology. (Sec.30)

There is a clarification relating to each location of use representing a separate general licensee and thus requiring a separate registration and fee. (Sec.63 – NAC 459.218)

Public:

No anticipated economic increase to the public.

Beneficial Effects:

Regulated businesses:

The expedited review fee will ensure equity and fairness to all licensees. Staff will be able to justify spending time on renewals that do not come in 30 days prior to the expiration date. Business will proceed without interruption.

The extension of existing fee to cover new technology ensures that all licensees are treated fairly..

Public:

Having clear regulations to deal with every contingency ensures the uninterrupted conduct of business, saving time and taxpayer money.

3. A description of the methods that BHCQC considered to reduce the impact of the proposed regulation on small businesses and statement regarding whether the agency actually used those methods.

In considering methods to reduce the impact of the proposed regulation on small businesses as required by NRS 233B.0608(2)(b)(1), the agency considered simplifying the proposed regulation.

The majority of the provisions are required to be either verbatim or substantially similar to the regulations of the U.S. Nuclear Regulatory Commission in order to maintain compatibility with their program in accordance with the Governor's signed agreement.

In considering methods to reduce the impact of the proposed regulation on small businesses as required by NRS 233B.0608 2 (b) (2), the agency considered establishing different standards of compliance for a small business.

The majority of the provisions are required to be either verbatim or substantially similar to the regulations of the U.S. Nuclear Regulatory Commission in order to maintain compatibility with their program in accordance with the Governor's signed agreement

In considering methods to reduce the impact of the proposed regulation on small businesses as required by NRS 233B.0608(2) (b) (3), the agency considered modifying a fee or fine set forth in the regulation so that a small business is authorized to pay a lower fee or fine.

There are no fines included in the proposed changes to NAC 459. Fees established are less than those of the U.S. Nuclear Regulatory Commission. No separate fee for small business is proposed by these regulation revisions.

4. The estimated cost to the agency for enforcement of the proposed regulation.

Estimated cost to the agency for enforcement of the proposed regulations is minimal.

5. Total amount BHCQC expects to collect from any fees and the manner in which the money will be used.

No anticipated increase.

6. An explanation of why any duplicative or more stringent provisions than federal, state or local standards regulating the same activity are necessary.

No duplicative or more stringent provisions than federal, state or local standards regulating the same activity are proposed in these regulation revisions.

Minor Amendments- Part 20, 30, 32, 35, 40, and 70
(71 FR 15005) RATS ID # 2006-1 Effective date 03/27/06
Date Due For State Adoption 03/27/09

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
20. Appendix B **ADOPTED**	Standards For Protection Against Radiation AList of Elements@		A	In Appendix B to Part 20, >>List of Elements,== the Element >>Thalium,== Atomic Number 69, should be changed to read as >>Thulium.==			R185-08A- Sec. 47 : NAC 459.0192
20. Appendix D	Standards For Protection Against Radiation @United States Nuclear Regulatory Commission Regional Offices@		D	N/A	N/A		**N/A**
' 30.6	Communications		D	N/A	N/A		**N/A**
' 32.72 **ADOPTED**	Manufacture, preparation, or transfer for commercial distribution of radioactive drugs containing byproduct material for medical use under part 35.		B	**In ' 32.72, paragraph (b)(2)(ii) is revised to read as follows:** (b) * * * (2) * * * (ii) This individual meets the requirements specified in 10 CFR 35.55(b) and 35.59 and the licensee has received an approved license amendment identifying this individual as an authorized nuclear pharmacist, or * * * *			R185-08A- Sec. 72 : NAC 459.300.2(b)

' 32.74 **ADOPTED**	Manufacture and distribution of sources or devices containing byproduct material for medical use.		B	**In ' 32.74, the introductory text of paragraph (a) is revised to read as follows:** (a) An application for a specific license to manufacture and distribute sources and devices containing byproduct material to persons licensed pursuant to part 35 of this chapter for use as a calibration, transmission, or reference source or for the uses listed in ' ' 35.400, 35.500, and 35.600 of this chapter will be approved if: * * * * *			**R185-08A- Sec. 73 : NAC 459.306**
' 35.2 **ADOPTED**	Definitions		B	*Authorized medical physicist* means an individual whoC (1) Meets the requirements in ' ' 35.51(a) and 35.59; or			**R185-08A- Sec. 74 : NAC 459.3062** **Part 35, as it existed on 11/11/2007 has been adopted.**
' 35.2 **ADOPTED**	Definitions		B	*Authorized nuclear pharmacist* means a pharmacist whoC (1) Meets the requirements in ' ' 35.55(a) and 35.59; or			**R185-08A- Sec. 74 : NAC 459.3062** **Part 35, as it existed on 11/11/2007 has been adopted.**
' 35.2 **ADOPTED**	Definitions		B	*Authorized user* means a physician, dentist, or podiatrist whoC (1) Meets the requirements in ' ' 35.59 and 35.190(a), 35.290(a), 35.390(a), 35.392(a), 35.394(a), 35.490(a), 35.590(a), or 35.690(a); or			**R185-08A- Sec. 74 : NAC 459.3062** **Part 35, as it existed on 11/11/2007 has been adopted.**
' 35.2 **ADOPTED**	Definitions		B	*Radiation Safety Officer* means an individual whoC (1) Meets the requirements in ' ' 35.50(a) or (c)(1) and 35.59; or			**R185-08A- Sec. 74 : NAC 459.3062** **Part 35, as it existed on 11/11/2007 has been adopted.**

' 35.2	Definitions		D	*Medical event*	N/A		**N/A**
' 35.8	Information collection requirements: OMB approval.		D	N/A	N/A		**N/A**
' 35.10	Implementation		D	N/A	N/A		**N/A**
' 35.13	License Amendments		D	N/A	N/A		**N/A**
' 35.14	Notifications		D	N/A	N/A		**N/A**
' 35.49 **ADOPTED**	Suppliers for sealed sources or devices for medical use.		C	**In ' 35.49, paragraph (b) is revised to read as follows:** (b) Sealed sources or devices noncommercially transferred from a Part 35 licensee or an Agreement State medical use licensee.			**R185-08A- Sec. 74 : NAC 459.3062** **Part 35, as it existed on 11/11/2007 has been adopted**
' 35.50 **ADOPTED**	Training for Radiation Safety Officer.		B	**In ' 35.50, paragraph (a)(2)(ii)(B) is revised to read as follows:** (a) * * * (2) * * * (ii) * * * (B) In clinical nuclear medicine facilities providing diagnostic and/or therapeutic services under the direction of physicians who meet the requirements for authorized users in '' 35.290 or 35.390;			**R185-08A- Sec. 74 : NAC 459.3062** **Part 35, as it existed on 11/11/2007 has been adopted**
' 35.51 **ADOPTED**	Training for an authorized medical physicist.		B	**In ' 35.51, paragraphs (a)(2)(ii) and (b)(2) are revised to read as follows:** (a) * * *			**R185-08A- Sec. 74 : NAC 459.3062** **Part 35, as it existed on 11/11/2007 has been adopted**

				(2) * * * (ii) In clinical radiation facilities providing high-energy, external beam therapy (photons and electrons with energies greater than or equal to 1 million electron volts) and brachytherapy services under the direction of physicians who meet the requirements for authorized users in '' 35.490 or 35.690; and * * * * * (b) * * * (2) Has obtained written attestation that the individual has satisfactorily completed the requirements in paragraphs (c) and (a)(1) and (2), or (b)(1) and (c) of this section, and has achieved a level of competency sufficient to function independently as an authorized medical physicist for each type of therapeutic medical unit for which the individual is requesting authorized medical physicist status. The written attestation must be signed by a preceptor authorized medical physicist who meets the requirements in ' 35.51, or equivalent Agreement State requirements for an authorized medical physicist for each type of therapeutic medical unit for which the individual is requesting authorized medical physicist status; and * * * * *			
' 35.59 **ADOPTED**	Recentness of training.		B	**Section 35.59 is revised to read as follows:** The training and experience specified in Subparts B, D, E, F, G, and H of this part must have been obtained			**R185-08A- Sec. 74 : NAC 459.3062** **Part 35, as it existed on 11/11/2007 has been adopted**

				within the seven years preceding the date of application or the individual must have had related continuing education and experience since the required training and experience was completed.			
' 35.65 **ADOPTED**	Authorization for calibration, transmission, and reference sources.		D	N/A	N/A		**N/A**
' 35.100 **ADOPTED**	Use of unsealed byproduct material for uptake, dilution, and excretion studies for which a written directive is not required.		H&S	**In ' 35.100, paragraph (b)(2) is revised to read as follows:** b) * * * (2) A physician who is an authorized user and who meets the requirements specified in '' 35.290, or 35.390 and 35.290(c)(1)(ii)(G); or * * * * *			**R185-08A- Sec. 74 : NAC 459.3062** **Part 35, as it existed on 11/11/2007 has been adopted**
' 35.190 **ADOPTED**	Training for uptake, dilution, and excretion studies.		B	**In ' 35.190, paragraphs (b), (c)(1)(ii) and (c)(2) are revised to read as follows:** (b) Is an authorized user under '' 35.290, 35.390, or equivalent Agreement State requirements; or (c)(1)* * * (ii) Work experience, under the supervision of an authorized user who meets the requirements in '' 35.190, 35.290, 35.390, or equivalent Agreement State requirements, involvingC * * * * * (2) Has obtained written attestation, signed by a preceptor authorized user who meets the requirements in '' 35.190, 35.290, or 35.390, or			**R185-08A- Sec. 74 : NAC 459.3062** **Part 35, as it existed on 11/11/2007 has been adopted**

				equivalent Agreement State requirements, that the individual has satisfactorily completed the requirements in paragraph (a)(1) or (c)(1) of this section and has achieved a level of competency sufficient to function independently as an authorized user for the medical uses authorized under ' 35.100.			
' 35.200 **ADOPTED**	Use of unsealed byproduct material for imaging and localization studies for which a written directive is not required.		H&S	**In ' 35.200, paragraph (b)(2) is revised to read as follows:** (b) * * * (2) A physician who is an authorized user and who meets the requirements specified in ' 35.290, or 35.390 and 35.290(c)(1)(ii)(G); or * * * * *			**R185-08A- Sec. 74 : NAC 459.3062** **Part 35, as it existed on 11/11/2007 has been adopted**
' 35.290 **ADOPTED**	Training for imaging and localization studies.		B	**In ' 35.290, paragraphs (a)(1), (b), the introductory text of paragraph (c)(1)(ii) and paragraph (c)(2) are revised to read as follows:** (a) * * * (1) Complete 700 hours of training and experience in basic radionuclide handling techniques and radiation safety applicable to the medical use of unsealed byproduct material for imaging and localization studies that includes the topics listed in paragraphs (c)(1)(i) and (c)(1)(ii) of this section; and * * * * * (b) Is an authorized user under ' 35.390 and meets the requirements in			**R185-08A- Sec. 74 : NAC 459.3062** **Part 35, as it existed on 11/11/2007 has been adopted**

				35.290(c)(1)(ii)(G), or equivalent Agreement State requirements; or (c)(1) * * * (ii) Work experience, under the supervision of an authorized user, who meets the requirements in '' 35.290, or 35.290(c)(1)(ii)(G), and 35.390, or equivalent Agreement State requirements, involvingC * * * * (2) Has obtained written attestation, signed by a preceptor authorized user who meets the requirements in '' 35.290, or 35.390 and 35.290(c)(1)(ii)(G), or equivalent Agreement State requirements, that the individual has satisfactorily completed the requirements in paragraph (a)(1) or (c)(1) of this section and has achieved a level of competency sufficient to function independently as an authorized user for the medical uses authorized under '' 35.100 and 35.200.			
' 35.300 **ADOPTED**	Use of unsealed byproduct material for which a written directive is required.		H&S	**In ' 35.300, paragraph (b)(2) is revised to read as follows:** (b) * * * (2) A physician who is an authorized user and who meets the requirements specified in '' 35.290, 35.390, or * * * * *			**R185-08A- Sec. 74 : NAC 459.3062** **Part 35, as it existed on 11/11/2007 has been adopted**

' 35.390 **ADOPTED**	Training for use of unsealed byproduct material for which a written directive is required.		B	**In ' 35.390, paragraphs (b)(1)(ii) introductory text, (b)(1)(ii)(G)(*3*), and (b)(2) are revised to read as follows:** (b)(1) * * * (ii) Work experience, under the supervision of an authorized user who meets the requirements in ' 35.390, or equivalent Agreement State requirements. A supervising authorized user, who meets the requirements in ' 35.390(b), must also have experiencein administering dosages in the same dosage category or categories (*i.e.*,35.390(b)(1)(ii)(G)) as the individual requesting authorized user status. The work experience must involveC * * * * * (G) * * * (*3*) Parenteral administration of any beta emitter, or a photon-emitting radionuclide with a photon energy less than 150 keV, for which a written directive is required; and/or * * * * * (2) Has obtained written attestation that the individual has satisfactorily completed the requirements in paragraphs (a)(1) and (b)(1)(ii)(G) or (b)(1) of this section, and has achieved a level of competency sufficient to function independently as an authorized user for the medical uses authorized under ' 35.300. The			**R185-08A- Sec. 74 : NAC 459.3062** **Part 35, as it existed on 11/11/2007 has been adopted**

				written attestation must be signed by a preceptor authorized user who meets the requirements in ' 35.390 or equivalent Agreement State requirements. The preceptor authorized user, who meets the requirements in ' 35.390(b) must have experience in administering dosages in the same dosage category or categories (*i.e.*, ' 35.390(b)(1)(ii)(G)) as the individual requesting authorized user status.			
' 35.392 **ADOPTED**	Training for the oral administration of sodium iodide IB131 requiring a written directive in quantities less than or equal to 1.22 gigabecquerels (33 millicuries).		B	**In ' 35.392, paragraph (b), the introductory text of paragraph 8)(2) and paragraph (c)(3) are revised to read as follows:** (b) Is an authorized user under ' 35.390 for uses listed in ' 35.390(b)(1)(ii)(G)(*1*) or (*2*), ' 35.394, or equivalent Agreement State requirements; or (c) * * *(2) Has work experience, under the supervision of an authorized user who meets the requirements in '' 35.390, 35.392, 35.394, or equivalent Agreement State requirements. A supervising authorized user who meets the requirements in ' 35.390(b) must also have experience in administering dosages as specified in ' 35.390(b)(1)(ii)(G)(*1*) or (*2*). The work experience must involveC * * * * *			**R185-08A- Sec. 74 : NAC 459.3062** **Part 35, as it existed on 11/11/2007 has been adopted**

				(3) Has obtained written attestation that the individual has satisfactorily completed the requirements in paragraphs (c)(1) and (c)(2) of this section, and has achieved a level of competency sufficient to function independently as an authorized user for medical uses authorized under ' 35.300. The written attestation must be signed by a preceptor authorized user who meets the requirements in '' 35.390, 35.392, 35.394, or equivalent Agreement State requirements. A preceptor authorized user, who meets the requirement in ' 35.390(b), must also have experience in administering dosages as specified in ' 35.390(b)(1)(ii)(G)(*1*) or (*2*).			
' 35.394 **ADOPTED**	Training for the oral administration of sodium iodide IB131 requiring a written directive in quantities greater than 1.22 gigabecquerels (33 millicuries).		B	**In ' 35.394, paragraph (b), the introductory text of paragraph (c)(2), and paragraph (c)(3) are revised to read as follows:** (b) Is an authorized user under ' 35.390 for uses listed in ' 35.390(b)(1)(ii)(G)(*2*) or equivalent Agreement State requirements; or (c) * * * (2) Has work experience, under the supervision of an authorized user who meets the requirements in '' 35.390, 35.394, or equivalent Agreement State requirements. A			**R185-08A- Sec. 74 : NAC 459.3062** **Part 35, as it existed on 11/11/2007 has been adopted**

				supervising authorized user, who meets the requirements in ' 35.390(b), must also have experience in administering dosages as specified in ' 35.390(b)(1)(ii)(G)(*2*). The work experience must involveC * * * (3) Has obtained written attestation that the individual has satisfactorily completed the requirements in paragraphs (c)(1) and (c)(2) of this section, and has achieved a level of competency sufficient to function independently as an authorized user for medical uses authorized under ' 35.300. The written attestation must be signed by a preceptor authorized user who meets the requirements in '' 35.390, 35.394, or equivalent Agreement State requirements. A preceptor authorized user, who meets the requirements in ' 35.390(b), must also have experience in administering dosages as specified in ' 35.390(b)(1)(ii)(G)(*2*).			
' 35.396 **ADOPTED**	Training for the parenteral administration of unsealed byproduct material requiring a written directive.		B	**In ' 35.396, the introductory paragraph, paragraphs (a), (b), (c), the introductory text of paragraphs (d)(1) and (d)(2), paragraph (d)(2)(vi), and paragraph (d)(3) are revised to read as follows:** Except as provided in ' 35.57, the licensee shall require an authorized			**R185-08A- Sec. 74 : NAC 459.3062** **Part 35, as it existed on 11/11/2007 has been adopted**

				user for the parenteral administration requiring a written directive, to be a physician who: (a) Is an authorized user under '' 35.390 for uses listed in '' 35.390(b)(1)(ii)(G)(*3*) or 35.390(b)(1)(ii)(G)(*4*), or equivalent Agreement State requirements; or (b) Is an authorized user under '' 35.490, 35.690, or equivalent Agreement State requirements and who meets the requirements in paragraph (d) of this section; or (c) Is certified by a medical specialty board whose certification process has been recognized by the Commission or an Agreement State under '' 35.490 or 35.690, and who meets the requirements in paragraph (d) of this section. (d)(1) Has successfully completed 80 hours of classroom and laboratory training, applicable to parenteral administrations, for which a written directive is required, of any beta emitter, or any photon-emitting radionuclide with a photon energy less than 150 keV, and/or parenteral administration of any other radionuclide for which a written directive is required. The training must include: * * * * * (2) Has work experience, under the supervision of an authorized user who meets the requirements in ''			

				35.390, 35.396, or equivalent Agreement State requirements, in the parenteral administration, for which a written directive is required, of any beta emitter, or any photon-emitting radionuclide with a photon energy less than 150 keV, and/or parenteral administration of any other radionuclide for which a written directive is required. A supervising authorized user who meets the requirements in ' 35.390 must have experience in administering dosages as specified in '' 35.390(b)(1)(ii)(G)(*3*) and/or 35.390(b)(1)(ii)(G)(*4*). The work experience must involveC * * * * * (vi) Administering dosages to patients or human research subjects, that include at least 3 cases involving the parenteral administration, for which a written directive is required, of any beta emitter, or any photon-emitting radionuclide with a photon energy less than 150 keV and/or at least 3 cases involving the parenteral administration of any other radionuclide, for which a written directive is required; and (3) Has obtained written attestation that the individual has satisfactorily completed the requirements in paragraph (b) or (c) of this section, and has achieved a level of			

				competency sufficient to function independently as an authorized user for the parenteral administration of unsealed byproduct material requiring a written directive. The written attestation must be signed by a preceptor authorized user who meets the requirements in '' 35.390, 35.396, or equivalent Agreement State requirements. A preceptor authorized user, who meets the requirements in ' 35.390, must have experience in administering dosages as specified in '' 35.390(b)(1)(ii)(G)(*3*) and/or 35.390(b)(1)(ii)(G)(*4*).			
' 35.490 **ADOPTED**	Training for use of manual brachytherapy sources.		B	**In ' 35.490, the introductory text of paragraph (b)(1)(ii), and paragraphs (b)(2), and (b)(3) are revised to read as follows:** (b)(1) * * * (ii) 500 hours of work experience, under the supervision of an authorized user who meets the requirements in ' 35.490 or equivalent Agreement State requirements at a medical institution, involvingC * * * * * (2) Has completed 3 years of supervised clinical experience in radiation oncology, under an authorized user who meets the requirements in ' 35.490 or equivalent Agreement State			**R185-08A- Sec. 74 : NAC 459.3062** **Part 35, as it existed on 11/11/2007 has been adopted**

				requirements, as part of a formal training program approved by the Residency Review Committee for Radiation Oncology of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Committee on Postdoctoral Training of the American Osteopathic Association. This experience may be obtained concurrently with the supervised work experience required by paragraph (b)(1)(ii) of this section; and (3) Has obtained written attestation, signed by a preceptor authorized user who meets the requirements in ' 35.490 or equivalent Agreement State requirements, that the individual has satisfactorily completed the requirements in paragraphs (a)(1), or (b)(1) and (b)(2) of this section and has achieved a level of competency sufficient to function independently as an authorized user of manual brachytherapy sources for the medical uses authorized under ' 35.400.			
35.491 **ADOPTED**	Training for ophthalmic use of strontium-90.		B	**In ' 35.491, paragraphs (a) and (b)(3) are revised to read as follows:** (a) Is an authorized user under ' 35.490 or equivalent Agreement State requirements; or(b) * * *			**R185-08A- Sec. 74 : NAC 459.3062** **Part 35, as it existed on 11/11/2007 has been adopted**

				(3) Has obtained written attestation, signed by a preceptor authorized user who meets the requirements in '' 35.490, 35.491, or equivalent Agreement State requirements, that the individual has satisfactorily completed the requirements in paragraphs (a) and (b) of this section and has achieved a level of competency sufficient to function independently as an authorized user of strontium-90 for ophthalmic use.			
35.690 **ADOPTED**	Training for use of remote afterloader units, teletherapy units, and gamma stereotactic radiosurgery units.		B	**In ' 35.690, the introductory text of paragraph (b)(1)(ii), and paragraphs (b)(2), and (b)(3) are revised to read as follows:** (b)(1) * * * (ii) 500 hours of work experience, under the supervision of an authorized user who meets the requirements in ' 35.690 or, equivalent Agreement State requirements at a medical institution, involvingC * * * * * (2) Has completed 3 years of supervised clinical experience in radiation therapy, under an authorized user who meets the requirements in ' 35.690 or equivalent Agreement State requirements, as part of a formal training program approved by the Residency Review Committee for			

				Radiation Oncology of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Committee on Postdoctoral Training of the American Osteopathic Association. This experience may be obtained concurrently with the supervised work experience required by paragraph (b)(1)(ii) of this section; and (3) Has obtained written attestation that the individual has satisfactorily completed the requirements in paragraphs (a)(1) or (b)(1) and (b)(2), and (c) of this section, and has achieved a level of competency sufficient to function independently as an authorized user of each type of therapeutic medical unit for which the individual is requesting authorized user status. The written attestation must be signed by a preceptor authorized user who meets the requirements in ' 35.690 or equivalent Agreement State requirements for an authorized user for each type of therapeutic medical unit for which the individual is requesting authorized user status; and * * * * *			
' 40.5	Communications		D	N/A	N/A		**N/A**
	Communications						

' 70.5			D	N/A	N/A		**N/A**
' 70.14	Foreign military aircraft		D	N/A	N/A		**N/A**

Medical Use of Byproduct Material - Minor Corrections and Clarifications 10 CFR Parts 32 and 35
(72 FR 45147, 54207) RATS ID # 2007-1 Effective date 10/29/07
Date Due for State Adoption 10/29/10

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant	Location
'32.72 (b)(5) **ADOPTED**	Manufacture, preparation, or transfer for commercial distribution of radioactive drugs containing byproduct material for medical use under Part 35.		B	**In Sec. 32.72, paragraph (b)(5) is revised to read as follows:** (b) * * * (5) Shall provide to the Commission a copy of each individual's: (i)(A) Certification by a specialty board whose certification process has been recognized by the Commission or an Agreement State as specified in Sec. 35.55(a) of this chapter with the written attestation signed by a preceptor as required by Sec. 35.55(b)(2) of this chapter; or (B) The Commission or Agreement State license; or (C) The permit issued by a licensee of broad scope; and (ii) State pharmacy licensure or registration, no later than 30 days after the date that the licensee allows, under paragraphs (b)(2)(i) and (b)(2)(iii) of this section, the individual to work as an authorized nuclear pharmacist.			R185-08A – Sec. 72: NAC 459.300.2(d)

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant	Location
'32.74(a) **ADOPTED**	Manufacture and distribution of sources or devices containing byproduct material for medical use		B	**In Sec. 32.74, the introductory text of paragraph (a) is revised to read as follows:** (a) An application for a specific license to manufacture and distribute sources and devices containing byproduct material to persons licensed under part 35 of this chapter for use as a calibration, transmission, or reference source or for the uses listed in Sec. Sec. 35.400, 35.500, 35.600, and 35.1000 of this chapter will be approved if: * * * * *			R185-08A – Sec. 73: NAC 459.306
'35.2	Definitions: Medium dose-rate remote afterloader		D	N/A	N/A		N/A
'35.41(b)(4)	Procedures for administrations requiring a written directive		D	N/A	N/A		N/A
'35.75(a) **ADOPTED**	Release of individuals containing unsealed byproduct		C	**In Sec. 35.75, the text of paragraph (a) is republished and footnote 1 is revised to read as follows:**			R185-08A - Sec. 74 : NAC 459.3062 Part 35, as it existed on 11/11/2007, has been adopted

Medical Use of Byproduct Material - Minor Corrections and Clarifications 10 CFR Parts 32 and 35
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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant	Location
	material or implants containing byproduct material			a) A licensee may authorize the release from its control of any individual who has been administered unsealed byproduct material or implants containing byproduct material if the total effective dose equivalent to any other individual from exposure to the released individual is not likely to exceed 5 mSv (0.5 rem).\1\ * * * * * \1\ The current revision of NUREG-1556, Vol. 9, ``Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Medical Licenses'' describes methods for calculating doses to other individuals and contains tables of activities not likely to cause doses exceeding 5 mSv (0.5 rem).			
'35.92 **ADOPTED**	Decay-in-storage is an: “H&S” for States authorizing this activity and “D” for States that do not authorize this activity	H&S		**In Sec. 35.92, the introductory text of paragraph (a) is revised to read as follows:** (a) A licensee may hold byproduct material with a physical half-life of less than or equal to 120 days for decay-in-			**R185-08A - Sec. 74 : NAC 459.3062** **Part 35, as it existed on 11/11/2007, has been adopted**

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant	Location
				storage before disposal without regard to its radioactivity if it-- * * * * *			
'35.190 **ADOPTED**	Training for uptake, dilution, and excretion studies	B		**In Sec. 35.190, paragraph (a)(1) is revised to read as follows:** (a) * * * (1) Complete 60 hours of training and experience in basic radionuclide handling techniques and radiation safety applicable to the medical use of unsealed byproduct material for uptake, dilution, and excretion studies as described in paragraphs (c)(1)(i) through (c)(1)(ii)(F) of this section; and * * * * *			**R185-08A - Sec. 74 : NAC 459.3062 Part 35, as it existed on 11/11/2007, has been adopted**
'35.290 **ADOPTED**	Training for imaging and localization studies	B		**10. In Sec. 35.290, paragraph (a)(1) is revised to read as follows:** (a) * * * (1) Complete 700 hours of training and experience in basic radionuclide handling techniques and radiation safety applicable to the medical use of unsealed byproduct material for imaging and localization studies as described in paragraphs			**R185-08A - Sec. 74 : NAC 459.3062 Part 35, as it existed on 11/11/2007, has been adopted**

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant	Location
				(c)(1)(i) through (c)(1)(ii)(G) of this section; and * * * * *			

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
'20.1003 **ADOPTED**	Definition: Accelerator-produced radioactive material		H&S	**In § 20.1003, the definition of *Accelerator-produced radioactive material,* is added to read as follows:** *Accelerator-produced radioactive material* means any material made radioactive by a particle accelerator.			**R185-08A – Sec.2**
'20.1003 **ADOPTED**	Definition: Byproduct Material		[H&S]*** **(***please note 10 CFR 20.1003 Definition of Byproduct Material was changed from a Compatibility Category A to a Compatibility Category H&S)**	**In § 20.1003, the definition of *Byproduct material* is revised to read as follows:** *Byproduct material* means— (1) Any radioactive material (except special nuclear material) yielded in, or made radioactive by, exposure to the radiation incident to the process of producing or using special nuclear material;			**R185-08A – Sec.48: NAC 459.022**

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
				(2) The tailings or wastes produced by the extraction or concentration of uranium or thorium from ore processed primarily for its source material content, including discrete surface wastes resulting from uranium solution extraction processes. Underground ore bodies depleted by these solution extraction operations do not constitute ''byproduct material'' within this definition; (3)(i) Any discrete source of radium-226 that is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; or (ii) Any material that— (A) Has been made radioactive by use of a particle accelerator; and (B) Is produced, extracted, or			

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
				converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; and (4) Any discrete source of naturally occurring radioactive material, other than source material, that— (i) The Commission, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate Federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium-226 to the public health and safety or the common defense and security; and (ii) Before, on, or after August 8, 2005, is extracted or converted after extraction for use in a commercial, medical, or research			

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
				activity. * * * *			
' 20.1003 **ADOPTED**	Definition: Discrete Source		H&S	**In § 20.1003, the definition of *Discrete source* is added to read as follows:** *Discrete source* means a radionuclide that has been processed so that its concentration within a material has been purposely increased for use for commercial, medical, or research activities.			**R185-08A – Sec.6**
' 20.1003 **ADOPTED & CODIFIED**	Definition: Particle Accelerator		H&S	**In § 20.1003, the definition of *Particle accelerator* is added to read as follows:** *Particle accelerator* means any machine capable of accelerating electrons, protons, deuterons, or other charged particles in a vacuum and of discharging the resultant particulate or other radiation into a medium at			**NAC 459.056 (Already in the NACs)**

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
				energies usually in excess of 1 megaelectron volt. For purposes of this definition, ''accelerator'' is an equivalent term.			
'20.1003 **ADOPTED**	Definition: Waste		B	**In § 20.1003, the definition of *Waste* is added to read as follows:** *Waste* means those low-level radioactive wastes containing source, special nuclear, or byproduct material that are acceptable for disposal in a land disposal facility. For the purposes of this definition, low-level radioactive waste means radioactive waste not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material as defined in paragraphs (2), (3), and (4) of the definition of Byproduct material set forth in this section.			**R185-08A – Sec. 19:**
'20.1009	List of OMB		D	N/A	N/A		N/A

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
	approved information collections						
' 20.2001 (a)(4) **ADOPTED & CODIFIED**	General requirements		C	**In § 20.2001, paragraph (a)(4) is revised to read as follows:** a) * * * (4) As authorized under §§20.2002, 20.2003, 20.2004, 20.2005, or 20.2008.			**NAC 459.359(d) (Already in the NACs)**
' 20.2006 (e) **ADOPTED**	Transfer for disposal and manifests		B	**In § 20.2006, paragraph (e) is added to read as follows:** (e) Any licensee shipping byproduct material as defined in paragraphs (3) and (4) of the definition of *Byproduct material* set forth in § 20.1003 intended for ultimate disposal at a land disposal facility licensed under part 61 of this chapter must			**R185-08A – Sec.76: NAC 459.313.4**

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
				document the information required on the NRC's Uniform Low- Level Radioactive Waste Manifest and transfer this recorded manifest information to the intended consignee in accordance with appendix G to this part.			
' 20.2008 **ADOPTED**	Disposal of 11e.(3) and 11e.(4) byproduct material		B	**Section 20.2008 is added to read as follows:** (a) Licensed material as defined in paragraphs (3) and (4) of the definition of *Byproduct material* set forth in §20.1003 may be disposed of in accordance with part 61 of this chapter, even though it is not defined as low level radioactive waste. Therefore, any licensed byproduct material being disposed of at a facility, or transferred for ultimate disposal at a facility licensed under part 61 of this chapter, must meet the requirements of §20.2006.			**R185-08A – Sec.20: 1,2**

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
				(b) A licensee may dispose of byproduct material, as defined in paragraphs (3) and (4) of the definition of *Byproduct material* set forth in §20.1003, at a disposal facility authorized to dispose of such material in accordance with any Federal or State solid or hazardous waste law, including the Solid Waste Disposal Act, as authorized under the Energy Policy Act of 2005.			
Part 20 Appendix B **ADOPTED**	Annual Limits on Intake (ALIs) and Derived Air Concentrations (DACs) of Radionuclides for Occupational Exposure; Effluent		A	**In Appendix B to part 20, the List of Elements table is amended by adding Nitrogen and Oxygen in alphabetical order, and page 1 of Tables 1, 2, and 3 following the List of Elements is revised to read as follows:** See tables at the end of the document.			**R185-08A – Sec.47: NAC 459.0192**

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
	Concentrations; Concentrations for Release to Sewerage						
'30.3(a) **ADOPTED**	Activities requiring license		C	**Section 30.3(a) is revised to read as follows:** (a) Except as provided in paragraphs (b)(2), (b)(3), (c)(2), and (c)(3) of this section and for persons exempt as provided in this part and part 150 of this chapter, no person shall manufacture, produce, transfer, receive, acquire, own, possess, or use byproduct material except as authorized in a specific or general license issued in accordance with the regulations in this chapter.			**R185-08A – Sec.51.1: NAC 459.180.1. (e),(f)**
'30.3(b) (1), (2), & (3) **BEING REPEALED**	Activities requiring license		NRC	**Section 30.3(b)(1), (2), & (3) is revised to read as follows:** (b)(1) The requirements, including provisions that are specific to			NRC Was adopted in R185-08A-

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
				licensees, in this part and parts 19, 20, 21, and 71 of this chapter, as well as the additional requirements for specific broad scope, industrial radiography, irradiator, or well logging uses in 10 CFR parts 33, 34, 36, or 39, respectively, shall apply to Government agencies or Federally recognized Indian Tribes on November 30, 2007, when conducting activities under the authority provided by paragraphs (b)(2) and (b)(3) of this section. (2) A specifically licensed Government agency or Federally recognized Indian Tribe that possesses and uses accelerator-produced radioactive material or discrete sources of radium-226 for which a license amendment is required to authorize the activities in paragraph (a) of this section, may continue to use these			Sec. 51: NAC459.180.1(a),(b). Is being **REPEALED** in Proposed Regulations PR 2011-2: Sec.C - R185-08A-Sec. 51:1(a),(b)

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
				materials for uses permitted under this part until the date of the NRC's final licensing determination, provided that the licensee submits an amendment application on or before June 2, 2008. (3) A Government agency or Federally recognized Indian Tribe that possesses and uses accelerator-produced radioactive material or discrete sources of radium-226 for which a specific license is required in paragraph (a) of this section, may continue to use such material for uses permitted under this part until the date of the NRC's final licensing determination provided that the agency or Indian Tribe submits an application for a license authorizing activities involving these materials on or before			

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
				December 1, 2008.			
' 30.3(c) (1), (2), (3), & (d)	Activities requiring license		D	N/A	N/A		N/A
' 30.4 **ADOPTED**	Definition: Accelerator produced radioactive material		H&S	**In § 30.4, the definition of *Accelerator-produced radioactive material,* is added to read as follows:** *Accelerator-produced radioactive material* means any material made radioactive by a particle accelerator.			R185-08A – Sec.2
' 30.4 **ADOPTED**	Definition: Byproduct material		[H&S]*** **(***please note 10 CFR 30.4 Definition of Byproduct Material was changed from a Compatibility**	**In § 30.4, the definition of *Byproduct material* is revised, to read as follows:** *Byproduct material* means— (1) Any radioactive material (except special nuclear material) yielded in, or made radioactive by, exposure to the radiation incident to the process of producing or			R185-08A – Sec.48: NAC 459.022

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
			Category A to a Compatibility Category H&S)	using special nuclear material; (2)(i) Any discrete source of radium-226 that is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; or (ii) Any material that (A) Has been made radioactive by use of a particle accelerator; and (B) Is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; and (3) Any discrete source of naturally occurring radioactive material, other than source material, that— (i) The Commission, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any			

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
				other appropriate Federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium-226 to the public health and safety or the common defense and security; and (ii) Before, on, or after August 8, 2005, is extracted or converted after extraction for use in a commercial, medical, or research activity.			
' 30.4 **ADOPTED**	Definition: Consortium		C	**In § 30.4, the definition of *Consortium,* is added to read as follows:** *Consortium* means an association of medical use licensees and a PET radionuclide production facility in the same geographical area that jointly own or share in the operation and maintenance cost of the PET radionuclide production facility that produces			**R185-08A – Sec. 5**

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
				PET radionuclides for use in producing radioactive drugs within the consortium for noncommercial distributions among its associated members for medical use. The PET radionuclide production facility within the consortium must be located at an educational institution or a Federal facility or a medical facility.			
'30.4	Definition: Cyclotron		D	N/A	N/A		N/A
'30.4 **ADOPTED**	Definition: Discrete Source		H&S	**In § 30.4, the definition of *Discrete source*, is added to read as follows:** *Discrete source* means a radionuclide that has been processed so that its concentration within a material has been purposely increased for use for commercial, medical, or research activities.			**R185-08A – Sec. 6**

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
'30.4 **ADOPTED & CODIFIED**	Definition: Particle accelerator		H&S	**In § 30.4, the definition of *Particle accelerator* is added to read as follows:** *Particle accelerator* means any machine capable of accelerating electrons, protons, deuterons, or other charged particles in a vacuum and of discharging the resultant particulate or other radiation into a medium at energies usually in excess of 1 megaelectron volt. For purposes of this definition, accelerator is an equivalent term.			NAC 459.056 (Already in the NACs)
'30.15 (a)(1)(viii) **ADOPTED**	Certain items containing byproduct material		B	**In § 30.15, paragraph (a)(1)(viii) is added to read as follows:** (a) * * * (1) * * * (viii) 0.037 megabecquerel (1 microcurie) of radium-226 per timepiece in intact timepieces			R185-08A – Sec. 54: NAC 459.190.8

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				manufactured prior to November 30, 2007.			
'30.18 (b) **ADOPTED**	Exempt quantities		B	**In § 30.18, paragraph (b) is revised to read as follows:** (b) Any person, who possesses byproduct material received or acquired before September 25, 1971, under the general license then provided in § 31.4 of this chapter or similar general license of a State, is exempt from the requirements for a license set forth in section 81 of the Act and from the regulations in parts 30 through 34, 36 and 39 of this chapter to the extent that this person possesses, uses, transfers, or owns byproduct material.			**R185-08A – Sec.52: NAC 459.184.2**
'30.20(a) **ADOPTED**	Gas and aerosol detectors containing byproduct		B	**In § 30.20, paragraph (a) is revised to read as follows:** (a) Except for persons who manufacture, process, produce, or			**R185-08A – Sec.55: NAC 459.192.3**

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	material			initially transfer for sale or distribution gas and aerosol detectors containing byproduct material, any person is exempt from the requirements for a license set forth in section 81 of the Act and from the regulations in parts 19, 20, and 30 through 36, and 39 of this chapter to the extent that the person receives, possesses, uses, transfers, owns, or acquires byproduct material in gas and aerosol detectors designed to protect life or property from fires and airborne hazards, and manufactured, processed, produced, or initially transferred in accordance with a specific license issued under § 32.26 of this chapter, which license authorizes the initial transfer of the product for use under this section. This exemption also covers gas and aerosol detectors manufactured or			

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				distributed before November 30, 2007 in accordance with a specific license issued by a State under comparable provisions to § 32.26 of this chapter authorizing distribution to persons exempt from regulatory requirements.			
' 30.32(g) **ADOPTED**	Application for specific licenses		C	**In § 30.32, paragraphs (g)(1) and (g)(2) are revised and paragraphs (g)(3) are added to read as follows:** (g) * * * (1) Identify the source or device by manufacturer and model number as registered with the Commission under § 32.210 of this chapter, with an Agreement State, or for a source or a device containing radium-226 or accelerator-produced radioactive material with a State under provisions comparable to § 32.210 of this chapter; or			R185-08A – Sec.67: NAC 459.236.7(a),(b),(c)

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				(2) Contain the information identified in § 32.210(c) of this chapter; or (3) For sources or devices containing naturally occurring or accelerator produced radioactive material manufactured prior to November 30, 2007 that are not registered with the Commission under § 32.210 of this chapter or with an Agreement State, and for which the applicant is unable to provide all categories of information specified in §32.210(c) of this chapter, the applicant must provide: (i) All available information identified in § 32.210(c) of this chapter concerning the source, and, if applicable, the device; and (ii) Sufficient additional information to demonstrate that there is reasonable assurance that the			

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				radiation safety properties of the source or device are adequate to protect health and minimize danger to life and property. Such information must include a description of the source or device, a description of radiation safety features, the intended use and associated operating experience, and the results of a recent leak test.			
' 30.32(j) **ADOPTED**	Application for specific licenses		B	**In § 30.32, paragraph (j) is added to read as follows:** (j) An application from a medical facility, educational institution, or Federal facility to produce Positron Emission Tomography (PET) radioactive drugs for noncommercial transfer to licensees in its consortium authorized for medical use under part 35 of this chapter or			R185-08A – Sec.67: NAC 459.236.9

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
				equivalent Agreement State requirements shall include: (1) A request for authorization for the production of PET radionuclides or evidence of an existing license issued under part 30 of this chapter or Agreement State requirements for a PET radionuclide production facility within its consortium from which it receives PET radionuclides. (2) Evidence that the applicant is qualified to produce radioactive drugs for medical use by meeting one of the criteria in § 32.72(a)(2) of this chapter. (3) Identification of individual(s) authorized to prepare the PET radioactive drugs if the applicant is a pharmacy, and documentation that each individual meets the requirements of an authorized nuclear pharmacist as specified in			

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				§ 32.72(b)(2) of this chapter. (4) Information identified in § 32.72 (a)(3) of this chapter on the PET drugs to be noncommercially transferred to members of its consortium.			
'30.34 (g) **ADOPTED**	Terms and conditions of licenses		H&S*** **(***please note 10 CFR 30.34(g) Terms and Conditions of Licenses was changed from a Compatibility Category D to a Compatibility Category H&S)**	**In § 30.34, paragraph (g) is revised to read as follows:** (g) Each licensee preparing technetium-99m radiopharmaceuticals from molybdenum-99/technetium-99m generators or rubidium-82 from strontium-82/rubidium-82 generators shall test the generator eluates for molybdenum-99 breakthrough or strontium-82 and strontium-85 contamination, respectively, in accordance with § 35.204 of this chapter. The			**R185-08A – Sec.58: NAC 459.198.5(a),(b)**

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
				licensee shall record the results of each test and retain each record for 3 years after the record is made.			
'30.34(j) **ADOPTED**	Terms and conditions of licenses		B	**In § 30.34, paragraph (j) is added to read as follows:** (j)(1) Authorization under § 30.32(j) to produce Positron Emission Tomography (PET) radioactive drugs for noncommercial transfer to medical use licensees in its consortium does not relieve the licensee from complying with applicable FDA, other Federal, and State requirements governing radioactive drugs. (2) Each licensee authorized under § 30.32(j) to produce PET radioactive drugs for noncommercial transfer to medical use licensees in its			**R185-08A – Sec.58: NAC 459.198.6(d)** **R185-08A – Sec.58: NAC 459.198.6(a),(b),(c),(d)**

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
				consortium shall: (i) Satisfy the labeling requirements in § 32.72(a)(4) of this chapter for each PET radioactive drug transport radiation shield and each syringe, vial, or other container used to hold a PET radioactive drug intended for noncommercial distribution to members of its consortium. (ii) Possess and use instrumentation to measure the radioactivity of the PET radioactive drugs intended for noncommercial distribution to members of its consortium and meet the procedural, radioactivity measurement, instrument test, instrument check, and instrument adjustment requirements in § 32.72(c) of this chapter. (3) A licensee that is a pharmacy authorized under § 30.32(j) to			

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				produce PET radioactive drugs for noncommercial transfer to medical use licensees in its consortium shall require that any individual that prepares PET radioactive drugs shall be: (i) an authorized nuclear pharmacist that meets the requirements in § 32.72(b)(2) of this chapter, or (ii) an individual under the supervision of an authorized nuclear pharmacist as specified in § 35.27 of this chapter. (4) A pharmacy, authorized under § 30.32(j) to produce PET radioactive drugs for noncommercial transfer to medical use licensees in its consortium that allows an individual to work as an authorized nuclear pharmacist, shall meet the requirements of § 32.72(b)(5) of this chapter.			

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'30.71 **ADOPTED**	Schedule B		B	**Section 30.71 is amended by adding Cesium 129 (Cs 129), Cobalt 57 (Co 57), Gallium 67 (Ga 67), Germanium 68 (Ge 68), Gold 195 (Au 195), Indium 111 (In 111), Iodine 123 (I 123), Iron 52n (Fe 52), Potassium 43 (K 43), Rubidium 81 (Rb 81), Sodium 22 (Na 22), Yttrium 87 (Y 87), and Yttrium 88 (Y 88) in alphabetical order by element as follows:** See table at end of document.			**R185-08A – Sec. 53: NAC 459.188**
'30.72 **ADOPTED**	Schedule C – Quantities of radioactive material requiring consideration of the need for an emergency		H&S	**Section 30.72 is amended by adding radium-226 in alphabetical order to read as follows:** See table at end of document.			**R185-08A – Sec.56: NAC 459.1951**

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	plan for responding to a release						
'31.4	List of OMB approved Information collections		D	N/A	N/A		N/A
'31.5 (b)(1) & (c)(13) **ADOPTED** **ADOPTED**	Certain detecting, measuring, gauging, or controlling devices and/or an ionizing atmosphere		B	**In § 31.5, paragraphs (b)(1)(i), (b)(1)(ii), and (c)(13)(i) are revised and paragraph (b)(1)(iii) is added to read as follows:** (b)(1) * * * (i) A specific license issued under § 32.51 of this chapter; or (ii) An equivalent specific license issued by an Agreement State; or (iii) An equivalent specific license issued by a State with provisions comparable to § 32.51 of this chapter. * * * * * (c) * * * (13)(i) Shall register, in accordance with paragraphs			**R185-08A – Sec.62: NAC 459.216.2** **R185-08A – Sec.63: NAC 459.218.13**

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				(c)(13)(ii) and (iii) of this section, devices containing at least 370 megabecquerels (10 millicuries) of cesium-137, 3.7 megabecquerels (0.1 millicurie) of strontium-90, 37 megabecquerels (1 millicurie) of cobalt-60, 3.7 megabecquerels (0.1 millicurie) of radium-226, or 37 megabecquerels (1 millicurie) of americium-241 or any other transuranic (i.e., element with atomic number greater than uranium (92)), based on the activity indicated on the label. Each address for a location of use, as described under paragraph (c)(13)(iii)(D) of this section, represents a separate general licensee and requires a separate registration and fee.			
'31.8	Americium-241 in the form of calibration		D	N/A	N/A		N/A

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	and reference sources						
'31.11	General license for use of byproduct material for certain in vivo clinical and laboratory testing		D	N/A	N/A		N/A
'31.12 **ADOPTED** **ADOPTED**	General license for certain items and self-luminous products containing radium-226		C	**Sections 31.12, 31.13, and 31.14 are redesignated as § 31.21, § 31.22, and § 31.23, respectively, §§31.13 through 31.20 are reserved, and a new § 31.12 is added to read as follows:** (a) A general license is hereby issued to any person to acquire, receive, possess, use, or transfer, in accordance with the provisions of paragraphs (b), (c), and (d) of			**R185-08A – Sec.21:1,2**

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				this section, radium-226 contained in the following products manufactured prior to November 30, 2007. (1) Antiquities originally intended for use by the general public. For the purposes of this paragraph, antiquities mean products originally intended for use by the general public and distributed in the late 19th and early 20th centuries, such as radium emanator jars, revigators, radium water jars, radon generators, refrigerator cards, radium bath salts, and healing pads. (2) Intact timepieces containing greater than 0.037 megabecquerel (1 microcurie), nonintact timepieces, and timepiece hands and dials no longer installed in timepieces. (3) Luminous items installed in air, marine, or land vehicles. (4) All other luminous products, provided that no more than 100			

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ADOPTED				items are used or stored at the same location at any one time. (5) Small radium sources containing no more than 0.037 megabecquerel (1 microcurie) of radium-226. For the purposes of this paragraph, ''small radium sources'' means discrete survey instrument check sources, sources contained in radiation measuring instruments, sources used in educational demonstrations (such as cloud chambers and spinthariscopes), electron tubes, lightning rods, ionization sources, static eliminators, or as designated by the NRC. (b) Persons who acquire, receive, possess, use, or transfer byproduct material under the general license issued in paragraph (a) of this section are exempt from the provisions of 10 CFR parts 19, 20, and 21, and			R185-08A – Sec.21:2

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ADOPTED				§ 30.50 and 30.51 of this chapter, to the extent that the receipt, possession, use, or transfer of byproduct material is within the terms of the general license; provided, however, that this exemption shall not be deemed to apply to any such person specifically licensed under this chapter. (c) Any person who acquires, receives, possesses, uses, or transfers byproduct material in accordance with the general license in paragraph (a) of this section: (1) Shall notify the NRC should there be any indication of possible damage to the product so that it appears it could result in a loss of the radioactive material. A report containing a brief description of the event, and the remedial action taken, must be furnished to the Director of the Office of Federal			R185-08A – Sec.21:3

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				and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001 within 30 days. (2) Shall not abandon products containing radium-226. The product, and any radioactive material from the product, may only be disposed of according to § 20.2008 of this chapter or by transfer to a person authorized by a specific license to receive the radium- 226 in the product or as otherwise approved by the NRC. (3) Shall not export products containing radium-226 except in accordance with part 110 of this chapter. (4) Shall dispose of products containing radium-226 at a disposal facility authorized to dispose of radioactive material in accordance with any Federal or			

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				State solid or hazardous waste law, including the Solid Waste Disposal Act, as authorized under the Energy Policy Act of 2005, by transfer to a person authorized to receive radium-226 by a specific license issued under part 30 of this chapter, or equivalent regulations of an Agreement State, or as otherwise approved by the NRC. (5) Shall respond to written requests from the NRC to provide information relating to the general license within 30 calendar days of the date of the request, or other time specified in the request. If the general licensee cannot provide the requested information within the allotted time, it shall, within that same time period, request a longer period to supply the information by providing the Director of the Office of Federal and State Materials and			

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ADOPTED				Environmental Management Programs, by an appropriate method listed in § 30.6(a) of this chapter, a written justification for the request. (d) The general license in paragraph (a) of this section does not authorize the manufacture, assembly, disassembly, repair, or import of products containing radium-226, except that timepieces may be disassembled and repaired.			R185-08A – Sec.21:4
'32.1 (c)(1)	Purpose and scope		NRC	**In § 32.1, paragraph (c) is added to read as follows:** (c)(1) The requirements in this part, including provisions that are specific to licensees, shall apply to			NRC

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				Government agencies and Federally recognized Indian Tribes with respect to accelerator-produced radioactive material or discrete sources of radium- 226 on November 30, 2007 except that the agency or tribe may continue to manufacture or initially transfer items containing accelerator-produced radioactive material or discrete sources of radium-226 for sale or distribution to persons exempted from the licensing requirements of part 30 of this chapter, and to persons generally licensed under part 31 of this chapter, and radioactive drugs and sources and devices to medical use licensees, until the date of the NRC's final licensing determination, provided that the agency or tribe submits a new license application for these activities on or before December 1, 2008 or an amendment			

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				application for these activities on or before June 2, 2008.			
'32.1 (c)(2)	Purpose and scope		D	N/A	N/A		N/A
'32.57 **ADOPTED**	Calibration or reference sources containing americium-241 or radium- 226: Requirements for license to manufacture or initially transfer		B	**In § 32.57, the heading and the introductory text are revised to read as follows:** An application for a specific license to manufacture or initially transfer calibration or reference sources containing americium-241 or radium-226, for distribution to persons generally licensed under § 31.8 of this chapter, will be approved if: (a) The applicant satisfies the general requirements of § 30.33 of this chapter; (b) The applicant submits sufficient information regarding each type of calibration or			R185-08A – Sec.22

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				reference source pertinent to evaluation of the potential radiation exposure, including: (1) Chemical and physical form and maximum quantity of americium 241 or radium-226 in the source; (2) Details of construction and design; (3) Details of the method of incorporation and binding of the americium-241 or radium-226 in the source; (4) Procedures for and results of prototype testing of sources, which are designed to contain more than 0.005 microcurie of americium-241 or radium-226, to demonstrate that the americium-241 or radium-226 contained in each source will not be released or be removed from the source under normal			

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				conditions of use; (5) Details of quality control procedures to be followed in manufacture of the source; (6) Description of labeling to be affixed to the source or the storage container for the source; (7) Any additional information, including experimental studies and tests, required by the Commission to facilitate a determination of the safety of the source. (c) Each source will contain no more than 5 microcuries of americium-241 or radium-226. (d) The Commission determines, with respect to any type of source containing more than 0.005 microcurie of americium-241 or radium-226, that: (1) The method of incorporation			

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				and binding of the americium-241 or radium-226 in the source is such that the americium-241 will not be released or be removed from the source under normal conditions of use and handling of the source; and (2) The source has been subjected to and has satisfactorily passed the prototype tests prescribed by § 32.102, Schedule C, of this part.			
'32.58 **ADOPTED**	Same: labeling of devices		B	**Section 32.58 is revised to read as follows:** Each person licensed under § 32.57 shall affix to each source, or storage container for the source, a label which shall contain sufficient information relative to safe use and storage of the source and shall include the following statement or a substantially similar			R185-08A – Sec. 24

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				statement which contains the information called for in the following statement: The receipt, possession, use, and transfer of this source, Model , Serial No., are subject to a general license and the regulations of the United States Nuclear Regulatory Commission or of a State with which the Commission has entered into an agreement for the exercise of regulatory authority. Do not remove this label. CAUTION-RADIOACTIVE MATERIAL–THIS SOURCE CONTAINS AMERICIUM-241 (or RADIUM-226). DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE _____ (Name of manufacturer or initial transferor)			
'32.59	Same: Leak		B	**Section 32.59 is revised to read**			R185-08A – Sec.23

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ADOPTED	testing of each source			**as follows:** Each person licensed under § 32.57 shall perform a dry wipe test upon each source containing more than 3.7 kilobecquerels (0.1 microcurie) of americium-241 or radium-226 before transferring the source to a general licensee under § 31.8 of this chapter. This test shall be performed by wiping the entire radioactive surface of the source with a filter paper with the application of moderate finger pressure. The radioactivity on the paper shall be measured by using radiation detection instrumentation capable of detecting 0.185 kilobecquerel (0.005 microcurie) of americium-241 or radium-226. If this test discloses more than 0.185 kilobecquerel (0.005 microcurie) of radioactive material, the source shall be deemed to be leaking or losing americium-241 or radium-			

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				226 and shall not be transferred to a general licensee under § 31.8 of this chapter or equivalent regulations of an Agreement State.			
'32.71 (b)(8) & (c)(1) **ADOPTED**	Manufacture and distribution of byproduct material for certain in vitro clinical or laboratory testing under general license		B	**In § 32.71, paragraph (b)(8) is added, and paragraph (c)(1) is revised to read as follows:** (b) * * * (8) Cobalt-57 in units not exceeding 0.37 megabecquerel (10 microcuries) each. (c) * * * (1) Identifying the radioactive contents as to chemical form and radionuclide, and indicating that the amount of radioactivity does not exceed 0.37 megabecquerel (10 microcuries) of iodine-131, iodine-125, selenium-75, or carbon-14; 1.85 megabecquerels (50 microcuries) of hydrogen-3			**R185-08A – Sec.71:NAC 459.296.2.(f)** **R185-08A – Sec.71:NAC 459.296.3**

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				(tritium); or 0.74 megabecquerel (20 microcuries) of iron-59; or Mock Iodine-125 in units not exceeding 1.85 kilobecquerels (0.05 microcurie) of iodine-129 and 0.185 kilobecquerel (0.005 microcurie) of americium-241 each; or cobalt-57 in units not exceeding 0.37 megabecquerel (10 microcuries); and			
'32.72 (a)(2)(i), (iii), (iv), (v), & (b) **ADOPTED**	Manufacture, preparation, or transfer for commercial distribution of radioactive drugs, containing byproduct material for certain in vitro clinical or laboratory testing under		B	**In § 32.72, paragraphs (a)(2)(i), (a)(2)(iii), (a)(2)(iv), (b)(2)(ii), (b)(4), and (b)(5) are revised, and a new paragraph (a)(2)(v) is added to read as follows:** (a) * * * (2) * * * (i) Registered with the U.S. Food and Drug Administration (FDA) as the owner or operator of a drug establishment that engages in the manufacture, preparation, propagation, compounding, or			R185-08A – Sec.72:NAC 459.300.1

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ADOPTED	general license			processing of a drug under 21 CFR 207.20(a); * * * * * (iii) Licensed as a pharmacy by a State Board of Pharmacy; (iv) Operating as a nuclear pharmacy within a Federal medical institution; or (v) A Positron Emission Tomography (PET) drug production facility registered with a State agency. * * * * * (b) * * * (2) * * * (ii) This individual meets the requirements specified in § 35.55(b) and 35.59 of this chapter, and the licensee has received an approved license amendment identifying this individual as an authorized nuclear pharmacist; or * * * * * (4) May designate a pharmacist (as defined in § 35.2 of this			R185-08A – Sec.72:NAC 459.300.2(b) R185-08A – Sec.72:NAC 459.300.2(c)

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ADOPTED				chapter) as an authorized nuclear pharmacist if: (i) The individual was a nuclear pharmacist preparing only radioactive drugs containing accelerator-produced radioactive material, and (ii) The individual practiced at a pharmacy at a Government agency or Federally recognized Indian Tribe before November 30, 2007 or at all other pharmacies before August 8, 2009, or an earlier date as noticed by the NRC. (5) Shall provide to the Commission: (i) A copy of each individual's certification by a specialty board whose certification process has been recognized by the Commission or an Agreement State as specified in § 35.55(a) of this chapter with the written attestation signed by a preceptor			R185-08A – Sec.72:NAC 459.300.2(d)

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				as required by § 35.55(b)(2) of this chapter; or (ii) The Commission or Agreement State license, or (iii) Commission master materials licensee permit, or (iv) The permit issued by a licensee or Commission master materials permittee of broad scope or the authorization from a commercial nuclear pharmacy authorized to list its own authorized nuclear pharmacist, or (v) Documentation that only accelerator-produced radioactive materials were used in the practice of nuclear pharmacy at a Government agency or Federally recognized Indian Tribe before November 30, 2007 or at all other locations of use before August 8, 2009, or an earlier date as noticed by the NRC; and (vi) A copy of the State pharmacy licensure or registration, no later			

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				than 30 days after the date that the licensee allows, under paragraphs (b)(2)(i) and (b)(2)(iii) of this section, the individual to work as an authorized nuclear pharmacist.			

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'32.102 **ADOPTED**	Schedule-C prototype tests for calibration or reference sources containing americium-241		B	**In § 32.102, the heading and the introductory paragraph are revised to read as follows:** An applicant for a license under § 32.57 shall, for any type of source which is designed to contain more than 0.185 kilobecquerel (0.005 microcurie) of americium-241 or radium-226, conduct prototype tests, in the order listed, on each of five prototypes of the source, which contains more than 0.185 kilobecquerel (0.005 microcurie) of americium-241 or radium-226, as follows:			R185-08A – Sec.22.4
'33.100	Schedule A		D	N/A	N/A		
'35.2	Definition: Cyclotron		D	N/A	N/A		
'35.2	Definition:		H&S	**In § 35.2, new definition for**			R185-08A – Sec.74:NAC

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
ADOPTED	Positron Emission Tomography (PET) radionuclide production facility			***Positron Emission Tomography (PET) radionuclide production facility* is added to read as follows:** *Positron Emission Tomography (PET) radionuclide production facility* is defined as a facility operating a cyclotron or accelerator for the purpose of producing PET radionuclides.			**459.3062**
'35.10(a) & (g)	Implementation		D	N/A	N/A		N/A
'35.11(a) **ADOPTED**	License required		C	**In § 35.11, paragraph (a) is revised to read as follows:** (a) A person may manufacture, produce, acquire, receive, possess, prepare, use, or transfer byproduct material for medical use only in accordance with a specific license issued by the Commission or an Agreement State, or as			**R185-08A – Sec.74:NAC 459.3062**

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				allowed in paragraph (b) or (c) of this section.			
'35.11 (c)(1)	License required		NRC	**In § 35.11 paragraph (c) is added to read as follows:** (c)(1) A Government agency or a Federally recognized Indian Tribe, that possesses and uses accelerator-produced radioactive material or discrete sources of radium-226 for which a specific medical use license is required in paragraph (a) of this section, may continue to use such materials for medical uses until the date of the NRC's final licensing determination, provided that the person submits a medical use license application on or before December 1, 2008.			NRC NRC
'35.11 (c)(2)	License required		D	N/A	N/A		N/A

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'35.13 (a)(1) ADOPTED	License amendments		NRC	**In § 35.13, paragraphs (a)(1) is revised to read as follows:** (a) Before it receives, prepares, or uses byproduct material for a type of use that is permitted under this part, but is not authorized on the licensee's current license issued under this part; except that— (1) A Government agency or a Federally recognized Indian Tribe licensee who possesses and uses accelerator-produced radioactive material or discrete sources of radium-226 may continue to use such material for medical uses permitted under this part until the date of the NRC's final licensing determination, provided that the licensee submits an amendment application on or before June 2, 2008.			R185-08A – Sec.74:NAC 459.3062
'35.13 (a)(2), (b)(5), (e),	License amendments		D	N/A	N/A		N/A

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'35.14 (a) & (b)(5)	Notifications		D	N/A	N/A		N/A
'35.15 (f)	Exemptions regarding Type A specific licenses of broad scope		D	N/A	N/A		N/A
'35.57 (a)(3) & (b)(3)	Training for experienced Radiation Safety Officer, teletherapy or medical physicist, authorized user, and nuclear pharmacist		D	N/A	N/A		N/A
'35.63 (b)(2)(ii), (b)(2)(iii), & (c)(3) **ADOPTED**	Determination of dosages of unsealed byproduct material for medical use		H&S	**In § 35.63, paragraphs (b)(2)(ii) and (c)(3) are revised, and paragraph (b)(2)(iii) is added to read as follows:** (b) * * *			**R185-08A – Sec.74:NAC 459.3062**

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				(2) * * * (ii) An NRC or Agreement State licensee for use in research in accordance with a Radioactive Drug Research Committee-approved protocol or an Investigational New Drug (IND) protocol accepted by FDA; or (iii) A PET radioactive drug producer licensed under § 30.32(j) of this chapter or equivalent Agreement State requirements. (c) * * * (3) Combination of volumetric measurements and mathematical calculations, based on the measurement made by: (i) A manufacturer or preparer licensed under § 32.72 of this chapter or equivalent Agreement State requirements; or (ii) A PET radioactive drug producer licensed under § 30.32(j) of this chapter or equivalent			

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				Agreement State requirements.			
'35.100 (a) & (b) **ADOPTED**	Use of unsealed byproduct material for uptake, dilution, and excretion studies for which a written directive is not required		H&S	**In § 35.100, paragraph (a) and the introductory text of paragraph (b) are revised to read as follows:** (a) Obtained from: (1) A manufacturer or preparer licensed under § 32.72 of this chapter or equivalent Agreement State requirements; or (2) A PET radioactive drug producer licensed under § 30.32(j) of this chapter or equivalent Agreement State requirements; or (b) Excluding production of PET radionuclides, prepared by:			R185-08A – Sec.74:NAC 459.3062
'35.200 (a) & (b) **ADOPTED**	Use of unsealed byproduct material for imaging and		H&S	**In § 35.200, paragraph (a) and the introductory text of paragraph (b) are revised to read as follows:**			R185-08A – Sec.74:NAC 459.3062

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	localization studies for which a written directive is not required.			(a) Obtained from: (1) A manufacturer or preparer licensed under § 32.72 of this chapter or equivalent Agreement State requirements; or (2) A PET radioactive drug producer licensed under § 30.32(j) of this chapter or equivalent Agreement State requirements; or (b) Excluding production of PET radionuclides, prepared by:			
' 35.204 (a) **ADOPTED**	Permissible molybdenum-99 concentrations		H&S	**In § 35.204, the heading and paragraph (a) are revised to read as follows:** (a) A licensee may not administer to humans a radiopharmaceutical that contains: (1) More than 0.15 kilobecquerel of molybdenum-99 per megabecquerel of technetium-99m (0.15 microcurie of molybdenum-99 per millicurie of			R185-08A – Sec.74:NAC 459.3062

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				technetium-99m); or (2) More than 0.02 kilobecquerel of strontium-82 per megabecquerel of rubidium-82 chloride injection (0.02 microcurie of strontium-82 per millicurie of rubidium-82 chloride); or more than 0.2 kilobecquerel of strontium-85 per megabecquerel of rubidium-82 chloride injection (0.2 microcurie of strontium-85 per millicurie of rubidium-82).			
' 35.204 (c) & (d)	Permissible molybdenum-99 concentrations		D	N/A	N/A		N/A
' 35.300 (a) & (b) **ADOPTED**	Use of unsealed byproduct material for which a written directive is		H&S	**In § 35.300, paragraph (a) and the introductory text of paragraph (b) are revised to read as follows:** (a) Obtained from: (1) A manufacturer or preparer			**R185-08A – Sec.74:NAC 459.3062**

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	required			licensed under § 32.72 of this chapter or equivalent Agreement State requirements; or (2) A PET radioactive drug producer licensed under § 30.32(j) of this chapter or equivalent Agreement State requirements; or (b) Excluding production of PET radionuclides, prepared by:			
'35.2204 **ADOPTED**	Records of molybdenum-99 concentrations		D	N/A	N/A		R185-08A – Sec.74:NAC 459.3062
'50.2	Definition: Byproduct Material		NRC	**In § 50.2, the definition of *Byproduct material* is revised to read as follows:** *Byproduct material* means— (1) Any radioactive material (except special nuclear material) yielded in, or made radioactive by, exposure to the radiation incident			NRC

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				to the process of producing or using special nuclear material; (2)(i) Any discrete source of radium- 226 that is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; or (ii) Any material that— (A) Has been made radioactive by use of a particle accelerator; and (B) Is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; and (3) Any discrete source of naturally occurring radioactive material, other than source material, that— (i) The Commission, in consultation with the Administrator of the Environmental Protection			

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				Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate Federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium-226 to the public health and safety or the common defense and security; and (ii) Before, on, or after August 8, 2005, is extracted or converted after extraction for use in a commercial, medical, or research activity.			
'61.2 **ADOPTED**	Definition: Waste		B	**In § 61.2, the definition for *Waste* is revised to read as follows:** *Waste* means those low-level radioactive wastes containing source, special nuclear, or byproduct material that are			R185-08A – Sec.19

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				acceptable for disposal in a land disposal facility. For the purposes of this definition, low-level radioactive waste means radioactive waste not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material as defined in paragraphs (2), (3), and (4) of the definition of *Byproduct material* set forth in § 20.1003 of this chapter.			
' 62.2	Definition: Low- Level radioactive waste		NRC	**In § 62.2, the definition for *Low-level radioactive waste (LLW)* is revised to read as follows:** *Low-level radioactive waste (LLW)* means radioactive material that— (1) Is not high-level radioactive waste, spent nuclear fuel, or byproduct material (as defined in paragraphs (2), (3), and (4) of the definition of *Byproduct Material* set forth in § 20.1003 of this chapter); and			NRC

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				(2) The NRC, consistent with existing law and in accordance with paragraph (1) of this definition, classifies as low level radioactive waste.			
' 72.3	Definition: Byproduct Material		NRC	**In § 72.3, the definition for *Byproduct material* is revised to read as follows:** *Byproduct material* means— (1) Any radioactive material (except special nuclear material) yielded in, or made radioactive by, exposure to the radiation incident to the process of producing or using special nuclear material; (2)(i) Any discrete source of radium- 226 that is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; or			NRC

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				(ii) Any material that— (A) Has been made radioactive by use of a particle accelerator; and (B) Is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; and (3) Any discrete source of naturally occurring radioactive material, other than source material, that— (i) The Commission, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate Federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium-226 to the public health and safety or the common defense and security; and (ii) Before, on, or after August 8,			

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				2005, is extracted or converted after extraction for use in a commercial, medical, or research activity.			
'110.2	Definition: Accelerator produced radioactive material		NRC	**In § 110.2, definition of *Accelerator-produced radioactive material* is added to read as follows:** *Accelerator-produced radioactive material* means any material made radioactive by a particle accelerator.			NRC
'110.2	Definition: Discrete Source		NRC	In § 110.2, definition of *Discrete source* is added to read as follows: *Discrete source* means a radionuclide that has been processed so that its concentration within a material has been purposely increased for use for commercial, medical, or research activities.			NRC NRC

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' 110.2	Definition: Particle accelerator		NRC	**In § 110.2, definition of *Particle accelerator* is added to read as follows:** *Particle accelerator* means any machine capable of accelerating electrons, protons, deuterons, or other charged particles in a vacuum and of discharging the resultant particulate or other radiation into a medium at energies usually in excess of 1 megaelectron volt. For purposes of this definition, ''accelerator'' is an equivalent term.			NRC
' 150.3 **ADOPTED**	Definition: Byproduct material		H&S*** **(***please note 10 CFR 150.3 Definition of Byproduct Material was changed from a Compatibility**	**In § 150.3, the definition of *Byproduct material* is revised to read as follows:** *Byproduct material* means— (1) Any radioactive material (except special nuclear material) yielded in, or made radioactive by, exposure to the radiation incident			**R185-08A – Sec.48:NAC 459.022**

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
			Category A to a Compatibility Category H&S)	to the process of producing or using special nuclear material; (2) The tailings or wastes produced by the extraction or concentration of uranium or thorium from ore processed primarily for its source material content, including discrete surface wastes resulting from uranium solution extraction processes. Underground ore bodies depleted by these solution extraction operations do not constitute ‘‘byproduct material’’ within this definition; (3)(i) Any discrete source of radium-226 that is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; or (ii) Any material that—			

Requirements for Expanded Definition of Byproduct Material 10 CFR Parts 20, 30, 31, 32, 33, 35, 50, 61, 62, 72, 110, 150, 170, and 171
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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
				(A) Has been made radioactive by use of a particle accelerator; and (B) Is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; and (4) Any discrete source of naturally occurring radioactive material, other than source material, that— (i) The Commission, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate Federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium-226 to the public health and safety or the common defense and security; and (ii) Before, on, or after August 8, 2005, is extracted or converted			

Requirements for Expanded Definition of Byproduct Material 10 CFR Parts 20, 30, 31, 32, 33, 35, 50, 61, 62, 72, 110, 150, 170, and 171
(72 FR 55864, 73 FR 42671) RATS ID # 2007-3 Effective date 11/30/07
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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
				after extraction for use in a commercial, medical, or research activity.			
'150.3 **ADOPTED**	Definition: Discrete source		H&S	**In § 150.3, the definition of *Discrete source* is added to read as follows:** *Discrete source* means a radionuclide that has been processed so that its concentration within a material has been purposely increased for use for commercial, medical, or research activities.			**R185-08A – Sec.6**

Occupational Dose Records, Labeling Containers, and the Total Effective Dose Equivalent Parts – 19 and 20
(72 FR 68043) RATS ID # 2008-1 Effective date 02/15/08
Date Due for State Adoption 02/15/11

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
'19.13 **ADOPTED**	Notification and reports to individuals		C	**In § 19.13, paragraphs (b) and (d) are revised to read as follows:** (b) Each licensee shall make dose information available to workers as shown in records maintained by the licensee under the provisions of 10 CFR 20.2106. The licensee shall provide an annual report to each individual monitored under 10 CFR 20.1502 of the dose received in that monitoring year if: (1) The individual's occupational dose exceeds 1 mSv (100 mrem) TEDE or 1 mSv (100 mrem) to any individual organ or tissue; or (2) The individual requests his or her annual dose report. * * * * * (d) When a licensee is required by §§ 20.2202, 20.2203 or 20.2204 of this chapter to report to the Commission any exposure of an individual to radiation or radioactive material, the licensee			**R185-08A, Sec. 87: NAC.459.786.2** **R185-08A, Sec. 87: NAC.459.786.4**

Occupational Dose Records, Labeling Containers, and the Total Effective Dose Equivalent Parts – 19 and 20
(72 FR 68043) RATS ID # 2008-1 Effective date 02/15/08
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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
				shall also provide the individual a report on his or her exposure data included in the report to the Commission. This report must be transmitted no later than the transmittal to the Commission.			
'20.1003 **ADOPTED**	Definition: Total Effective Dose Equivalent (TEDE)		A	**In § 20.1003, the definition of *Total Effective Dose Equivalent (TEDE)* is revised to read as follows:** *Total Effective Dose Equivalent* (TEDE) means the sum of the effective dose equivalent (for external exposures) and the committed effective dose equivalent (for internal exposures).			**R185-08A, Sec. 50: NAC.459.1095**
'20.1201 **ADOPTED**	Occupational Dose Limits for Adults		A	**In § 20.1201, paragraph (c) is revised to read as follows:** (c) When the external exposure is determined by measurement with an external personal monitoring			**R185-08A, Sec. 77: NAC.459.325.3**

Occupational Dose Records, Labeling Containers, and the Total Effective Dose Equivalent Parts – 19 and 20
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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
				device, the deep-dose equivalent must be used in place of the effective dose equivalent, unless the effective dose equivalent is determined by a dosimetry method approved by the NRC. The assigned deep-dose equivalent must be for the part of the body receiving the highest exposure. The assigned shallow-dose equivalent must be the dose averaged over the contiguous 10 square centimeters of skin receiving the highest exposure. The deep-dose equivalent, lens dose equivalent, and shallow-dose equivalent may be assessed from surveys or other radiation measurements for the purpose of demonstrating compliance with the occupational dose limits, if the individual monitoring device was not in the region of highest potential exposure, or the results of individual monitoring are unavailable.			

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
' 20.1905 (g)	Exemptions to Labeling Requirements		NRC (*****please note Part 20.1905 (a) – (f) still remains a Compatibility Category A only the newly added paragraph (g) is a Compatibility Category NRC)**	**In § 20.1905 paragraph (g) is added to read as follows:** (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			NRC

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	Location
				before being removed from the posted area.			
'20.2104	Determination of Prior Occupational Dose		D	N/A	N/A		N/A
'20.2205 **ADOPTED**	Reports to Individuals of Exceeding Dose Limits		C	**Section 20.2205 is revised to read as follows:** 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.			**R185-08A, Sec. 80: NAC.459.368.2**

This chapter of NAC has changes which have been adopted but have not been codified; you can see those changes by viewing the following regulation(s) on the Nevada Register of Administrative Regulations: R185-08

CHAPTER 459 - HAZARDOUS MATERIALS

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RADIATION CONTROL

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GENERAL PROVISIONS

NAC 459.010 Definitions. (NRS 459.030, 459.201) As used in NAC 459.010 to 459.950, inclusive, unless the context otherwise requires, the words and terms defined in NAC 459.012 to 459.116, inclusive, have the meanings ascribed to them in those sections.

(Supplied in codification; A by Bd. of Health, 4-27-84; 10-22-93; 1-18-94; 1-21-94; 7-7-94; 11-1-95; R084-98, 1-26-99; A by Dep’t of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R149-03, 12-3-2003; R085-06, 11-13-2006; R149-07, 1-30-2008)

NAC 459.012 “Absorbed dose” defined. (NRS 459.030, 459.201) “Absorbed dose” means the energy imparted to matter by ionizing radiation per unit mass of irradiated material at the place of interest. The special units of absorbed dose

are the rad and the gray.

[Bd. of Health, Radiation Control Reg. § 1.2.9.2, eff. 2-28-80]—(NAC A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.014 "Accelerator produced material" defined. (NRS 459.201**)** "Accelerator produced material" means any material made radioactive by exposing it in a particle accelerator.

[Bd. of Health, Radiation Control Reg. § 1.2.1, eff. 2-28-80]

NAC 459.0145 "Activity" defined. (NRS 459.030**,** 459.201**)** "Activity" means the rate of disintegration or decay of radioactive material. The units of activity are the curie and the becquerel.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R085-06, 11-13-2006)

NAC 459.0147 "Address of use" defined. (NRS 459.201**)** "Address of use" means the building or buildings that are identified on the license and where radioactive materials may be received, used or stored.

(Added to NAC by Bd. of Health, eff. 11-1-95)

NAC 459.015 "Adult" defined. (NRS 459.201**)** "Adult" means any person who is 18 years of age or older.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.016 "Agreement state" defined. (NRS 459.201**)** "Agreement state" means any state with which the Nuclear Regulatory Commission has entered into an effective agreement under section 274(b) of the Atomic Energy Act of 1954, as amended, 73 Stat. 689.

[Bd. of Health, Radiation Control Reg. § 1.2.2, eff. 2-28-80]

NAC 459.018 "Airborne radioactive material" defined. (NRS 459.201**)** "Airborne radioactive material" means any radioactive material dispersed in the air in the form of dust, fumes, mists, particulates, vapors or gases.

[Bd. of Health, Radiation Control Reg. § 1.2.3, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.0185 "Annual limit on intake" defined. (NRS 459.201**)** "Annual limit on intake" means the limit for the amount of radioactive material taken into the body of an adult worker during the course of his employment, by inhalation or ingestion, in 1 year. The annual limit on intake is equal to the lesser of:

1. The intake of a given radionuclide in a year by the reference man that would result in a committed effective dose equivalent of 5 rems; or
2. A committed dose equivalent of 50 rems to any individual organ or tissue.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.019 "Appendix A" defined. (NRS 459.201**)** "Appendix A" means Appendix A to 10 C.F.R. §§ 20.1001 to 20.2402, inclusive, as those provisions existed on October 13, 1999.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R085-06, 11-13-2006)

NAC 459.0192 "Appendix B" defined. (NRS 459.201**)** "Appendix B" means Appendix B to 10 C.F.R. §§ 20.1001 to 20.2402, inclusive, as those provisions existed on October 13, 1999.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R085-06, 11-13-2006)

NAC 459.0194 "Appendix C" defined. (NRS 459.201**)** "Appendix C" means Appendix C to 10 C.F.R. §§ 20.1001 to 20.2402, inclusive, as those provisions existed on October 13, 1999.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R085-06, 11-13-2006)

NAC 459.0195 "Appendix E" defined. (NRS 459.201**)** "Appendix E" means Appendix E to 10 C.F.R. §§ 20.1001 to 20.2402, inclusive, as those provisions existed on November 8, 2006.

(Added to NAC by Bd. of Health by R149-07, eff. 1-30-2008)

NAC 459.0196 "Appendix G" defined. (NRS 459.201**)** "Appendix G" means Appendix G to 10 C.F.R. §§ 20.1001 to 20.2402, inclusive, as those provisions existed on November 16, 2005.

(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.020 "Area of airborne radioactivity" defined. (NRS 459.201**)** "Area of airborne radioactivity" means any room, enclosure or area in which airborne radioactive material exists in concentrations:

1. In excess of the derived air concentrations specified in Appendix B; or
2. To such a degree that a person present in the area without a respiratory protective device could receive in the hours

he works in 1 week, an intake of radiation that is greater than 0.6 percent of the annual limit on intake or derived air concentration hours.

[Bd. of Health, Radiation Control Reg. § 1.2.4, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.0203 "Area of use" defined. (NRS 459.201**)** "Area of use" means a portion of an address of use that has been set aside for the purpose of receiving, using and storing radioactive materials.

(Added to NAC by Bd. of Health, eff. 11-1-95)

NAC 459.0205 "As low as is reasonably achievable" defined. (NRS 459.030, 459.201**)** "As low as is reasonably achievable" means making every reasonable effort to maintain exposures to radiation as far below the applicable limits as is practical, in a manner that is consistent with the purpose for which the licensed or registered activity is undertaken, taking into account:

1. The state of the technology;
2. The costs of improving the technology, including a consideration of the extent to which any improvements would benefit the health and safety of the public;
3. The utilization of licensed or registered sources of radiation in the public interest; and
4. Any other societal and socioeconomic considerations, including, without limitation, the potential for death or other harm that could reasonably be expected to result from transportation accidents that occur during the process of decontamination and waste disposal.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.02055 "Assigned protection factor" defined. (NRS 459.201**)** "Assigned protection factor" means the expected level of respiratory protection in a workplace that would be provided by a properly functioning respirator or class of respirators to properly fitted and trained users. Operationally, the inhaled concentration can be estimated by dividing the ambient airborne concentration by the assigned protection factor.

(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.02065 "Atmosphere-supplying respirator" defined. (NRS 459.201**)** "Atmosphere-supplying respirator" means a respirator that supplies the user with breathing air from a source independent of the ambient atmosphere, and includes, without limitation, a supplied-air respirator and a self-contained breathing apparatus unit.

(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.0207 "Authorized nuclear pharmacist" defined. (NRS 459.201**)** "Authorized nuclear pharmacist" has the meaning ascribed to it in 10 C.F.R. § 35.2, as adopted by reference pursuant to NAC 459.3062.

(Added to NAC by Bd. of Health by R084-98, eff. 1-26-99; A by R085-06, 11-13-2006)

NAC 459.0208 "Authorized user" defined. (NRS 459.201**)** "Authorized user" has the meaning ascribed to it in 10 C.F.R. § 35.2, as adopted by reference pursuant to NAC 459.3062.

(Added to NAC by Bd. of Health, eff. 11-1-95; A by R084-98, 1-26-99; R085-06, 11-13-2006)

NAC 459.021 "Background radiation" defined. (NRS 459.030, 459.201**)**

1. "Background radiation" means:

(a) Radiation from cosmic sources;

(b) Naturally occurring radioactive materials, including radon, except as a product of decay from source or special nuclear materials; and

(c) Global fallout as it exists in the environment from the testing of nuclear explosive devices, or past nuclear accidents, that contributes to background radiation and is not under the control of the licensee.

2. The term does not include sources of radiation from any radioactive material regulated by the Division pursuant to NAC 459.010 to 459.950, inclusive.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R149-07, 1-30-2008)

NAC 459.0212 "Becquerel" defined. (NRS 459.030, 459.201**)** "Becquerel" means a unit of measurement of radioactivity. One becquerel is that quantity of radioactive material which decays at the rate of one disintegration per second. One becquerel is equivalent to 2.7×10^{-11} curie.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003; A by Bd. of Health by R085-06, 11-13-2006)

NAC 459.0214 "Bioassay" defined. (NRS 459.201**)** "Bioassay" means the determination of the kinds, quantities or concentrations and, in some cases, the locations, of radioactive material in the human body, whether by direct measurement, in vivo counting or an analysis of materials excreted or removed from the human body.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.0216 "Boundary of a site" defined. (NRS 459.201**)** "Boundary of a site" means the boundary beyond which the land or property is not owned, leased or otherwise controlled by a licensee.
(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.0218 "Brachytherapy source" defined. (NRS 459.201**)** "Brachytherapy source" has the meaning ascribed to it in 10 C.F.R. § 35.2, as adopted by reference pursuant to NAC 459.3062.
(Added to NAC by Bd. of Health, eff. 11-1-95; A by R085-06, 11-13-2006)

NAC 459.022 "By-product material" defined. (NRS 459.201**)** "By-product material" has the meaning ascribed to it in subsection 1 of NRS 459.010.
[Bd. of Health, Radiation Control Reg. § 1.2.5, eff. 2-28-80]

NAC 459.024 "Calendar quarter" defined. (NRS 459.201**)** "Calendar quarter" means not less than 12 consecutive weeks nor more than 14 consecutive weeks. The first calendar quarter of each year begins in January. Subsequent calendar quarters are arranged so that no day is included in more than 1 calendar quarter and no day in any 1 year is omitted from inclusion within a calendar quarter.
[Bd. of Health, Radiation Control Reg. part § 1.2.6, eff. 2-28-80]

NAC 459.0241 "Category 1 irradiator" defined. (NRS 459.201**)** "Category 1 irradiator" means an irradiator in which the sealed sources for the irradiation of materials are not removed from the shield of the irradiator.
(Added to NAC by Bd. of Health by R149-03, eff. 12-3-2003)

NAC 459.0243 "Chemical description" defined. (NRS 459.201**)** "Chemical description" means a description of the principal chemical characteristics of low-level radioactive waste.
(Added to NAC by Bd. of Health by R084-98, eff. 1-26-99)

NAC 459.0245 "Class" defined. (NRS 459.201**)** "Class" means a system of classification for inhaled radioactive material based on its rate of clearance from the pulmonary region of the lung, whereby radioactive materials are classified as either D, W or Y according to the following ranges of clearance half-times:
1. Class D, less than 10 days;
2. Class W, from 10 to 100 days; and
3. Class Y, more than 100 days.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.025 "Collective dose" defined. (NRS 459.201**)** "Collective dose" means the sum of the individual doses received in a given period by a specified population from exposure to a specified source of radiation.
(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.0252 "Collimator" defined. (NRS 459.201**)** "Collimator" means a device used to limit the size, shape and direction of a primary radiation beam.
(Added to NAC by Bd. of Health, eff. 1-21-94)

NAC 459.0254 "Committed dose equivalent" defined. (NRS 459.201**)** "Committed dose equivalent" means the dose equivalent to organs or tissues of reference that will be received from an intake of radioactive material by a person during the 50-year period following the intake.
(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.0256 "Committed effective dose equivalent" defined. (NRS 459.201**)** "Committed effective dose equivalent" means the sum of the products of the weighting factors applicable to each of the organs or tissues that are irradiated and the committed dose equivalent to each of those organs or tissues.
(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.0258 "Consignee" defined. (NRS 459.201**)** "Consignee" means the designated receiver of a shipment of low-level radioactive waste.
(Added to NAC by Bd. of Health by R084-98, eff. 1-26-99)

NAC 459.0259 "Constraint" defined. (NRS 459.201**)** "Constraint" means a value above which specified licensee actions are required.
(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.026 "Curie" defined. (NRS 459.030**,** 459.201**)** "Curie" means a unit of measurement of radioactivity. One curie (Ci) is that quantity of radioactive material which decays at the rate of 3.7×10^{10} disintegrations per second (dps). One curie is equivalent to 37 gigabecquerels.

[Bd. of Health, Radiation Control Reg. § 1.2.7, eff. 2-28-80]—(NAC A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R085-06, 11-13-2006)

NAC 459.027 "Decommission" defined. (NRS 459.030**,** 459.201**)** "Decommission" means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits:

1. Release of the property for unrestricted use and termination of the license of the licensee; or
2. Release of the property under restricted conditions and termination of the license of the licensee.

(Added to NAC by Bd. of Health, eff. 10-22-93; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.0275 "Deep-dose equivalent" defined. (NRS 459.201**)** "Deep-dose equivalent" means the dose equivalent that is measured at a depth of 1 centimeter in a tissue of the body.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.0278 "Demand respirator" defined. (NRS 459.201**)** "Demand respirator" means an atmosphere-supplying respirator that admits breathing air to the facepiece only when a negative pressure is created inside the facepiece by inhalation.

(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.028 "Department of Energy" defined. (NRS 459.201**)** "Department of Energy" means the department established by P.L. 95-91, August 4, 1977, 91 Stat. 565, 42 U.S.C. §§ 7101 et seq., to the extent that the Department exercises functions formerly vested in the Atomic Energy Commission, its Chairman, members, officers and components, and transferred to the Energy Research and Development Administration and to the Administrator thereof pursuant to sections 104(b), (c) and (d) of the Energy Reorganization Act of 1974 (P.L. 93-438, October 11, 1974, 88 Stat.1233 at 1237, effective January 19, 1975) and retransferred to the Secretary of Energy pursuant to section 301(a) of the Department of Energy Organization Act (P.L. 95-91, August 4, 1977, 91 Stat. 565 at 577-578, 42 U.S.C. § 7151, effective October 1, 1977).

[Bd. of Health, Radiation Control Reg. § 1.2.49, eff. 2-28-80]

NAC 459.029 "Derived air concentration" defined. (NRS 459.201**)** "Derived air concentration" means the concentration of a given radionuclide in air which, if breathed by the reference man for 2,000 hours under conditions in which the inhalation rate is 1.2 cubic meters of air per hour, results in an intake of one annual limit on intake.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.0292 "Derived air concentration-hour" defined. (NRS 459.201**)** "Derived air concentration-hour" means the product of the concentration of a radionuclide in air and the time of exposure to that radionuclide, in hours. Two thousand derived air concentration-hours are equal to one annual limit on intake or a committed effective dose equivalent of 5 rems.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.0296 "Disposal container" defined. (NRS 459.201**)** "Disposal container":

1. Means a container that is used to confine low-level radioactive waste for disposal at a land disposal facility.
2. May include the container used to transport the low-level radioactive waste to the land disposal facility.

(Added to NAC by Bd. of Health by R084-98, eff. 1-26-99)

NAC 459.030 "Division" defined. (NRS 459.201**)** "Division" means the Health Division of the Department of Health and Human Services.

[Bd. of Health, Radiation Control Reg. § 1.2.8, eff. 2-28-80]

NAC 459.032 "Dose" defined. (NRS 459.201**)** "Dose" means an absorbed dose, dose equivalent, effective dose equivalent, committed dose equivalent, committed effective dose equivalent or total effective dose equivalent, as appropriate.

[Bd. of Health, Radiation Control Reg. § 1.2.9.1, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.034 "Dose equivalent" defined. (NRS 459.030**,** 459.201**)** "Dose equivalent" means the product of the absorbed dose in a tissue, quality factor and all other necessary modifying factors at the location of interest. The units of dose equivalent are the rem and the sievert.

[Bd. of Health, Radiation Control Reg. § 1.2.9.3, eff. 2-28-80]—(NAC A 1-18-94; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.0345 "Dosimetry processor" defined. (NRS 459.201**)** "Dosimetry processor" means a person who processes and evaluates personnel monitoring equipment in order to determine the dose of radiation delivered to such equipment.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.035 "Effective dose equivalent" defined. (NRS 459.201**)** "Effective dose equivalent" means the sum of the products of the dose equivalent to an organ or tissue and the weighting factors applicable to each of the organs or tissues that are irradiated.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.0352 "Electron source" defined. (NRS 459.201**)** "Electron source" means an assemblage of components for the controlled production of electrons without conversion into X-radiation.

(Added to NAC by Bd. of Health by R149-03, eff. 12-3-2003)

NAC 459.0354 "Embryo" defined. (NRS 459.201**)** "Embryo" means a developing human organism from conception until the time of birth.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.0356 "Entrance" defined. (NRS 459.201**)** "Entrance" means any location through which a person may gain access to radiation areas or to radioactive materials.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.036 "Exposure" defined. (NRS 459.201**)** "Exposure" means being exposed to radiation or to radioactive material.

[Bd. of Health, Radiation Control Reg. § 1.2.10 + § 6.2.19, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.038 "Exposure rate" defined. (NRS 459.201**)** "Exposure rate" means the exposure per unit of time, such as R/min or mR/h.

[Bd. of Health, Radiation Control Reg. § 1.2.11, eff. 2-28-80]

NAC 459.0382 "External dose" defined. (NRS 459.201**)** "External dose" means that portion of a dose equivalent received from sources of radiation outside the body.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.0384 "Extremity" defined. (NRS 459.201**)** "Extremity" means a hand, an elbow, that portion of an arm below the elbow, a foot, a knee or that portion of a leg below the knee.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.0387 "Fit factor" defined. (NRS 459.201**)** "Fit factor" means a quantitative estimate of the fit of a particular respirator to a specific person, and typically includes an estimate of the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.

(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.0388 "Fit test" defined. (NRS 459.201**)** "Fit test" means the use of a protocol which involves a qualitative fit test or quantitative fit test to evaluate the fit of a respirator on a person.

(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.039 "Form regarding history of cumulative occupational exposure" defined. (NRS 459.201**)** "Form regarding history of cumulative occupational exposure" means a form provided by the Division regarding the history of the cumulative occupational exposure of a person, or an equivalent form.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.0395 "Generator" defined. (NRS 459.030**)** "Generator" means:

1. A waste generator; or
2. An entity that operates pursuant to a license issued by the Nuclear Regulatory Commission or an agreement state and to which waste is attributed pursuant to the Low-Level Radioactive Waste Policy Amendments Act of 1985, 42 U.S.C. §§ 2021b et seq.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

NAC 459.0397 "Gray" defined. (NRS 459.030**)** "Gray" means a special unit of absorbed dose. One gray equals an

absorbed dose of 1 joule per kilogram of material. One gray is equivalent to 100 rads.
(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

NAC 459.040 "Healing arts" defined. (NRS 459.201**)** "Healing arts" means any system, treatment, operation, diagnosis, prescription or practice for the diagnosis, cure, relief, palliation, adjustment or correction of any human disease, ailment, deformity, injury, or unhealthy or abnormal physical or mental condition.
[Bd. of Health, Radiation Control Reg. § 1.2.12, eff. 2-28-80]

NAC 459.042 "High radiation area" defined. (NRS 459.030, 459.201**)** "High radiation area" means any area, accessible to persons, in which radiation from a source of radiation external to the body exists at such levels that a person could receive a dose equivalent in excess of 0.1 rem (1 millisievert) in 1 hour at 30 centimeters from:
1. The source of radiation; or
2. Any surface that the radiation penetrates.
[Bd. of Health, Radiation Control Reg. § 1.2.13, eff. 2-28-80]—(NAC A 1-18-94; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.044 "Human use" defined. (NRS 459.201**)** "Human use" means the internal or external administration of radiation or radioactive material to human beings.
[Bd. of Health, Radiation Control Reg. § 1.2.14, eff. 2-28-80]

NAC 459.0445 "Industrial radiography" defined. (NRS 459.030, 459.201**)** "Industrial radiography" has the meaning attributed to it in 10 C.F.R. § 34.3.
[Bd. of Health, Radiation Control Reg. § 5.3.2, eff. 2-28-80]—(NAC A by Dep't of Human Resources by R137-01, 5-30-2003)—(Substituted in revision for NAC 459.688)

NAC 459.046 "Inspection" defined. (NRS 459.201**)** "Inspection" means an official examination or observation, including, but not limited to, tests, surveys and monitoring to determine compliance with regulations, orders, requirements and conditions of the Division.
[Bd. of Health, Radiation Control Reg. § 1.2.15, eff. 2-28-80]

NAC 459.047 "Internal dose" defined. (NRS 459.201**)** "Internal dose" means that portion of the dose equivalent received from radioactive material taken into the body.
(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.0475 "Land disposal facility" defined. (NRS 459.201**)** "Land disposal facility" means the land, buildings, structures and equipment that are intended to be used for the disposal of radioactive waste.
(Added to NAC by Bd. of Health by R084-98, eff. 1-26-99)

NAC 459.0477 "Lens dose equivalent" defined. (NRS 459.030, 459.201**)** "Lens dose equivalent" means the dose equivalent from a source of radiation external to the body that is measured at a depth of 0.3 centimeter in the lens of the eye.
(Added to NAC by Bd. of Health, eff. 1-18-94; A by Dep't of Human Resources by R137-01, 5-30-2003)—(Substituted in revision for NAC 459.0386)

NAC 459.048 "License" defined. (NRS 459.201**)** "License" means a license issued by the Division in accordance with the provisions of NAC 459.010 to 459.950, inclusive, and chapter 459 of NRS.
[Bd. of Health, Radiation Control Reg. § 1.2.16, eff. 2-28-80]—(NAC A by R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.049 "Licensed radioactive material" defined. (NRS 459.201**)** "Licensed radioactive material" means any radioactive material that is possessed under a specific or general license issued by the Division pursuant to this chapter.
(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.050 "Licensee" defined. (NRS 459.201**)** "Licensee" means any person who is licensed by the Division in accordance with the provisions of NAC 459.010 to 459.950, inclusive, and chapter 459 of NRS.
[Bd. of Health, Radiation Control Reg. § 1.2.17, eff. 2-28-80]—(NAC A by R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.0504 "Limit" defined. (NRS 459.201**)** "Limit" means the highest permissible dose of radiation.
(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.0506 "Lost or missing sources of radiation" defined. (NRS 459.201**)** "Lost or missing sources of radiation" means radioactive material or a radiation machine whose location is unknown. The term includes a source of

radiation that has been shipped but has not reached its destination, and whose location cannot be readily trac

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.0508 "Medical use of radioactive material" and "medical use" defined. (NRS 459.201**)** "Medical use of radioactive material" or "medical use" means the intentional internal or external administration of:

1. Licensed radioactive material or radiation therefrom, as described in 10 C.F.R. Part 35; or
2. Radiation from a machine that produces radiation,

to patients or human research subjects under the supervision of an authorized user.

(Added to NAC by Bd. of Health by R084-98, eff. 1-26-99; A by R085-06, 11-13-2006)

NAC 459.051 "Member of the public" defined. (NRS 459.201**)** "Member of the public" means any natural person except during any period in which that natural person receives an occupational dose.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R084-98, 1-26-99)

NAC 459.0512 "Minor" defined. (NRS 459.201**)** "Minor" means a person who is under 18 years of age.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.0516 "Monitoring" defined. (NRS 459.201**)** "Monitoring" means the measurement of levels of radiation, concentrations of radioactive materials, or surface area activities or quantities of radioactive material, and the use of the results of these measurements to evaluate potential exposures and doses.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.0517 "National Source Tracking System" defined. (NRS 459.201**)** "National Source Tracking System" means the mandatory tracking system for radiation sources in the United States established and administered by the Nuclear Regulatory Commission pursuant to 42 U.S.C. § 2210h.

(Added to NAC by Bd. of Health by R149-07, eff. 1-30-2008)

NAC 459.0518 "National Source Tracking Transaction Report" defined. (NRS 459.201**)** "National Source Tracking Transaction Report" means a report submitted to the National Source Tracking System.

(Added to NAC by Bd. of Health by R149-07, eff. 1-30-2008)

NAC 459.0519 "Nationally tracked source" defined. (NRS 459.201**)** "Nationally tracked source" has the meaning ascribed to it in 10 C.F.R. § 20.1003.

(Added to NAC by Bd. of Health by R149-07, eff. 1-30-2008)

NAC 459.052 "Natural radioactivity" defined. (NRS 459.201**)** "Natural radioactivity" means radioactivity of naturally occurring nuclides.

[Bd. of Health, Radiation Control Reg. § 1.2.18, eff. 2-28-80]

NAC 459.0525 "Naturally occurring or accelerator-produced radioactive material" defined. (NRS 459.030**)** "Naturally occurring or accelerator-produced radioactive material" includes naturally occurring radioactive material, including materials generated by accelerators used in subatomic particle physics research, and accelerator-produced radioactive material. The term does not include by-product, source or special nuclear material.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

NAC 459.0527 "Negative pressure respirator" defined. (NRS 459.201**)** "Negative pressure respirator" means a respirator in which the air pressure inside the facepiece is negative during inhalation with respect to the ambient air pressure outside the respirator.

(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.053 "Nonstochastic effect" defined. (NRS 459.201**)** "Nonstochastic effect" means the effects on health from exposure to radiation, the severity of which varies with the dose of radiation and for which it is believed that a threshold exists.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.054 "Occupational dose" defined. (NRS 459.030**,** 459.201**)** "Occupational dose" means the dose received by a natural person in the course of employment in which the natural person's duties involve exposure to radiation or radioactive material from licensed and unlicensed sources of radiation, whether in the possession of a licensee or registrant or any other person. The term does not include a dose received by a natural person:

1. From background radiation;
2. From any medical administration of radiation to the person;

3. From exposure to other natural persons who have been administered radioactive material and have been released pursuant to 10 C.F.R. § 35.75;
4. From voluntary participation in medical research; or
5. As a member of the public.

[Bd. of Health, Radiation Control Reg. § 1.2.19, eff. 2-28-80]—(NAC A 1-18-94; R084-98, 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R085-06, 11-13-2006)

NAC 459.055 "Occupational exposure" defined. (NRS 459.201**)** "Occupational exposure" means exposure of a person:
1. In a restricted area; or
2. In the course of employment in which the person's duties involve exposure from sources of radiation, whether in the possession of the licensee, registrant or any other person.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.0555 "Package" defined. (NRS 459.201**)** "Package" means the assembly of the components necessary to comply with the regulations of the United States Department of Transportation relating to packaging and the radioactive contents of the package, as presented for transport.

(Added to NAC by Bd. of Health by R084-98, eff. 1-26-99)

NAC 459.056 "Particle accelerator" defined. (NRS 459.201**)** "Particle accelerator" means any machine capable of accelerating electrons, protons, deuterons or other charged particles in a vacuum and of discharging the resultant particulate or other radiation into a medium at energies usually in excess of 1 MeV.

[Bd. of Health, Radiation Control Reg. § 1.2.20, eff. 2-28-80]

NAC 459.058 "Person" defined. (NRS 459.201**)** "Person" has the meaning ascribed to it in subsection 5 of NRS 459.010.

[Bd. of Health, Radiation Control Reg. § 1.2.21, eff. 2-28-80]

NAC 459.059 "Personnel monitoring" defined. (NRS 459.201**)** "Personnel monitoring" means:
1. The assessment of dose equivalent by the use of equipment designed to be worn by a person;
2. The assessment of committed effective dose equivalent by bioassay or derived air concentration-hours; or
3. The assessment of dose equivalent by the use of data from a survey.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.060 "Personnel monitoring equipment" defined. (NRS 459.030, 459.201**)** "Personnel monitoring equipment" means devices designed to be worn by a natural person for the assessment of dose equivalent, including, but not limited to, film badges, thermoluminescence dosimeters, pocket ionization chambers and personal devices for sampling air.

[Bd. of Health, Radiation Control Reg. § 1.2.22, eff. 2-28-80]—(NAC A 1-18-94; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.062 "Pharmacist" defined. (NRS 459.201**)** "Pharmacist" has the meaning ascribed to it in 10 C.F.R. § 35.2, as adopted by reference pursuant to NAC 459.3062.

[Bd. of Health, Radiation Control Reg. § 1.2.23, eff. 2-28-80]—(NAC A by R085-06, 11-13-2006)

NAC 459.063 "Physical description" defined. (NRS 459.201**)** "Physical description" means the items required to be indicated on NRC Form 541 to describe low-level radioactive waste.

(Added to NAC by Bd. of Health by R084-98, eff. 1-26-99)

NAC 459.064 "Physician" defined. (NRS 459.201**)** "Physician" has the meaning ascribed to it in 10 C.F.R. § 35.2, as adopted by reference pursuant to NAC 459.3062.

[Bd. of Health, Radiation Control Reg. § 1.2.24, eff. 2-28-80]—(NAC A by R085-06, 11-13-2006)

NAC 459.0645 "Planned special exposure" defined. (NRS 459.201**)** "Planned special exposure" means an infrequent exposure to radiation pursuant to NAC 459.329, separate from and in addition to the annual limits specified in NAC 459.325.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.0646 "Positive pressure respirator" defined. (NRS 459.201**)** "Positive pressure respirator" means a respirator in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.

(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.06485 "Pressure demand respirator" defined. (NRS 459.201**)** "Pressure demand respirator" means a positive pressure atmosphere-supplying respirator that admits breathing air to the facepiece when the positive pressure is reduced inside the facepiece by inhalation.

(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.06495 "Principal activities" defined. (NRS 459.201**)** "Principal activities" means the activities authorized by a license which are essential to achieving the purpose for which the license was issued or amended. The term does not include:

1. Storage during which no licensed material is accessed for use; or
2. Disposal and activities incidental to decontamination or decommissioning.

(Added to NAC by Bd. of Health by R084-98, eff. 1-26-99)

NAC 459.065 "Public dose" defined. (NRS 459.030, 459.201**)** "Public dose" means the dose received by a member of the public from exposure to radiation or radioactive material that is released by a licensee, or from another source of radiation under the control of a licensee or registrant. The term does not include a dose received by a natural person from:

1. Background radiation;
2. Any medical administration of radiation to the person;
3. Exposure to other natural persons who have been administered radioactive material and have been released pursuant to 10 C.F.R. § 35.75;
4. An occupational dose; or
5. Voluntary participation in medical research.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R084-98, 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R085-06, 11-13-2006)

NAC 459.0653 "Qualitative fit test" defined. (NRS 459.201**)** "Qualitative fit test" means a fit test that relies on the response of a person to the test agent to assess on a pass or fail basis the adequacy of the fit of a respirator.

(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.0655 "Quality factor" defined. (NRS 459.201**)** "Quality factor" means the applicable modifying factor that is specified in NAC 459.3235.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.0657 "Quantitative fit test" defined. (NRS 459.201**)** "Quantitative fit test" means a fit test that relies on numerically measuring the amount of leakage into a respirator to assess the adequacy of the fit of the respirator.

(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.066 "Rad" defined. (NRS 459.030, 459.201**)** "Rad" means the special unit of absorbed dose. One rad equals one hundredth of a joule per kilogram of material; for example, if tissue is the material of interest, 1 rad equals 100 ergs per gram of tissue. One rad is equivalent to 10 milligrays.

[Bd. of Health, Radiation Control Reg. § 1.2.25, eff. 2-28-80]—(NAC A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.068 "Radiation" defined. (NRS 459.201**)** "Radiation" means ionizing radiation, that is, gamma rays and X rays, alpha and beta particles, high speed electrons, neutrons and other nuclear particles.

[Bd. of Health, Radiation Control Reg. § 1.2.26, eff. 2-28-80]

NAC 459.070 "Radiation area" defined. (NRS 459.201**)** "Radiation area" means any area accessible to any person in which there exists radiation at a level which could result in a person receiving a dose equivalent in excess of 0.005 rem in 1 hour at 30 centimeters from the source of radiation or from any surface that the radiation penetrates.

[Bd. of Health, Radiation Control Reg. § 1.2.27, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.072 "Radiation machine" defined. (NRS 459.201**)** "Radiation machine" means any device capable of producing radiation except one which produces radiation only from radioactive material.

[Bd. of Health, Radiation Control Reg. § 1.2.28, eff. 2-28-80]

NAC 459.074 "Radiation safety officer" defined. (NRS 459.201**)** "Radiation safety officer" has the meaning ascribed to it in 10 C.F.R. § 35.2, as adopted by reference pursuant to NAC 459.3062.

[Bd. of Health, Radiation Control Reg. § 1.2.29, eff. 2-28-80]—(NAC A by R085-06, 11-13-2006)

NAC 459.075 "Radiation symbol" defined. (NRS 459.201) "Radiation symbol" means the radiation symbol specified in NAC 459.355.
(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.076 "Radioactive material" defined. (NRS 459.201) "Radioactive material" means any solid, liquid or gaseous material which emits radiation spontaneously.
[Bd. of Health, Radiation Control Reg. § 1.2.30, eff. 2-28-80]

NAC 459.078 "Radioactivity" defined. (NRS 459.201) "Radioactivity" means the disintegration of unstable atomic nuclei by the emission of radiation.
[Bd. of Health, Radiation Control Reg. § 1.2.31, eff. 2-28-80]

NAC 459.0785 "Record of occupational exposure for a monitoring period" defined. (NRS 459.201) "Record of occupational exposure for a monitoring period" means a form provided by the Division to serve as a record of occupational exposure for a monitoring period, or an equivalent form.
(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.079 "Reference man" defined. (NRS 459.201) "Reference man" means a hypothetical aggregation of human physical and physiological characteristics established by international standards approved by the Board and used by researchers and public health workers to standardize the results of experiments and to relate biological effects to a common base.
(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.080 "Registrant" defined. (NRS 459.201) "Registrant" means any person who is registered with the Division and who is legally obligated to register with the Division pursuant to NAC 459.010 to 459.950, inclusive, and chapter 459 of NRS.
[Bd. of Health, Radiation Control Reg. § 1.2.32, eff. 2-28-80]—(NAC A by R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.082 "Registration" defined. (NRS 459.201) "Registration" means registration with the Division in accordance with the provisions of NAC 459.010 to 459.950, inclusive, and chapter 459 of NRS.
[Bd. of Health, Radiation Control Reg. § 1.2.33, eff. 2-28-80]—(NAC A by R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.084 "Regulations of the Department of Transportation" defined. (NRS 459.201) "Regulations of the Department of Transportation" means the regulations in 49 C.F.R. Parts 171 to 177, inclusive.
[Bd. of Health, Radiation Control Reg. § 1.2.34, eff. 2-28-80]—(NAC A 9-6-88)

NAC 459.085 "Released for unrestricted use" defined. (NRS 459.201) "Released for unrestricted use" means:
1. When applied to restricted areas on land or in facilities such as buildings, that all radioactive materials have been removed until the only radiation remaining is background radiation, and that after the Division has given its approval, the area is no longer restricted; or
2. When applied to equipment such as tools or vehicles in a restricted area, that all radioactive material has been removed from the equipment, so that the equipment may be released from the restricted area.
(Added to NAC by Bd. of Health, eff. 11-1-95)

NAC 459.086 "Rem" defined. (NRS 459.030, 459.201) "Rem" means the special unit of any of the quantities expressed as a dose equivalent that is equal to the absorbed dose in rads multiplied by the quality factor. One rem is equivalent to 10 millisieverts.
[Bd. of Health, Radiation Control Reg. § 1.2.35, eff. 2-28-80]—(NAC A 9-6-88; 1-18-94; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.088 "Research and development" defined. (NRS 459.201) "Research and development" means:
1. Theoretical analysis, exploration or experimentation; or
2. The extension of investigative findings and theories of a scientific or technical nature into practical application for experimental and demonstrative purposes, including the experimental production and testing of models, devices, equipment, materials and processes. "Research and development" does not include the internal or external administration of radiation or radioactive material to human beings.
[Bd. of Health, Radiation Control Reg. § 1.2.36, eff. 2-28-80]

NAC 459.0885 "Residual waste" defined. (NRS 459.030, 459.201) "Residual waste" means low-level radioactive waste resulting from processing or decontamination that, because it cannot be easily separated into distinct batches attributable to individual waste generators, is attributed to the processor or decontamination facility, as applicable.

(Added to NAC by Bd. of Health by R084-98, eff. 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.089 "Respiratory protective device" defined. (NRS 459.201**)** "Respiratory protective device" means an apparatus used to reduce the intake of airborne radioactive material by a person.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.090 "Restricted area" defined. (NRS 459.201**)** "Restricted area" means any area to which access is limited by the licensee or registrant for the purpose of protecting persons from undue risks from exposure to radiation and radioactive material. The term does not include an area used for residential quarters, although a separate room or rooms in a residential building may be set apart as a restricted area.

[Bd. of Health, Radiation Control Reg. § 1.2.37, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.092 "Roentgen" defined. (NRS 459.201**)** "Roentgen" (R) means a special unit of exposure. One roentgen equals 2.58×10^{-4} coulombs per kilogram of air.

[Bd. of Health, Radiation Control Reg. § 1.2.38, eff. 2-28-80]

NAC 459.093 "Sanitary sewerage" defined. (NRS 459.201**)** "Sanitary sewerage" means a system of public sewers for carrying off wastewater and refuse. The term does not include sewage treatment facilities, septic tanks or leach fields owned or operated by a licensee.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.094 "Sealed source" defined. (NRS 459.201**)** "Sealed source" means radioactive material that is permanently bonded or fixed in a capsule or matrix designed to prevent release and dispersal of the radioactive material under the most severe conditions which are likely to be encountered in normal use and handling.

[Bd. of Health, Radiation Control Reg. § 1.2.39, eff. 2-28-80]

NAC 459.0945 "Self-contained breathing apparatus" defined. (NRS 459.201**)** "Self-contained breathing apparatus" means an atmosphere-supplying respirator for which the breathing air source is designed to be carried by the user.

(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.095 "Shallow-dose equivalent" defined. (NRS 459.201**)** "Shallow-dose equivalent" means the dose equivalent to the skin of the whole body or the skin of an extremity that is measured at a tissue depth of 0.007 centimeter (7 mg/cm^2).

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R085-06, 11-13-2006)

NAC 459.0955 "Shipper" defined. (NRS 459.201**)** "Shipper" means an entity, including, without limitation, a waste collector, waste generator or waste processor, that offers low-level radioactive waste for transportation by consigning the waste to a different waste collector or waste processor, or to a land disposal facility.

(Added to NAC by Bd. of Health by R084-98, eff. 1-26-99)

NAC 459.0957 "Shipping papers" defined. (NRS 459.030**)** "Shipping papers" means Form 540 and, if necessary, Form 540A, published by the Nuclear Regulatory Commission.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

NAC 459.0959 "Sievert" defined. (NRS 459.030**)** "Sievert" means the special unit of any of the quantities expressed as a dose equivalent that is equal to the absorbed dose in grays multiplied by the quality factor. One sievert is equivalent to 100 rems.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

NAC 459.096 "Source material" defined. (NRS 459.201**)** "Source material" means:

1. Uranium or thorium, or any combination thereof, in any physical or chemical form; or
2. Ores which contain by weight one-twentieth of one percent (0.05 percent) or more of uranium or thorium, or any combination thereof. Source material does not include special nuclear material.

[Bd. of Health, Radiation Control Reg. § 1.2.40, eff. 2-28-80]

NAC 459.098 "Source of radiation" defined. (NRS 459.201**)** "Source of radiation" means any radioactive material, or any device or equipment emitting or capable of producing radiation.

[Bd. of Health, Radiation Control Reg. § 1.2.41, eff. 2-28-80]

NAC 459.102 "Special nuclear material in quantities not sufficient to form a critical mass" defined. (NRS

459.201) "Special nuclear material in quantities not sufficient to form a critical mass" means uranium enriched in the isotope uranium 235 in quantities not exceeding 350 grams of contained uranium 235; uranium 233 in quantities not exceeding 200 grams; plutonium in quantities not exceeding 200 grams; or any combination of them in accordance with the following formula:

1. For each kind of special nuclear material, determine the ration between the quantity of that special nuclear material and the quantity specified above for the same kind of special nuclear material.

2. The sum of such ratios for all of the kinds of special nuclear material in combination must not exceed "1" for example, unity. For example, the following quantities in combination would not exceed the limitation and are within the formula:

$$\frac{175 \text{ (grams contained U 235)}}{350} + \frac{50 \text{ (grams U 233)}}{200} + \frac{50 \text{ (grams Pu)}}{200} = 1$$

[Bd. of Health, Radiation Control Reg. § 1.2.43, eff. 2-28-80]

NAC 459.103 "Stochastic effect" defined. (NRS 459.201**)** "Stochastic effect" means the effects on health that occur randomly and for which:

1. The probability of the effect occurring, rather than its severity, is assumed to be a linear function of the dose of radiation; and

2. It is believed that there is no threshold.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.1035 "Supplied-air respirator" defined. (NRS 459.201**)** "Supplied-air respirator" means an atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user, and includes, without limitation, an airline respirator.

(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.104 "Survey" defined. (NRS 459.201**)** "Survey" means an evaluation of the radiological conditions and potential hazards incident to the production, use, transfer, release, disposal or presence of radioactive material or other sources of radiation. When appropriate, the evaluation includes, but is not limited to, a physical survey of the location of radioactive material and measurements or calculations of levels of radiation, or concentrations or quantities of radioactive material present.

[Bd. of Health, Radiation Control Reg. § 1.2.44, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.106 "Termination" defined. (NRS 459.201**)** "Termination" means the end of employment with the license or registrant or, in the case of persons not employed by the licensee or registrant, the end of a work assignment in the licensee's or registrant's restricted areas in a given calendar quarter, without expectation or specific scheduling of reentry into the restricted areas during the remainder of that calendar quarter.

[Bd. of Health, Radiation Control Reg. § 1.2.51, eff. 2-28-80]

NAC 459.108 "Test" defined. (NRS 459.201**)** "Test" means a method for determining the characteristics or condition of sources of radiation or components thereof.

[Bd. of Health, Radiation Control Reg. § 1.2.45, eff. 2-28-80]

NAC 459.109 "Threshold" defined. (NRS 459.201**)** "Threshold" means the dose of radiation below which there are no effects on the health of a person from that dose of radiation.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.1092 "Tight-fitting facepiece" defined. (NRS 459.201**)** "Tight-fitting facepiece" means a respiratory inlet covering that forms a complete seal with the face.

(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.1095 "Total effective dose equivalent" defined. (NRS 459.201**)** "Total effective dose equivalent" means the sum of the deep-dose equivalent and the committed effective dose equivalent.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.111 "Total organ dose equivalent" defined. (NRS 459.201**)** "Total organ dose equivalent" means the sum of the deep-dose equivalent and the committed dose equivalent for the organ receiving the highest dose.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.1115 "Uniform manifest" defined. (NRS 459.201**)** "Uniform manifest" means the combin of NRC Forms 540, 541 and 542, and continuation sheets, as applicable.
(Added to NAC by Bd. of Health by R084-98, eff. 1-26-99)

NAC 459.112 "Unrefined and unprocessed ore" defined. (NRS 459.201**)** "Unrefined and unprocessed ore" means ore in its natural form before any processing, such as grinding, roasting, beneficiating or refining.
[Bd. of Health, Radiation Control Reg. § 1.2.47, eff. 2-28-80]

NAC 459.114 "Unrestricted area" defined. (NRS 459.201**)** "Unrestricted area" means any area where access is not controlled or limited by the licensee or registrant.
[Bd. of Health, Radiation Control Reg. § 1.2.48, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.1142 "User-performed seal check" defined. (NRS 459.201**)** "User-performed seal check" means an action conducted by the user of a respirator to determine if the respirator is properly seated to the face. The term includes, without limitation, a negative pressure check, a positive pressure check, an irritant smoke check and an isoamyl acetate check.
(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.1145 "Very high radiation area" defined. (NRS 459.030**,** 459.201**)** "Very high radiation area" means an area, accessible to persons, in which radiation levels from a source of radiation external to the body could result in a person receiving an absorbed dose in excess of 500 rads (5 grays) in 1 hour at 1 meter from:
1. A radiation source; or
2. Any surface that the radiation penetrates.
(Added to NAC by Bd. of Health, eff. 1-18-94; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.1146 "Waste collector" defined. (NRS 459.201**)** "Waste collector" means an entity that operates pursuant to a license issued by the Nuclear Regulatory Commission or an agreement state whose principal purpose is to:
1. Collect and consolidate waste generated by others; and
2. Transfer this waste without processing or repackaging the waste to another waste collector, waste processor or land disposal facility.
(Added to NAC by Bd. of Health by R084-98, eff. 1-26-99)

NAC 459.1147 "Waste generator" defined. (NRS 459.201**)** "Waste generator" means:
1. An entity that operates pursuant to a license issued by the Nuclear Regulatory Commission or an agreement state that:
(a) Possesses any material or component that contains radioactivity or is radioactively contaminated for which the licensee foresees no further use; and
(b) Transfers this material or component to a land disposal facility, waste collector or waste processor for handling or treatment before disposal; or
2. An entity that operates pursuant to a license issued by the Nuclear Regulatory Commission or an agreement state that transfers residual waste from its facility to a land disposal facility, waste collector or waste processor for handling or treatment before disposal.
(Added to NAC by Bd. of Health by R084-98, eff. 1-26-99)

NAC 459.1148 "Waste processor" defined. (NRS 459.201**)** "Waste processor" means an entity that operates pursuant to a license issued by the Nuclear Regulatory Commission or an agreement state whose principal purpose is to process, repackage or otherwise treat low-level radioactive material or waste generated by others before the waste is transferred to a licensed land disposal facility.
(Added to NAC by Bd. of Health by R084-98, eff. 1-26-99)

NAC 459.1149 "Waste type" defined. (NRS 459.030**)** "Waste type" means a waste, within a disposal container, that has a unique physical description. The term includes, without limitation, a waste that has a specific descriptor code and a waste that is sorbed on or solidified in a specifically defined medium.
(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

NAC 459.115 "Weighting factor" defined. (NRS 459.201**)** "Weighting factor" means the proportion that the risk of stochastic effects resulting from irradiation of an organ or tissue bears to the total risk of stochastic effects when the whole body is irradiated uniformly, calculated pursuant to the requirements set forth in NAC 459.323.
(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.1152 "Whole body" defined. (NRS 459.201**)** "Whole body" means, for the purposes of determining

external doses, the head, that portion of an arm above the elbow, that portion of a leg above the knee, the trunk, including the gonads.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.1156 "Woman who has declared her pregnancy" defined. (NRS 459.030**,** 459.201**)** "Woman who has declared her pregnancy" means a woman who has voluntarily informed the relevant licensee or registrant, in writing, of her pregnancy and the estimated date of conception.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.116 "Worker" defined. (NRS 459.201**)** "Worker" means a person engaged in work under a license or registration issued by the agency and controlled by a licensee or registrant.

[Bd. of Health, Radiation Control Reg. § 1.2.50, eff. 2-28-80]

RADIATION CONTROL

General Provisions

NAC 459.118 Applicability. (NRS 459.030**,** 459.201**)** **The provisions of** NAC 459.010 to 459.950, inclusive, apply to all persons who receive, possess, use, transfer, own or acquire any source of radiation except as otherwise specifically provided in NAC 459.010 to 459.950, inclusive. Nothing in NAC 459.010 to 459.950, inclusive, applies to any person to the extent he is subject to regulation by the Nuclear Regulatory Commission.

[Bd. of Health, Radiation Control Reg. § 1.1, eff. 2-28-80]—(NAC A 9-6-88; R084-98, 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R149-07, 1-30-2008)

NAC 459.120 Exemptions. (NRS 459.201**)**

1. The Division may, upon application or its own initiative, grant exemptions or exceptions from the requirements of NAC 459.010 to 459.950, inclusive, as it determines will not result in undue hazard to public health and safety or property.

2. Common and contract carriers, freight forwarders and warehousemen who are subject to the regulations of the United States Department of Transportation or the United States Postal Service, 39 C.F.R. Parts 14 and 15, are exempt from NAC 459.010 to 459.950, inclusive, to the extent that they transport or store sources of radiation in the regular course of their carriage for another or store the sources as an incident to such transportation. Private carriers who are subject to the regulations of the United States Department of Transportation are exempt from NAC 459.010 to 459.950, inclusive, to the extent that they transport sources of radiation. Common, contract and private carriers who are not subject to the regulations of the United States Department of Transportation or the United States Postal Service are subject to applicable sections of NAC 459.010 to 459.950, inclusive.

3. Any contractor or subcontractor of the United States Department of Energy or the Nuclear Regulatory Commission who is in one of the following categories and operating within this State is exempt from NAC 459.010 to 459.950, inclusive, to the extent that, under his contract, he receives, possesses, uses, transfers or acquires sources of radiation:

(a) Any prime contractor performing work for the United States Department of Energy at sites owned or controlled by the United States Government, transporting sources of radiation to or from such sites, or performing contract services during temporary interruptions of such transportation.

(b) Any prime contractor of the United States Department of Energy performing research in, or development, manufacture, storage, testing or transportation of atomic weapons or components thereof.

(c) Any prime contractor of the United States Department of Energy using or operating a nuclear reactor or other nuclear device in a vehicle or vessel owned by the United States Government.

(d) Any other prime contractor or subcontractor of the United States Department of Energy or of the Nuclear Regulatory Commission when the State and the Nuclear Regulatory Commission jointly determine that:

(1) The exemption of the prime contractor or subcontractor is authorized by law; and

(2) Under the terms of the contract or subcontract there is adequate assurance that the work thereunder can be accomplished without undue risk to public health or safety.

[Bd. of Health, Radiation Control Reg. §§ 1.3-1.3.3.4, eff. 2-28-80]—(NAC A 9-6-88; R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.122 Prohibited equipment. (NRS 459.201**)** The use of the following equipment is prohibited:

1. Handheld fluoroscopic screens; and
2. Fluoroscopic devices for the fitting of shoes.

[Bd. of Health, Radiation Control Reg. §§ 1.8-1.8.2, eff. 2-28-80]

NAC 459.124 Records. (NRS 459.030**,** 459.060**,** 459.201**)**

1. In addition to other records required by NAC 459.010 to 459.950, inclusive, each licensee and registrant shall maintain records showing his receipt, transfer and disposal of all sources of radiation.

2. A licensee authorized to possess, in an unsealed form, radioactive material with a half-life greater 120 days shall:

(a) Before his license terminates, forward to the Division:

(1) All records of licensed radioactive material disposed of by the licensee pursuant to NAC 459.3595 to 459.3615, inclusive, including burials authorized before January 28, 1981; and

(2) All records required by paragraph (d) of subsection 2 of NAC 459.3645; and

(b) If the licensee transfers or assigns any licensed activities to another licensee, transfer to the other licensee:

(1) All records of licensed material disposed of by the licensee pursuant to NAC 459.3595 to 459.3615, inclusive, including burials authorized before January 28, 1981; and

(2) All records required by paragraph (d) of subsection 2 of NAC 459.3645.

3. A licensee to whom records are transferred pursuant to paragraph (b) of subsection 2 shall maintain the records until the termination of his license.

4. A licensee whose license is being terminated shall, before his license terminates, forward to the Division the records required by subsection 12 of NAC 459.1955.

[Bd. of Health, Radiation Control Reg. § 1.4, eff. 2-28-80]—(NAC A 9-6-88; R084-98, 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R085-06, 11-13-2006; R149-07, 1-30-2008)

NAC 459.126 Inspections. (NRS 459.201**)**

1. Each licensee and registrant shall, at any reasonable time, permit the Division to inspect sources of radiation and the premises or facilities where sources of radiation are used or stored.

2. Each licensee and registrant shall make available to the Division for inspection, upon reasonable notice, his records maintained pursuant to these regulations.

[Bd. of Health, Radiation Control Reg. §§ 1.5-1.5.2, eff. 2-28-80]

NAC 459.128 Tests. (NRS 459.201**)** On instruction from the Division, each licensee and registrant shall perform or permit the Division to perform such reasonable tests as the Division deems appropriate or necessary, including, but not limited to, tests of:

1. Sources of radiation;
2. Facilities in which sources of radiation are used or stored;
3. Instruments for detection and monitoring of radiation; and
4. Other equipment and devices used in connection with the use or storage of licensed or registered sources of radiation.

[Bd. of Health, Radiation Control Reg. §§ 1.6-1.6.4, eff. 2-28-80]

NAC 459.134 Communications with Division. (NRS 459.201**)** All communications and reports concerning the provisions of NAC 459.010 to 459.950, inclusive, and copies of regulatory guides and applications filed under those provisions should be addressed to the Radiological Health Section, Health Division, 4150 Technology Way, Suite 300, Carson City, Nevada 89706.

[Bd. of Health, Radiation Control Reg. § 1.9, eff. 2-28-80]—(NAC A 9-6-88; R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.135 Deliberate misconduct; enforcement action. (NRS 459.030**)**

1. A licensee, an employee of a licensee, a contractor or subcontractor of a licensee, or an employee of a contractor or subcontractor of a licensee, who knowingly provides to a licensee, or to a contractor or subcontractor of a licensee, any component, equipment, material or other good or service that relates to the activities of the licensee pursuant to this chapter shall not:

(a) Engage in deliberate misconduct; or

(b) Deliberately submit to the Division, a licensee, or a contractor or subcontractor of a licensee information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the Division.

2. A person who violates subsection 1 may be subject to an enforcement action by the Division.

3. As used in this section:

(a) "Contractor" includes a supplier and a consultant.

(b) "Deliberate misconduct" means an intentional act or omission that the person knows:

(1) Would cause or, if not detected, would have caused, a licensee to be in violation of any rule, regulation or order of the Division, or of any term, condition or limitation of a license issued by the Division; or

(2) Constitutes a violation of a requirement, procedure, instruction, contract, purchase order or policy of a licensee, contractor or subcontractor.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

NAC 459.136 Procedure for review of actions taken by Division; appeals. (NRS 459.201**)**

1. Any licensee or registrant who has reason to believe that an action by the Division or one or more of the Division's staff members pursuant to NAC 459.118 to 459.950, inclusive, concerning him has been incorrect or based on inadequate knowledge may, within 10 business days after receiving notice of the action, request an informal discussion with the

employee responsible for the action and the immediate supervisor of the employee.

2. If the informal discussion does not resolve the problem, the aggrieved person may, within 10 business days after the date scheduled for the informal discussion, submit a written request to the Bureau for an informal conference. The informal conference must be scheduled for a date, place and time mutually agreed upon by the aggrieved person and the Bureau, except that the informal conference must be held no later than 60 days after the date on which the Bureau received the written request.

3. Except as otherwise provided in subsection 4, the determination of the Bureau resulting from the informal conference cannot be appealed and is the final remedy available to the aggrieved person.

4. An applicant for or holder of a license or registration issued pursuant to NAC 459.118 to 459.950, inclusive, who is aggrieved by the Division taking any disciplinary action pursuant to NRS 459.010 to 459.290, inclusive, may appeal that action in accordance with NAC 439.300 to 439.395, inclusive, after exhausting the informal procedures set forth in this section, except that the Bureau may waive the informal procedures, or any portion thereof, by giving written notice to the aggrieved person.

5. As used in this section, "Bureau" means the Bureau of Health Protection Services of the Division or its successor.

[Bd. of Health, Radiation Control Reg. §§ 12.1-12.1.4, eff. 2-28-80]—(NAC A 9-6-88; 10-30-97; R149-07, 1-30-2008)

NAC 459.138 Change of method for determining calendar quarters. (NRS 459.201**)** No licensee or registrant may change the method observed by him for determining calendar quarters for purposes of NAC 459.010 to 459.950, inclusive, except at the beginning of a calendar year.

[Bd. of Health, Radiation Control Reg. part § 1.2.6, eff. 2-28-80]—(NAC A 9-6-88; R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.140 Variances. (NRS 459.201**)** A request for a variance must be made in accordance with the procedures in chapter 439 of NAC, regulations governing the procedures for seeking variances from board regulations.

[Bd. of Health, Radiation Control Reg. §§ 12.2 & 12.2.1, eff. 2-28-80]

NAC 459.141 Termination of declaration of woman who has declared her pregnancy. (NRS 459.030**)** The declaration of a woman who has declared her pregnancy remains in effect until the woman making the declaration:

1. Withdraws the declaration in writing; or
2. Is no longer pregnant.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

NAC 459.142 Severability. (NRS 459.201**)** If any of the provisions of NAC 459.010 to 459.950, inclusive, or any application thereof to any person, thing or circumstance is held invalid, it is intended that such invalidity not affect the remaining provisions, or their application, that can be given effect without the invalid provision or application.

[Bd. of Health, Radiation Control Reg. § 1.10, eff. 2-28-80]—(NAC A 9-6-88; R084-98, 1-26-99; R149-07, 1-30-2008)

Registration of Radiation Machines

NAC 459.150 Scope of provisions; registration required. (NRS 459.201**)**

1. NAC 459.150 to 459.166, inclusive, provide for the registration of radiation machines and registration of persons who install or perform service upon radiation machines.

2. No person may repair, maintain or install radiation machines unless he is registered in conformance with the requirement of NAC 459.150 to 459.166, inclusive.

3. A person may operate a radiation machine only if there is a valid registration or the operator is registered with the Division to install, service or repair the machine.

[Bd. of Health, Radiation Control Reg. §§ 2.12.1.2, eff. 2-28-80; § 2.1.3, eff. 10-15-81]—(NAC A 4-27-84; 9-1-89)

NAC 459.152 Exemptions from requirements. (NRS 459.201**)**

1. Electronic equipment that produces radiation incidental to its operation for other purposes is exempt from the requirements of registration and notification in NAC 459.150 to 459.166, inclusive, if the dose equivalent rate, averaged over an area of 10 square centimeters, does not exceed 0.5 mrem per hour at 5 cm from any accessible surface of the equipment. The production, testing or factory servicing of the equipment is not exempt.

2. Radiation machines which:

(a) Are in transit or in storage incident to transportation; or

(b) Have been previously registered and are disassembled or in storage,

➥ are exempt from the requirements of NAC 459.150 to 459.166, inclusive.

3. Domestic television receivers are exempt from the requirements of NAC 459.150 to 459.166, inclusive.

[Bd. of Health, Radiation Control Reg. §§ 2.2-2.2.3, eff. 2-28-80]—(NAC A 4-27-84)

NAC 459.154 Applications for registration; temporary use of portable machine. (NRS 439.150**,** 459.2

1. Except as otherwise provided in subsection 2, each person who controls an unregistered, operational radiation machine shall apply to the Division for registration of the machine within 30 days after installing the machine.

2. A person who brings a portable machine into this State for a temporary use of 180 days or less in any calendar year:

(a) Must apply to the Division for registration of the machine for a temporary use at least 3 working days before using it in this State;

(b) Shall comply with all other applicable provisions of NAC 459.010 to 459.950, inclusive;

(c) Shall furnish the Division with any other information it may reasonably request; and

(d) Shall not use the machine in this State more than 180 days per calendar year.

3. The application must be made on the Division's Form NRC-4, Application for Registration of Radiation Machine. A copy of the form may be obtained from the Division. A separate application and registration are required for each control console of a radiation machine.

4. Each application for registration of an X-ray machine must contain a list of the numbers of the X-ray tubes associated with a control panel.

5. Each person who controls a radiation machine must designate on the application form a person where the machine is located who is responsible for protection against radiation.

6. Each person who seeks to engage in the business of installing radiation machines, furnishing services or repairing radiation machines in this State must apply for registration with the Division and receive a certificate of registration before furnishing any services.

7. Each application for registration by a person to install, service or repair radiation machines must be accompanied by a nonrefundable annual fee of $140, or the application must not be acted upon by the Division.

[Bd. of Health, Radiation Control Reg. §§ 2.3, 2.3.2, & 2.3.3, eff. 2-28-80; § 2.3.1, eff. 2-28-80; A 10-15-81; §§ 2.3.1.1 & 2.3.1.2, eff. 10-15-81]—(NAC A 4-27-84; 6-23-86; 9-6-88; 9-6-88; 4-18-90; 1-24-92; R084-98, 1-26-99; R149-03, 12-3-2003; R149-07, 1-30-2008)

NAC 459.156 Registration certificate: Issuance; incorporation of additional requirements and conditions. (NRS 459.201**)**

1. Upon a determination that an applicant meets the requirements of NAC 459.150 to 459.166, inclusive, the Division shall issue a registration certificate for the radiation machine or for the person installing, servicing or repairing radiation machines on the appropriate form.

2. The Division may incorporate in the registration certificate at the time of issuance or thereafter by appropriate regulations or order any additional requirements and conditions with respect to the receipt, possession, use and transfer of radiation machines by the registrant as it deems appropriate or necessary.

[Bd. of Health, Radiation Control Reg. §§ 2.4-2.4.2, eff. 2-28-80]—(NAC A 4-27-84)

NAC 459.158 Registration certificate: Expiration. (NRS 459.201**)** Except as provided by NAC 459.160, each registration certificate expires on the last day of the month and year indicated on the certificate or 30 days after notification of expiration by the Division.

[Bd. of Health, Radiation Control Reg. § 2.5, eff. 2-28-80]—(NAC A 4-27-84)

NAC 459.160 Registration certificate: Renewal. (NRS 459.201**)**

1. An application for renewal of registration must be filed in accordance with NAC 459.154.

2. If a registrant files an application for renewal of his registration accompanied by the appropriate fee at least 10 days before its expiration, his registration does not expire until the status of his registration has been determined by the Division.

[Bd. of Health, Radiation Control Reg. §§ 2.6 & 2.6.1, eff. 2-28-80; § 2.6.2, eff. 2-28-80; A 10-15-81]—(NAC A 4-27-84)

NAC 459.161 Fees; failure to submit fee. (NRS 439.150**,** 459.201**)**

1. An application for the registration of a radiation machine submitted pursuant to NAC 459.154 must be accompanied by a nonrefundable fee for each X-ray tube or electron source which is installed in the radiation machine, as follows:

(a) Medical use, other than mammography, $500.

(b) Veterinary use, $150.

(c) Dental use, $140.

(d) Industrial use, $200.

(e) Academic use, $150.

(f) Accelerator, $550.

2. Except as otherwise provided in subsection 3, if the Division issues a registration certificate pursuant to NAC 459.156, the registrant must, for each year the certificate is valid, submit to the Division a nonrefundable renewal fee in an amount equal to the appropriate fee set forth in subsection 1.

3. The renewal fee must be received by the Division not later than the date on which the registration expires. If the fee is not received by that date, the registrant shall:

(a) Stop operating the radiation machine which does not have a valid registration on or before the date the registration expires; or

(b) Submit to the Division within 5 days after the registration expires:

(1) An application for renewal of the registration;

(2) A fee in an amount that is equal to the appropriate fee set forth in subsection 1; and

(3) A fee for late payment of $56 per registration.

4. Any application for registration or renewal of registration which is not accompanied by the appropriate fees will not be acted upon by the Division until such fees are paid.

5. An application for a certificate of authorization for a radiation machine must be accompanied by a nonrefundable fee for each machine as required pursuant to NAC 457.295.

(Added to NAC by Bd. of Health, eff. 9-1-89; A 1-24-92; 11-1-95; R149-03, 12-3-2003; R085-06, 11-13-2006; R149-07, 1-30-2008)

NAC 459.162 Report of changes. (NRS 459.201**)** The registrant shall notify the Division in writing before making any change which would render the information contained in his application for registration or his registration certificate, or both, no longer accurate.

[Bd. of Health, Radiation Control Reg. § 2.7, eff. 2-28-80]

NAC 459.164 Advertisement. (NRS 459.201**)** No person may advertise the fact that he or his facility is registered with the Division pursuant to the provisions of NAC 459.150 to 459.166, inclusive, or imply that any activity under the registration has been approved by the Division.

[Bd. of Health, Radiation Control Reg. § 2.8, eff. 2-28-80]—(NAC A 4-27-84)

NAC 459.166 Transfer, loan, disposal, assembly or installation of machine, supplies or equipment.(NRS 459.201**)**

1. Any person who sells, leases, transfers, lends, disposes, assembles or installs radiation machines in this State or sells, leases, transfers or disposes of a radiation machine currently registered in this State shall, within 15 days, notify the Division of:

(a) The name and address of each person who has received such a machine;

(b) The manufacturer, model and serial number of each control console and X-ray tube transferred; and

(c) The date of transfer of each machine.

2. A person shall not make, sell, lease, transfer, lend, assemble or install any radiation machine or the supplies and equipment used in connection with such a machine unless the machine and any supplies and equipment, when properly placed in operation and used, meet the applicable requirements of NAC 459.010 to 459.950, inclusive.

[Bd. of Health, Radiation Control Reg. §§ 2.9-2.9.2, eff. 2-28-80]—(NAC A 4-27-84; R084-98, 1-26-99; R149-07, 1-30-2008)

Licensing of Radioactive Material

NAC 459.180 Applicable provisions. (NRS 459.030, 459.201**)**

1. The provisions of NAC 459.180 to 459.313, inclusive, provide for the licensing of radioactive materials. No person may receive, possess, use, transfer, own or acquire radioactive material except as authorized in a specific or general license issued pursuant to NAC 459.180 to 459.313, inclusive, or as otherwise provided in those sections.

2. In addition to the requirements of NAC 459.180 to 459.313, inclusive, all licensees are subject to the requirements of NAC 459.010 to 459.142, inclusive, 459.320 to 459.374, inclusive, and 459.780 to 459.794, inclusive. Licensees engaged in industrial radiography are subject to the requirements of NAC 459.737, and licensees using radioactive materials in the healing arts are subject to the requirements of NAC 459.3066, 459.3801 and 459.3805.

[Bd. of Health, Radiation Control Reg. §§ 3.1 & 3.1.1, eff. 2-28-80; § 3.1.2, eff. 2-28-80; A 10-15-81]—(NAC A 4-27-84; 9-1-89; 1-18-94; 11-1-95; R084-98, 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R085-06, 11-13-2006; R149-07, 1-30-2008)

NAC 459.182 Exemptions for source materials. (NRS 459.201**)**

1. Any person is exempt from NAC 459.180 to 459.313, inclusive, to the extent that he receives, possesses, uses, owns or transfers source material in any chemical mixture, compound, solution or alloy in which the source material is by weight less than 0.05 percent of the mixture, compound, solution or alloy.

2. Any person is exempt from NAC 459.180 to 459.313, inclusive, to the extent that he receives, possesses, uses or transfers unrefined and unprocessed ore containing source material. Except as authorized in a specific license, such a person may not refine or process such ore.

3. Any person is exempt from NAC 459.180 to 459.313, inclusive, to the extent that he receives, possesses, uses or transfers any of the following:

(a) Any quantities of thorium contained in:

(1) Incandescent gas mantles;

(2) Vacuum tubes;
(3) Welding rods;
(4) Electric lamps for illuminating purposes if each lamp does not contain more than 50 milligrams of thorium;
(5) Germicidal lamps, sunlamps and lamps for outdoor or industrial lighting if each lamp does not contain more than 2 grams of thorium;
(6) Rare earth metals and compounds, mixtures and products containing not more than 0.25 percent by weight thorium, uranium or any combination of these; or
(7) Personnel neutron dosimeters if each dosimeter does not contain more than 50 milligrams of thorium.

(b) Source material contained in the following products:
(1) Glazed ceramic tableware if the glaze contains not more than 20 percent by weight source material;
(2) Glassware containing not more than 10 percent by weight source material, but not including commercially manufactured glass brick, pane glass, ceramic tile or other glass, glass enamel or ceramic used in construction; or
(3) Piezoelectric ceramic containing not more than 2 percent by weight source material.

(c) Photographic film, negatives and prints containing uranium or thorium.

(d) Any finished product or part which is fabricated of or contains tungsten-thorium or magnesium-thorium alloys if the thorium content of the alloy does not exceed 4 percent by weight. This exemption does not authorize the chemical, physical, or metallurgical treatment or processing of any such product or part.

(e) Uranium contained in counterweights installed in aircraft, rockets, projectiles and missiles, or stored or handled in connection with installation or removal of counterweights if:
(1) The counterweights are manufactured in accordance with a specific license issued by theNuclear Regulatory Commission authorizing distribution by the licensee pursuant to 10 C.F.R. Part 40;
(2) Each counterweight has been impressed with the following legend clearly legible through the plating or other covering: “DEPLETED URANIUM”; and
(3) Each counterweight is durably and legibly labeled or marked with the identification of the manufacturer and the statement: “UNAUTHORIZED ALTERATIONS PROHIBITED.”

➥ The exemption contained in this paragraph does not authorize the chemical, physical or metallurgical treatment or processing of any such counterweights other than repair or restoration of any plating or other covering. The requirements specified in subparagraphs (2) and (3) need not be met by counterweights manufactured before December 31, 1969, provided that such counterweights are impressed with the legend, “CAUTION - RADIOACTIVE MATERIAL - URANIUM,” as previously required by the regulations of the State Board of Health before February 28, 1980.

(f) Natural or depleted uranium metal used as shielding in any shipping container if:
(1) The shipping container is conspicuously and legibly impressed with the legend “CAUTION - RADIOACTIVE SHIELDING - URANIUM”; and
(2) The uranium metal is encased in mild steel or an equally fire resistant metal with a wall thickness of one-eighth of an inch.

(g) Thorium contained in finished optical lenses if each lens does not contain more than 30 percent by weight of thorium. The exemption contained in this paragraph does not authorize either:
(1) The shaping, grinding or polishing of such lenses or manufacturing processes other than the assembly of such lenses into optical systems and devices without any alteration of the lenses; or
(2) The receipt, possession, use or transfer of thorium contained in contact lenses, in spectacles, or in eyepieces in binoculars or other optical instruments.

(h) Uranium contained in detector heads for use in fire-detection units if each detector head contains not more than 0.005 microcurie of uranium.

(i) Thorium contained in any finished aircraft engine part containing nickel-thoria alloy if:
(1) The thorium is dispersed in the nickel-thoria alloy in the form of finely divided thoria (thorium dioxide); and
(2) The thorium content in the nickel-thoria alloy does not exceed 4 percent by weight.

4. The exemptions in subsection 3 do not authorize the manufacture of any of the products described.

[Bd. of Health, Radiation Control Reg. §§ 3.2-3.2.1.4, eff. 2-28-80]—(NAC A 9-6-88; R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.184 Exemption for certain concentrations and quantities of radioactive material other than source material. (NRS 459.030**,** 459.201**)**

1. Except as otherwise provided in subsection 2, any person is exempt from NAC 459.180 to 459.313, inclusive, to the extent that he receives, possesses, uses, transfers, owns or acquires products or materials containing:
(a) Radioactive material in concentrations not in excess of those listed in NAC 459.186; or
(b) Naturally occurring radioactive material that contains less than 5 picocuries of radium 226 per gram of material.

2. A person shall not introduce radioactive material into a product or material knowing or having reason to believe that it will be transferred to persons exempt under subsection 1 or the equivalent regulations of the Nuclear Regulatory Commission or any agreement state, except in accordance with a specific license issued pursuant to NAC 459.276 or the general licenses provided in NAC 459.210.

3. Except as otherwise provided in subsections 4 and 5, any person is exempt from the provisions of NAC 459.010 to 459.950, inclusive, to the extent that he receives, possesses, uses, transfers, owns or acquires radioactive material in

individual quantities each of which does not exceed the applicable quantity set forth in NAC 459.188.

4. The provisions of NAC 459.180 to 459.313, inclusive, do not authorize the production, packaging or repackaging of radioactive material for purposes of commercial distribution or the incorporation of radioactive material into products intended for commercial distribution.

5. A person shall not, for purposes of commercial distribution, transfer radioactive material in the individual quantities in NAC 459.188, knowing or having reason to believe that such quantities of radioactive material will be transferred to persons exempt under subsections 3 and 4 or the equivalent regulations of the Nuclear Regulatory Commission or any agreement state, except in accordance with a specific license issued by the Nuclear Regulatory Commission pursuant to 10 C.F.R. § 32.18 or by the Division pursuant to NAC 459.278. The license must state that the radioactive material may be transferred by the licensee to persons exempt under subsections 3 and 4 or the equivalent regulations of the Nuclear Regulatory Commission or any agreement state.

[Bd. of Health, Radiation Control Reg. §§ 3.2.2-3.2.2.2.3, eff. 2-28-80]—(NAC A by R084-98, 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R149-07, 1-30-2008)

NAC 459.186 Table of exempt concentrations. (NRS 459.201) Exempt concentrations are:

Element (atomic number)	Isotope	Column I Gas concentration µCi/ml[1]	Column II Liquid and solid concentration µCi/ml[2]
Antimony (51)	Sb 122		3×10^{-4}
	Sb 124		2×10^{-4}
	Sb 125		1×10^{-3}
Argon (18)	Ar 37	1×10^{-3}	
	Ar 41	4×10^{-7}	
Arsenic (33)	As 73		5×10^{-3}
	As 74		5×10^{-4}
	As 76		2×10^{-4}
	As 77		8×10^{-4}
Barium (56)	Ba 131		2×10^{-3}
	Ba 140		3×10^{-4}
Beryllium (4)	Be 7		2×10^{-2}
Bismuth (83)	Bi 206		4×10^{-4}
Bromine (35)	Br 82	4×10^{-7}	3×10^{-3}
Cadmium (48)	Cd 109		2×10^{-3}
	Cd 115m		3×10^{-4}
	Cd 115		3×10^{-4}
Calcium (20)	Ca 45		9×10^{-5}
	Ca 47		5×10^{-4}
Carbon (6)	C 14	1×10^{-6}	8×10^{-3}
Cerium (58)	Ce 141		9×10^{-4}
	Ce 143		4×10^{-4}
	Ce 144		1×10^{-4}
Cesium (55)	Cs 131		2×10^{-2}
	Cs 134m		6×10^{-2}
	Cs 134		9×10^{-5}
Chlorine (17)	Cl 38	9×10^{-7}	4×10^{-3}
Chromium (24)	Cr 51		2×10^{-2}
Cobalt (27)	Co 57		5×10^{-3}
	Co 58		1×10^{-3}
	Co 60		5×10^{-4}
Copper (29)	Cu 64		3×10^{-3}
Dysprosium (66)	Dy 165		4×10^{-3}
	Dy 166		4×10^{-4}
Erbium (68)	Er 169		9×10^{-4}
	Er 171		1×10^{-3}
Europium (63)	Eu 152 (Tr=9.2 h)		6×10^{-4}
	Eu 155		2×10^{-3}
Fluorine (9)	F 18	2×10^{-6}	8×10^{-3}
Gadolinium (64)	Gd 153		2×10^{-3}
	Gd 159		8×10^{-4}

Gallium (31)	Ga 72		4×10
Germanium (32)	Ge 71		2×10^{-2}
Gold (79)	Au 196		2×10^{-3}
	Au 198		5×10^{-4}
	Au 199		2×10^{-3}
Hafnium (72)	Hf 181		7×10^{-4}
Hydrogen (1)	H 3	5×10^{-6}	3×10^{-2}
Indium (49)	In 113m		1×10^{-2}
	In 114m		2×10^{-4}
Iodine (53)	I 126	3×10^{-9}	2×10^{-5}
	I 131	3×10^{-9}	2×10^{-5}
	I 132	8×10^{-8}	6×10^{-4}
	I 133	1×10^{-8}	7×10^{-5}
	I 134	2×10^{-7}	1×10^{-3}
Iridium (77)	Ir 190		2×10^{-3}
	Ir 192		4×10^{-4}
	Ir 194		3×10^{-4}
Iron (26)	Fe 55		8×10^{-3}
	Fe 59		6×10^{-4}
Krypton (36)	Kr 85m	1×10^{-6}	
	Kr 85	3×10^{-6}	
Lanthanum (57)	La 140		2×10^{-4}
Lead (82)	Pb 203		4×10^{-3}
Lutetium (71)	Lu 177		1×10^{-3}
Manganese (25)	Mn 52		3×10^{-4}
	Mn 54		1×10^{-3}
	Mn 56		1×10^{-3}
Mercury (80)	Hg 197m		2×10^{-3}
	Hg 197		3×10^{-3}
	Hg 203		2×10^{-4}
Molybdenum (42)	Mo 99		2×10^{-3}
Neodymium (60)	Nd 147		6×10^{-4}
	Nd 149		3×10^{-3}
Nickel (28)	Ni 65		1×10^{-3}
Niobium (Columbium) (41)	Nb 95		1×10^{-3}
	Nb 97		9×10^{-3}
Osmium (76)	Os 185		7×10^{-4}
	Os 191m		3×10^{-2}
	Os 191		2×10^{-3}
	Os 193		6×10^{-4}
Palladium (46)	Pd 103		3×10^{-3}
	Pd 109		9×10^{-4}
Phosphorus (15)	P 32		2×10^{-4}
Platinum (78)	Pt 191		1×10^{-3}
	Pt 193m		1×10^{-2}
	Pt 197m		1×10^{-2}
	Pt 197		1×10^{-3}
Potassium (19)	K 42		3×10^{-3}
Praseodymium (59)	Pr 142		3×10^{-4}
	Pr 143		5×10^{-4}
Promethium (61)	Pm 147		2×10^{-3}
	Pm 149		4×10^{-4}
Rhenium (75)	Re 183		6×10^{-3}
	Re 186		9×10^{-4}
	Re 188		6×10^{-4}
Rhodium (45)	Rh 103m		1×10^{-1}
	Rh 105		1×10^{-3}
Rubidium (37)	Rb 86		7×10^{-4}
Ruthenium (44)	Ru 97		4×10^{-3}
	Ru 103		8×10^{-4}
	Ru 105		1×10^{-3}
	Ru 106		1×10^{-4}
Samarium (62)	Sm 153		8×10^{-4}
Scandium (21)	Sc 46		4×10^{-4}
	Sc 47		9×10^{-4}
	Sc 48		3×10^{-4}
Selenium (34)	Se 75		3×10^{-3}
Silicon (14)	Si 31		9×10^{-3}
Silver (47)	Ag 105		1×10^{-3}
	Ag 110m		3×10^{-4}

	Ag 111		4×10^{-4}
Sodium (11)	Na 24		2×10^{-3}
Strontium (38)	Sr 85		1×10^{-3}
	Sr 89		1×10^{-4}
	Sr 91		7×10^{-4}
	Sr 92		7×10^{-4}
Sulfur (16)	S 35	9×10^{-8}	6×10^{-4}
Tantalum (73)	Ta 182		4×10^{-4}
Technetium (43)	Tc 96m		1×10^{-1}
	Tc 96		1×10^{-3}
Tellurium (52)	Te 125m		2×10^{-3}
	Te 127m		6×10^{-4}
	Te 127		3×10^{-3}
	Te 129m		3×10^{-4}
	Te 131m		6×10^{-4}
	Te 132		3×10^{-4}
Terbium (65)	Tb 160		4×10^{-4}
Thallium (81)	Tl 200		4×10^{-3}
	Tl 201		3×10^{-3}
	Tl 202		1×10^{-3}
	Tl 204		1×10^{-3}
Thulium (69)	Tm 170		5×10^{-4}
	Tm 171		5×10^{-3}
Tin (50)	Sn 113		9×10^{-4}
	Sn 125		2×10^{-4}
Tungsten (Wolfram) (74)	W 181		4×10^{-3}
	W 187		7×10^{-4}
Vanadium (23)	V 48		3×10^{-4}
Xenon (54)	Xe 131m	4×10^{-6}	
	Xe 133	3×10^{-6}	
	Xe 135	1×10^{-6}	
Ytterbium (70)	Yb 175		1×10^{-3}
Yttrium (39)	Y 90		2×10^{-4}
	Y 91m		3×10^{-2}
	Y 91		3×10^{-4}
	Y 92		6×10^{-4}
	Y 93		3×10^{-4}
Zinc (30)	Zn 65		1×10^{-3}
	Zn 69m		7×10^{-4}
	Zn 69		2×10^{-2}
Zirconium (40)	Zr 95		6×10^{-4}
	Zr 97		2×10^{-4}
Beta, gamma, or both, emitting radioactive material not listed above with a half-life of less than 3 years.		1×10^{-10}	1×10^{-6}

[1] Values are given in Column I only for those materials normally used as gases.

[2] µCi/gm for solids.

m Metastable state.

Concentration present in the product and the exempt concentration established in this section for the specific isotope when not in combination. The sum of such ratios may not exceed “1,” that is, unity. An example is:

$$\frac{\text{Concentration of Isotope A in Product}}{\text{Exempt concentration of Isotope A}} + \frac{\text{Concentration of Isotope B in Product}}{\text{Exempt concentration of Isotope B}} \leq 1$$

Note 1: Many radioisotopes disintegrate into isotopes which are also radioactive. In expressing the concentrations in the table, the activity stated is that of the parent isotope and takes into account the daughters.

Note 2: For the purposes of NAC 459.184 where there is involved a combination of isotopes, the limit for the combination should be derived as follows: Determine for each isotope in the product the ratio between the concentration present in the product and the exempt concentration.

[Bd. of Health, Radiation Control Reg. Art. 3, Appendix A, eff. 2-28-80]—(NAC A by R084-98, 1-26-99)

NAC 459.188 Table of exempt quantities. (NRS 459.201**)** Exempt quantities are:

Radioactive Material	Microcuries
Antimony-122 (Sb-122)	100
Antimony-124 (Sb-124)	10
Antimony-125 (Sb-125)	10
Arsenic-73 (As-73)	100
Arsenic-74 (As-74)	10
Arsenic-76 (As-76)	10
Arsenic-77 (As-77)	100
Barium-131 (Ba-131)	10
Barium-133 (Ba-133)	10
Barium-140 (Ba-140)	10
Bismuth-210 (Bi-210)	1
Bromine-82 (Br-82)	10
Cadmium-109 (Cd-109)	10
Cadmium-115m (Cd-115m)	10
Cadmium-115 (Cd-115)	100
Calcium-45 (Ca-45)	10
Calcium-47 (Ca-47)	10
Carbon-14 (C-14)	100
Cerium-141 (Ce-141)	100
Cerium-143 (Ce-143)	100
Cerium-144 (Ce-144)	1
Cesium-129 (Cs-129)	100
Cesium-131 (Cs-131)	1,000
Cesium-134m (Cs-134m)	100
Cesium-134 (Cs-134)	1
Cesium-135 (Cs-135)	10
Cesium-136 (Cs-136)	10
Cesium-137 (Cs-137)	10
Chlorine-36 (Cl-36)	10
Chlorine-38 (Cl-38)	10
Chromium-51 (Cr-51)	1,000
Cobalt-57 (Co-57)	100
Cobalt-58m (Co-58m)	10
Cobalt-58 (Co-58)	10
Cobalt-60 (Co-60)	1
Copper-64 (Cu-64)	100
Dysprosium-165 (Dy-165)	10
Dysprosium-166 (Dy-166)	100
Erbium-169 (Er-169)	100
Erbium-171 (Er-171)	100
Europium-152 (Eu-152)9.2h	100

Europium-152 (Eu-152)13 yr	1
Europium-154 (Eu-154)	1
Europium-155 (Eu-155)	10
Fluorine-18 (F-18)	1,000
Gadolinium-153 (Gd-153)	10
Gadolinium-159 (Gd-159)	100
Gallium-67 (Ga-67)	100
Gallium-72 (Ga-72)	10
Germanium-71 (Ge-71)	100
Gold-198 (Au-198)	100
Gold-199 (Au-199)	100
Hafnium-181 (Hf-181)	10
Holmium-166 (Ho-166)	100
Hydrogen-3 (H-3)	1,000
Indium-111 (In-111)	100
Indium-113m (In-113m)	100
Indium-114m (In-114m)	10
Indium-115m (In-115m)	100
Indium-115 (In-115)	10
Iodine-123 (I-123)	100
Iodine-125 (I-125)	1
Iodine-126 (I-126)	1
Iodine-129 (I-129)	0.1
Iodine-131 (I-131)	1
Iodine-132 (I-132)	10
Iodine-133 (I-133)	1
Iodine-134 (I-134)	10
Iodine-135 (I-135)	10
Iridium-192 (Ir-192)	10
Iridium-194 (Ir-194)	100
Iron-52 (Fe-52)	10
Iron-55 (Fe-55)	100
Iron-59 (Fe-59)	10
Krypton-85 (Kr-85)	100
Krypton-87 (Kr-87)	10
Lanthanum-140 (La-140)	10
Lutetium-177 (Lu-177)	100
Manganese-52 (Mn-52)	10
Manganese-54 (Mn-54)	10
Manganese-56 (Mn-56)	10
Mercury-197m (Hg-197m)	100
Mercury-197 (Hg-197)	100
Mercury-203 (Hg-203)	10
Molybdenum-99 (Mo-99)	100
Neodymium-147 (Nd-147)	100
Neodymium-149 (Nd-149)	100
Nickel-59 (Ni-59)	100
Nickel-63 (Ni-63)	10
Nickel-65 (Ni-65)	100
Niobium-93m (Nb-93m)	10
Niobium-95 (Nb-95)	10
Niobium-97 (Nb-97)	10
Osmium-185 (Os-185)	10
Osmium-191m (Os-191m)	100
Osmium-191 (Os-191)	100

Osmium-193 (Os-193)	100
Palladium-103 (Pd-103)	100
Palladium-109 (Pd-109)	100
Phosphorus-32 (P-32)	10
Platinum-191 (Pt-191)	100
Platinum-193m (Pt-193m)	100
Platinum-193 (Pt-193)	100
Platinum-197m (Pt-197m)	100
Platinum-197 (Pt-197)	100
Polonium-210 (Po-210)	0.1
Potassium-42 (K-42)	10
Potassium-43 (K-43)	10
Praseodymium-142 (Pr-142)	100
Praseodymium-143 (Pr-143)	100
Promethium-147 (Pm-147)	10
Promethium-149 (Pm-149)	10
Rhenium-186 (Re-186)	100
Rhenium-188 (Re-188)	100
Rhodium-103m (Rh-103m)	100
Rhodium-105 (Rh-105)	100
Rubidium-81 (Rb-81)	10
Rubidium-86 (Rb-86)	10
Rubidium-87 (Rb-87)	10
Ruthenium-97 (Ru-97)	100
Ruthenium-103 (Ru-103)	10
Ruthenium-105 (Ru-105)	10
Ruthenium-106 (Ru-106)	1
Samarium-151 (Sm-151)	10
Samarium-153 (Sm-153)	100
Scandium-46 (Sc-46)	10
Scandium-47 (Sc-47)	100
Scandium-48 (Sc-48)	10
Selenium-75 (Se-75)	10
Silicon-31 (Si-31)	100
Silver-105 (Ag-105)	10
Silver-110m (Ag-110m)	1
Silver-111 (Ag-111)	100
Sodium-22 (Na-22)	10
Sodium-24 (Na-24)	10
Strontium-85 (Sr-85)	10
Strontium-89 (Sr-89)	1
Strontium-90 (Sr-90)	0.1
Strontium-91 (Sr-91)	10
Strontium-92 (Sr-92)	10
Sulphur-35 (S-35)	100
Tantalum-182 (Ta-182)	10
Technetium-96 (Tc-96)	10
Technetium-97m (Tc-97m)	100
Technetium-97 (Tc-97)	100
Technetium-99m (Tc-99m)	100
Technetium-99 (Tc-99)	10
Tellurium-125m (Te-125m)	10
Tellurium-127m (Te-127m)	10
Tellurium-127 (Te-127)	100
Tellurium-129m (Te-129m)	10

Tellurium-129 (Te-129)	100
Tellurium-131m (Te-131m)	10
Tellurium-132 (Te-132)	10
Terbium-160 (Tb-160)	10
Thallium-200 (Tl-200)	100
Thallium-201 (Tl-201)	100
Thallium-202 (Tl-202)	100
Thallium-204 (Tl-204)	10
Thulium-170 (Tm-170)	10
Thulium-171 (Tm-171)	10
Tin-113 (Sn-113)	10
Tin-125 (Sn-125)	10
Tungsten-181 (W-181)	10
Tungsten-185 (W-185)	10
Tungsten-187 (W-187)	100
Vanadium-48 (V-48)	10
Xenon-131m (Xe-131m)	1,000
Xenon-133 (Xe-133)	100
Xenon-135 (Xe-135)	100
Ytterbium-175 (Yb-175)	100
Yttrium-87 (Y-87)	10
Yttrium-90 (Y-90)	10
Yttrium-91 (Y-91)	10
Yttrium-92 (Y-92)	100
Yttrium-93 (Y-93)	100
Zinc-65 (Zn-65)	10
Zinc-69m (Zn-69m)	100
Zinc-69 (Zn-69)	1,000
Zirconium-93 (Zr-93)	10
Zirconium-95 (Zr-95)	10
Zirconium-97 (Zr-97)	10
Any radioactive material not listed above other than alpha-emitting radioactive material.	0.1

[Bd. of Health, Radiation Control Reg. Art. 3, Appendix B, eff. 2-28-80]

NAC 459.190 Miscellaneous exemptions: Certain timepieces, lock illuminators, precision balances, automobile shift quadrants, marine navigational instruments, thermostats, electron tubes and ionizing radiation measuring instruments. (NRS 459.030, 459.201**)**

1. Except for persons who apply radioactive material to, or persons who incorporate radioactive material into, the following products, any person is exempt from NAC 459.010 to 459.950, inclusive, to the extent that he receives, possesses, uses, transfers, owns or acquires the following products:

(a) Timepieces, hands or dials containing not more than the following specified quantities of radioactive material and not exceeding the following specified levels of radiation:

(1) Twenty-five millicuries (925 megabecquerels) of tritium per timepiece.

(2) Five millicuries (185 megabecquerels) of tritium per hand.

(3) Fifteen millicuries (555 megabecquerels) of tritium per dial. If bezels are used, they are considered part of the dial.

(4) One hundred microcuries (3.7 megabecquerels) of promethium-147 per watch or 200 microcuries (7.4 megabecquerels) of promethium-147 per other timepiece.

(5) Twenty microcuries (740 kilobecquerels) of promethium-147 per watch hand or 40 microcuries(1.48 megabecquerels) of promethium-147 per other timepiece hand.

(6) Sixty microcuries (2.22 megabecquerels) of promethium-147 per watch dial or 120 microcuries(4.44 megabecquerels) of promethium-147 per other timepiece dial. If bezels are used, they are considered part of the dial.

(7) Fifteen-hundredths microcurie (5.55 kilobecquerels) of radium per timepiece.

(8) Three-hundredths microcurie (1.11 kilobecquerels) of radium per hand.

(9) Nine-hundredths microcurie (3.33 kilobecquerels) of radium per dial. If bezels are used, they are considered part of the dial.

(10) Notwithstanding these quantities, the levels of radiation from hands and dials containing promethium-147 or radium-226 must not exceed, when measured through 50 milligrams per square centimeter of absorber:

(I) For wrist watches, 0.1 millirad (1 microgray) per hour at 10 centimeters from any surface;

(II) For pocket watches, 0.1 millirad (1 microgray) per hour at 1 centimeter from any surface, also radium must not be used for pocket watches; and

(III) For any other timepiece, 0.2 millirad (2 micrograys) per hour at 10 centimeters from any surface.

(11) One microcurie (37 kilobecquerels) of radium-226 per timepiece in timepieces acquired before February 28, 1980.

(b) Lock illuminators containing not more than 15 millicuries (555 megabecquerels) of tritium or not more than 2 millicuries (74 megabecquerels) of promethium-147 installed in automobile locks. The levels of radiation from each lock illuminator containing promethium-147 must not exceed 1 millirad (10 micrograys) per hour at 1 centimeter from any surface when measured through 50 milligrams per square centimeter of absorber.

(c) Precision balances containing no more than 1 millicurie (37 megabecquerels) of tritium per balance or 0.5 millicurie (18.5 megabecquerels) of tritium per balance part.

(d) Automobile shift quadrants containing not more than 25 millicuries (925 megabecquerels) of tritium.

(e) Marine compasses containing not more than 750 millicuries (27.75 gigabecquerels) of tritium gas and other marine navigational instruments containing not more than 250 millicuries (9.25 gigabecquerels) of tritium gas.

(f) Thermostat dials and pointers containing not more than 25 millicuries (925 megabecquerels) of tritium per thermostat.

(g) Electron tubes, if each tube does not contain more than one of the following specified quantities of radioactive material:

(1) One hundred fifty millicuries (5.55 gigabecquerels) of tritium per microwave receiver protector tube or 10 millicuries (370 megabecquerels) of tritium per any other electron tube;

(2) One microcurie (37 kilobecquerels) of cobalt-60;

(3) Five microcuries (185 kilobecquerels) of nickel-63;

(4) Thirty microcuries (1.11 megabecquerels) of krypton-85;

(5) Five microcuries (185 kilobecquerels) of cesium-137;

(6) Thirty microcuries (1.11 megabecquerels) of promethium-147; or

(7) One microcurie (37 kilobecquerels) of radium-226,

➥ and if the levels of radiation from each electron tube containing radioactive material do not exceed 1 millirad (10 micrograys) per hour at 1 centimeter from any surface when measured through 7 milligrams per square centimeter of absorber.

(h) Ionizing radiation measuring instruments containing, for purposes of internal calibration or standardization, a source of radioactive material not exceeding the applicable quantity in NAC 459.188.

2. For the purposes of NAC 459.180 to 459.313, inclusive, authority to transfer possession or control by the manufacturer, processor or producer of any equipment, device, commodity or other product containing source material or by-product material whose subsequent possession, use, transfer and disposal by all other persons are exempted from regulatory requirements may be obtained only from the Nuclear Regulatory Commission.

3. For the purposes of paragraph (g) of subsection 1, electron tubes include spark gap tubes, power tubes, gas tubes including glow lamps, receiving tubes, microwave tubes, indicator tubes, pick-up tubes, radiation detection tubes and any other completely sealed tube that is designed to conduct or control electrical currents.

[Bd. of Health, Radiation Control Reg. §§ 3.2.2.3-3.2.2.3.1.8, eff. 2-28-80]—(NAC A by R084-98, 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R085-06, 11-13-2006; R149-07, 1-30-2008)

NAC 459.192 Miscellaneous exemptions: Certain self-luminous products, articles containing radium-226, gas and aerosol detectors, capsules containing carbon-14 urea and synthetic plastic resins containing scandium-46. (NRS 459.030**,** 459.201**)**

1. Except for persons who manufacture, process or produce self-luminous products containing tritium, krypton-85 or promethium-147, any person is exempt from the provisions of NAC 459.010 to 459.950, inclusive, to the extent that he receives, possesses, uses, transfers, owns or acquires tritium, krypton-85 or promethium-147 in self-luminous products manufactured, processed, produced, imported or transferred in accordance with a specific license issued by the Nuclear Regulatory Commission pursuant to 10 C.F.R. § 32.22, which license authorizes the transfer of the product to persons who are exempt from regulatory requirements. The exemption in this subsection for self-luminous products does not apply to tritium, krypton-85 or promethium-147 used in products for frivolous purposes or in toys or adornments.

2. Any person is exempt from the provisions of NAC 459.010 to 459.950, inclusive, to the extent that he receives, possesses, uses, transfers or owns articles containing less than 0.1 microcurie (3.7 kilobecquerels) of radium-226 which were acquired before February 28, 1980.

3. Except for persons who manufacture, process or produce gas and aerosol detectors containing radioactive material, any person is exempt from the provisions of NAC 459.010 to 459.950, inclusive, to the extent that he receives, possesses, uses, transfers, owns or acquires radioactive material in gas and aerosol detectors designed to protect life or property from

fires and airborne hazards if the detectors containing radioactive material have been manufactured, imported [redacted]ansferred in accordance with a specific license issued by the Division, the Nuclear Regulatory Commission or any other agreement state pursuant to 10 C.F.R. § 32.26 or its equivalent, which authorizes the transfer of the detectors to persons who are exempt from regulatory requirements. The following also apply to gas and aerosol detectors containing radioactive material:

(a) The provisions of subsection 2 of NAC 459.190 apply to this subsection.

(b) Any gas and aerosol detector which contains by-product material, or naturally occurring and accelerator-produced radioactive material, and which was previously manufactured and distributed to general licensees in accordance with a specific license issued by an agreement state is exempt under this subsection if the device is labeled in accordance with the specific license and if the device meets the requirements of NAC 459.280.

4. Any person who receives, possesses, uses, transfers, owns or acquires capsules that contain carbon-14 urea is exempt from the provisions of NAC 459.180 to 459.313, inclusive, if each capsule:

(a) Is intended solely for in vivo diagnostic use in humans and is not used for research involving human subjects; and

(b) Contains, allowing for nominal variation that may occur during the manufacturing process, not more than 1 microcurie (37 kilobecquerels) of carbon-14 urea.

➥ Nothing in this subsection relieves a person from complying with any other federal, state or local requirement governing the receipt, administration or use of drugs.

5. Any person who receives, possesses, uses, transfers, owns or acquires synthetic plastic resins containing scandium-46 which are designed for sand consolidation in oil wells is exempt from the provisions of NAC 459.010 to 459.950, inclusive, if the resins have been manufactured or imported in accordance with a specific license issued by theNuclear Regulatory Commission or have been manufactured in accordance with the specifications contained in a specific license issued by the Division or any agreement state to the manufacturer of resins pursuant to licensing requirements equivalent to those in 10 C.F.R. §§ 32.16 and 32.17 of the regulations of the Nuclear Regulatory Commission. This exemption does not authorize the manufacture of any resins containing scandium-46.

[Bd. of Health, Radiation Control Reg. §§ 3.2.2.3.2-3.2.2.3.4, eff. 2-28-80]—(NAC A by R084-98, 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R085-06, 11-13-2006; R149-07, 1-30-2008)

NAC 459.194 Types of licenses. (NRS 459.201**)** Licenses for radioactive materials are of two types:

1. General licenses which grant authority to persons for certain activities involving radioactive materials and are effective without the filing of applications with the Division or the issuance of licensing documents to the particular persons, although the filing of a certificate with the Division may be required by the particular general license. Except as otherwise provided in the specific provisions of a general license, including, without limitation, a provision concerning NAC 459.357, a general license is subject to all other applicable portions of these regulations and any limitations of the general license.

2. Specific licenses which are issued by the Division to a named person who files an application for a license pursuant to the provisions of NAC 459.180 to 459.313, inclusive. A specific license is subject to all applicable portions of these regulations as well as any limitations specified in the licensing document.

[Bd. of Health, Radiation Control Reg. §§ 3.3-3.3.1.2, eff. 2-28-80]—(NAC A by R085-06, 11-13-2006; R149-07, 1-30-2008)

NAC 459.195 Application for license: Evaluation or emergency plan required for certain quantities of radioisotopes. (NRS 459.201**)**

1. Except as otherwise provided in this subsection, each application for a license to possess radioactive materials in unsealed form, on foils, in plated sources or sealed in glass in excess of the quantities specified in the table set forth in NAC 459.1951 must contain:

(a) An evaluation showing that the maximum dose a person not on the premises of the facility where the radioactive material is located would receive due to a release of radioactive materials would not exceed 1 rem effective dose equivalent or 5 rems to the thyroid; or

(b) An emergency plan for responding to a release of radioactive material.

➥ An application for a license to possess a combination of radioactive materials must include an emergency plan if, pursuant to the table set forth in NAC 459.1951, the sum of the ratios of the quantity of each radioactive material for which the license is sought to the quantity listed for that material exceeds one.

2. An evaluation submitted pursuant to paragraph (a) of subsection 1 must be supported by one or more of the following factors:

(a) The radioactive material is physically separated so that only a portion could be involved in an accident;

(b) All or part of the radioactive material is not subject to release during an accident because of the way it is stored or packaged;

(c) The release fraction in the respirable size range would be lower than the release fraction specified in NAC 459.1951 because of the chemical or physical form of the material;

(d) The solubility of the radioactive material would reduce the dose received;

(e) The design of the facility or safety features engineered in the facility would cause the release fraction to be lower than the release fraction specified in the table set forth in NAC 459.1951;

(f) Operating restrictions or procedures would prevent a release fraction in excess of the release fraction specified in the table set forth in NAC 459.1951; or

(g) Other factors appropriate for the specific facility.

3. An emergency plan submitted pursuant to paragraph (b) of subsection 1 must include the following:

(a) A brief description of the applicant's facility and the area near the site of the facility.

(b) An identification of each type of accident involving radioactive materials that may occur for which protective actions would be needed.

(c) A classification system for classifying an accident as an alert or an emergency. As used in this paragraph:

(1) "Alert" means events may occur, are in progress or have occurred that could lead to a release of radioactive material but the release is not expected to require a response by any off-site organization for the protection of persons not on the property of the facility.

(2) "Emergency" means events may occur, are in progress or have occurred that could lead to a significant release of radioactive material and could require a response by an off-site organization for the protection of persons not on the property of the facility.

(d) An identification of the means of detecting each type of accident in a timely manner.

(e) A brief description of the means and equipment to be used to mitigate the consequences of each type of accident, including the means and equipment provided to protect employees of the facility, and a description of the program for maintaining the equipment.

(f) A brief description of the methods and equipment to be used to assess releases of radioactive materials.

(g) A requirement that in the event of a release of radioactive material a control point will be established.

(h) A brief description of the responsibilities of the personnel in the facility who would respond to an accident, including an identification of personnel responsible for promptly notifying off-site organizations and for promptly notifying the Division, and an identification of personnel responsible for maintaining and updating the emergency plan.

(i) A commitment to and a brief description of the means to notify promptly and request assistance from off-site organizations, including the means for requesting medical assistance for the treatment of contaminated or injured employees of the facility if necessary. The notification of and coordination with off-site organizations must be planned so that the unavailability of some employees of the facility, the unavailability of access to certain parts of the facility and the unavailability of certain equipment will not prevent the notification and coordination. The plan must contain a commitment for notification of the Division immediately after notification of the off-site organizations but such notification must be made not later than 1 hour after an accident has been classified as an emergency pursuant to paragraph (c).

(j) A brief description of the types of information that would be included in the notification given to off-site organizations and to the Division. Such information must include the status of the facility, any known releases of radioactive material and any recommended protective actions that should be taken.

(k) A brief description of the frequency and objectives of and plans for the training that will be provided to employees of the facility on how to respond to an emergency and a brief description of any special instructions and orientation tours that would be offered to fire, police, medical and other emergency personnel. The training of employees must familiarize the employees with the emergency procedures to be followed at the site of the facility. In addition, the training must thoroughly prepare employees of the facility for their responsibilities in the event of the types of accidents most probable for that specific facility. The required training may include the training of groups of employees in the proper and coordinated response to such accidents.

(l) A brief description of the means of restoring the facility to a safe condition after an accident.

(m) Provisions for conducting quarterly tests of the system for communication with off-site organizations. The quarterly tests must include the check and update of all necessary telephone numbers.

(n) Provisions for biennially conducting exercises at the site of the facility to test response to simulated emergencies. Off-site organizations must be invited to participate in the exercises. The exercises must use hypothetical accident scenarios which are most probable for the specific site of the facility and the scenarios must not be revealed to most participants in the exercises before commencing the exercises. A critique of each exercise must be required by participants who are not directly responsible for the implementation of the plan. The critiques of the exercises must evaluate the plan, emergency procedures, facilities, equipment, training of personnel and the overall effectiveness of the response. Deficiencies identified by the critiques must be corrected. The provisions of this paragraph do not require the participation of off-site organizations in the exercises.

(o) A certification that the applicant has complied with the provisions of the Emergency Planning and Community Right-to-Know Act of 1986 (42 U.S.C. §§ 11001 et seq.) which are applicable to the applicant's activities at the proposed place of use of the radioactive material.

4. The applicant shall provide off-site organizations which are expected to respond to any accidents involving radiation at the site of the facility 60 days to review and comment on the applicant's emergency plan before submitting the plan to the Division. The applicant shall submit any comments received within the 60 days to the Division with the emergency plan.

5. As used in this section, "off-site organization" means any organization not located at the site where the radioactive material is located which responds to accidents involving radiation.

(Added to NAC by Bd. of Health, eff. 10-22-93)

NAC 459.1951 Application for license: Quantities of radioisotopes for which evaluation or emergency plan is required. (NRS 459.201) The following table sets forth quantities of radioisotopes for the purposes of subsections 1 and 2 of NAC 459.195.

Radioactive Material	Release Fraction	Quantity (Curies)
Actinium-228	0.001	4,000
Americium-241	.001	2
Americium-242	.001	2
Americium-243	.001	2
Antimony-124	.01	4,000
Antimony-126	.01	6,000
Barium-133	.01	10,000
Barium-140	.01	30,000
Bismuth-207	.01	5,000
Bismuth-210	.01	600
Cadmium-109	.01	1,000
Cadmium-113	.01	80
Calcium-45	.01	20,000
Californium-252	.001	9(20mg)
Carbon-14	.01	50,000
	Non CO	
Cerium-141	.01	10,000
Cerium-144	.01	300
Cesium-134	.01	2,000
Cesium-137	.01	3,000
Chlorine-36	.5	100
Chromium-51	.01	300,000
Cobalt-60	.001	5,000
Copper-64	.01	200,000
Curium-242	.001	60
Curium-243	.001	3
Curium-244	.001	4
Curium-245	.001	2
Europium-152	.01	500
Europium-154	.01	400
Europium-155	.01	3,000
Germanium-68	.01	2,000
Gadolinium-153	.01	5,000
Gold-198	.01	30,000
Hafnium-172	.01	400
Hafnium-181	.01	7,000
Holmium-166m	.01	100
Hydrogen-3	.5	20,000
Iodine-125	.5	10
Iodine-131	.5	10
Indium-114m	.01	1,000
Iridium-192	.001	40,000
Iron-55	.01	40,000
Iron-59	.01	7,000
Krypton-85	1.0	6,000,000
Lead-210	.01	8
Manganese-56	.01	60,000
Mercury-203	.01	10,000
Molybdenum-99	.01	30,000
Neptunium-237	.001	2
Nickel-63	.01	20,000
Niobium-94	.01	300
Phosphorus-32	.5	100
Phosphorus-33	.5	1,000
Polonium-210	.01	10
Potassium-42	.01	9,000

Promethium-145	.01	4,000
Promethium-147	.01	4,000
Ruthenium-106	.01	200
Samarium-151	.01	4,000
Scandium-46	.01	3,000
Selenium-75	.01	10,000
Silver-110m	.01	1,000
Sodium-22	.01	9,000
Sodium-24	.01	10,000
Strontium-89	.01	3,000
Strontium-90	.01	90
Sulfur-35	.5	900
Technetium-99	.01	10,000
Technetium-99m	.01	400,000
Tellurium-127m	.01	5,000
Tellurium-129m	.01	5,000
Terbium-160	.01	4,000
Thulium-170	.01	4,000
Tin-113	.01	10,000
Tin-123	.01	3,000
Tin-126	.01	1,000
Titanium-44	.01	100
Vanadium-48	.01	7,000
Xenon-133	1.00	900,000
Yttrium-91	.01	2,000
Zinc-65	.01	5,000
Zirconium-93	.01	400
Zirconium-95	.01	5,000
Any other beta-gamma emitter	.01	10,000
Mixed fission products	.01	1,000
Mixed corrosion products	.01	10,000
Contaminated equipment beta-gamma	.001	10,000
Irradiated material, any form other than solid noncombustible	.01	1,000
Irradiated material, solid noncombustible	.001	10,000
Mixed radioactive waste, beta-gamma	.01	1,000
Packaged mixed waste, beta-gamma	.001	10,000
Any other alpha emitter	.001	2
Contaminated equipment, alpha	.0001	20
Packaged waste, alpha	.0001	20

(Added to NAC by Bd. of Health, eff. 10-22-93)

NAC 459.1955 Preparation for decommissioning: Plan for financing; financial assurance; records. (NRS 459.030**,** 459.201**)**

1. A plan for financing decommissioning, as described in subsection 10, must be submitted by each applicant for a license authorizing the possession and use of:

(a) Unsealed radioactive materials with a half-life of more than 120 days in quantities that exceed 10^5 times the applicable quantities set forth in NAC 459.362; or

(b) The involvement of a combination of radionuclides when R divided by 10^5 is greater than 1.

2. A plan for financing decommissioning, as described in subsection 10, must be submitted by each licensee who is authorized to possess and use, and each applicant for a specific license authorizing the possession and use of:

(a) Sealed sources of radioactive material or plated foils of radioactive material with a half-life of more than 120 days in quantities that exceed 10^{12} times the applicable quantities set forth in NAC 459.362; or

(b) The involvement of a combination of isotopes when R divided by 10^{12} is greater than 1.

3. Each applicant for a specific license that authorizes the possession and use of radioactive material with a half-life of more than 120 days and in the quantities set forth in subsection 9 must submit:

(a) A plan for financing decommissioning as described in subsection 10; or

(b) A certification which sets forth that financial assurance for decommissioning:

(1) Has been provided in the amount required by subsection 9 using one of the methods set forth in subsection 11; or

(2) Will be provided after the application has been approved and the license issued, but before the receipt of any licensed material by the licensee.

4. If an applicant:

(a) Defers the execution of the financial instrument until after the license has been issued pursuant to subparagraph (2) of paragraph (b) of subsection 3, the applicant must submit to the Division as part of the certification a signed original of the financial instrument used to comply with subsection 11 before the receipt of any licensed material.

(b) Does not defer the execution of the financial instrument until after the license has been issued, the applicant must submit to the Division as part of the certification a signed original of the financial instrument used by the applicant to comply with subsection 11.

5. An applicant for a specific license of the type described in subsection 1 or 3 must submit a plan for financing decommissioning or a certification of financial assurance for decommissioning with his application.

6. The holder of a specific license that is issued before January 26, 1999, and:

(a) Of a type described in subsection 1, shall submit a plan for financing decommissioning or a certification of financial assurance for decommissioning in an amount not less than $1,125,000. If a certification of financial assurance is submitted, the licensee shall include a plan for financing decommissioning in an application for renewal of the license.

(b) Of a type described in subsection 3, shall submit a plan for financing decommissioning or a certification of financial assurance for decommissioning.

7. A licensee who has submitted an application for renewal of his license before January 26, 1999, in accordance with NAC 459.202, shall:

(a) Provide financial assurance for decommissioning in accordance with subsections 1 and 3; and

(b) Submit a plan for financing decommissioning.

8. Waste collectors and waste processors, as defined in Appendix G, shall:

(a) Provide financial assurance for decommissioning in an amount based on a plan for financing decommissioning as described in subsection 10; and

(b) Submit a plan for financing decommissioning which must include, without limitation:

(1) The cost of disposal of the maximum amount, measured in curies, of radioactive material permitted by the license;

(2) The cost of disposal of the maximum quantity, measured by volume, of radioactive material which could be present at the licensee's facility at any time; and

(3) The cost to remediate the licensee's site to meet the license termination criteria set forth in NAC 459.200.

9. Financial assurance for decommissioning must be provided in accordance with the following amounts:

(a) Not less than $1,125,000 is required if:

(1) The amount of radioactive material is greater than 10^4, but less than or equal to 10^5 times the applicable quantities described in NAC 459.362, in unsealed form; or

(2) R, for a combination of radionuclides, divided by 10^4 is greater than 1 but R divided by 10^5 is less than or equal to 1.

(b) Not less than $225,000 is required if:

(1) The amount of radioactive material is greater than 10^3, but less than or equal to 10^4 times the applicable quantities described in NAC 459.362, in unsealed form; or

(2) R, for a combination of radionuclides, divided by 10^3 is greater than 1 but R divided by 10^4 is less than or equal to 1.

(c) Not less than $113,000 is required if:

(1) The amount of radioactive material is greater than 10^{10} times the applicable quantities described in NAC 459.362, in sealed sources or plated foils; or

(2) R, for a combination of radionuclides, divided by 10^{10} is greater than 1.

10. The plan for financing decommissioning must contain the following:

(a) An estimate of the costs of decommissioning the facility based on the decommissioning plan;

(b) A description of the method of assuring financing for decommissioning in compliance with subsection

(c) A schedule for adjusting the estimate of costs, which estimates of costs must be adjusted at least every 3 years, and associated levels of funding periodically over the life of the facility; and

(d) A certification by the licensee that financial assurance for decommissioning has been provided in the amount of the cost estimate for decommissioning and a signed original of the financial instrument used to satisfy the requirements of subsection 11.

11. Financial assurance for decommissioning must be provided by one or more of the following methods:

(a) Prepayment in the form of a deposit of an amount of money in cash or liquid assets that would be sufficient to pay the costs of decommissioning before starting operations at the facility into an account segregated from the assets of the licensee and outside the administrative control of the licensee. Prepayment may be in the form of a trust, escrow account, government fund, certificate of deposit or deposit of government securities.

(b) Provision of a surety that assures that the costs of decommissioning will be paid should the licensee fail to do so. A guarantee of money from a parent company of the licensee for the cost of decommissioning that is based on a financial test may be used if the guarantee and test meet the criteria set forth in subsection 14. Such a guarantee may not be used in combination with any other method of financing to satisfy the requirements of this subsection. A guarantee of money by the applicant or licensee for the cost of decommissioning that is based on a financial test may be used if the guarantee and test meet the criteria set forth in subsection 14. Such a guarantee must not be used in combination with any other method of financing to satisfy the requirements of this subsection or if the applicant or licensee has a parent company that holds a majority control of the voting stock of the applicant or licensee. Any surety used to provide financial assurance for decommissioning must contain the following conditions:

(1) The surety must be open-ended or, if written for a specified term, must be renewed automatically unless 90 days or more before the renewal date the issuer notifies the Division, the beneficiary and the licensee of his intention not to renew. The surety must provide that the full-face amount will be paid to the beneficiary automatically before the expiration without proof of forfeiture if the licensee fails to provide a replacement acceptable to the Division within 30 days after receipt of notification of the cancellation.

(2) The surety must be payable to a trust established for the costs of decommissioning the facility. The trustee and trust must be approved by the Division. The Division will approve as a trustee an appropriate agency of the State or Federal Government or an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by an agency of the State or Federal Government.

➥ A licensee shall maintain the surety in effect until the Division has terminated his license.

(c) Provision of an external sinking fund in which deposits are made at least annually, coupled with a surety issued in compliance with the provisions of paragraph (b) except that the value of the surety may decrease by the amount being accumulated in the external sinking fund.

(d) If the licensee is a federal, state or local governmental agency, a statement of intent containing an estimate of the costs of decommissioning or an amount required by subsection 9 and an indication that money for decommissioning will be obtained when necessary.

12. A person licensed pursuant to NAC 459.180 to 459.313, inclusive, shall maintain the following records in an identified location until the site is released for unrestricted use:

(a) Records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment or site. Such records must include, without limitation, the name, quantity, form and concentration of a nuclide involved in the spill or unusual occurrence.

(b) Drawings and other documents relating to:

(1) The modification of structures and equipment in restricted areas where radioactive materials are used and stored; and

(2) Locations where it is possible that contamination which is inaccessible has occurred, including, without limitation, areas of seepage into concrete and other porous materials.

(c) A list of all the areas:

(1) Designated and formerly designated as restricted areas;

(2) Outside of restricted areas that require documentation pursuant to paragraph (a);

(3) Outside of restricted areas where waste has been buried; and

(4) Outside of restricted areas which contain material that, if the license expired, the licensee would be required to decontaminate the area to unrestricted release levels or apply for approval for disposal pursuant to NAC 459.3595.

➥ If records important to the decommissioning of a facility are kept for other purposes, reference to these records and their locations may be used.

13. Before licensed activities are transferred or assigned pursuant to subsection 2 of NAC 459.198, the licensee must transfer all the records described in paragraphs (a), (b) and (c) of subsection 12 to the licensee to whom the activities have been transferred or assigned. Such records become, upon receipt, the responsibility of the licensee to whom the activities have been transferred or assigned and must be retained by that licensee until its license is terminated.

14. To pass the financial test referred to in subsection 11:

(a) A parent company must have:

(1) Two of the following three ratios:

(I) A ratio of total liabilities to net worth that is less than 2;

(II) A ratio of the sum of net income plus depreciation, depletion and amortization to total liabilities that is more than 0.1; and

(III) A ratio of current assets to current liabilities that is more than 1.5;

(2) Net working capital and tangible net worth that are each at least six times the current cost estimates for decommissioning or, if certification is used, the amount set forth in subsection 9; and

(3) Assets located in the United States that amount to at least 90 percent of the total assets of the parent company or at least six times the cost estimate for decommissioning or, if certification is used, the amount set forth in subsection 9; or

(b) A parent company must have:

(1) A rating for its most recent bond issuance of AAA, AA, A or BBB as issued by Standard and Poor's Ratings Services or a rating of Aaa, Aa, A or Baa as issued by Moody's Investors Service, Inc.;

(2) Tangible net worth of at least six times the current cost estimate for decommissioning, or, if a certification is used, the amount set forth in subsection 9; and

(3) Assets located in the United States that amount to at least 90 percent of the total assets of the parent company or at least six times the cost estimate for decommissioning.

15. The terms of a guarantee of a parent company must provide that:

(a) The guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the licensee and the Division. The guarantee may not be cancelled until 120 days after the date the notice of cancellation is received by both the licensee and the Division, as evidenced by the return receipts.

(b) If the licensee fails to provide alternate financial assurance as specified in this section within 90 days after receipt by the licensee and the Division of a notice of cancellation of the guarantee from the guarantor, the guarantor must provide such alternate financial assurance in the name of the licensee.

(c) The guarantee and financial test provisions set forth in subsection 14 must remain in effect until the Division has terminated the license.

(d) If a trust is established for the costs of decommissioning, the trustee and trust must be acceptable to the Division. An acceptable trustee includes an appropriate state or federal agency or an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

16. A licensee who guarantees the costs of decommissioning must have:

(a) A tangible net worth of at least 10 times the total estimated cost of decommissioning or the current amount required for decommissioning;

(b) Assets located in the United States that amount to at least 90 percent of its total assets or at least 10 times the cost estimate for decommissioning;

(c) A rating for its most recent bond issuance of AAA, AA or A as issued by Standard and Poor's Ratings Services or a rating of Aaa, Aa or A as issued by Moody's Investors Service, Inc.; and

(d) At least one class of equity securities registered pursuant to the Securities Exchange Act of 1934.

17. A licensee shall ensure that a certified public accountant who is independent of the licensee compares the data used to satisfy the financial test as set forth in subsections 14 and 16. The data must be derived from audited, year-end financial statements for the last fiscal year. A licensee shall inform the Division within 90 days after matters which cause the certified public accountant to believe that the data used to satisfy the financial test should be adjusted and that the licensee or parent company, as applicable, can no longer pass the test. After the initial financial test, the licensee or parent company, as applicable, shall repeat the test within 90 days after the close of each fiscal year. If the parent company can no longer pass the test, the licensee shall notify the Division of its intent to establish alternate financial assurance as specified in this section. The notice must be sent by certified mail within 90 days after the close of the fiscal year. The licensee shall provide alternate financial assurance within 120 days after the close of such fiscal year.

18. If a bond issuance of the licensee or parent company, as applicable, ceases to be rated in a category of A or above by either Standard and Poor's Ratings Services or Moody's Investors Service, Inc., the licensee shall notify the Division in writing within 20 days after the rating. If the bond issuance ceases to be rated in a category of A or above by both Standard and Poor's Ratings Services and Moody's Investors Service, Inc., the licensee or parent company, as applicable, no longer meets the financial test as set forth in subsection 14.

19. The licensee shall provide to the Division a written guarantee or commitment by a corporate officer which provides that the licensee will fund and complete the decommissioning of the facility or, upon issuance of an order by the State Board of Health, the licensee shall establish a trust in the amount of the current cost estimates for decommissioning.

20. As used in this section:

(a) "External sinking fund" means a fund established and maintained by depositing money periodically in an account segregated from the licensee's assets and outside the licensee's administrative control in which the total amount of money to be accumulated before the termination of the operation is expected is sufficient to pay the costs of decommissioning. The term includes, without limitation, a trust, escrow account, government fund, certificate of deposit or deposit of government securities.

(b) "R" equals the sum of the ratios of the quantity of each radionuclide to the applicable value as set forth in NAC 459.362.

(c) "Surety" includes, without limitation, a trust fund, surety bond, letter of credit, line of credit, insurance, guarantee of performance or, except as otherwise provided in this section, any combination thereof.

(Added to NAC by Bd. of Health, eff. 10-22-93; A by R084-98, 1-26-99; A by Dep't of Human Resources by R137-

01, 5-30-2003; A by Bd. of Health by R085-06, 11-13-2006; R149-07, 1-30-2008)

NAC 459.196 Issuance of specific licenses. (NRS 459.201)

1. Upon a determination that an application meets the requirements of chapter 459 of NRS and the regulations of the Division, the Division will issue a specific license authorizing the proposed activity in a form and containing such conditions and limitations as it deems appropriate or necessary.

2. The Division may incorporate in any license at the time of issuance additional requirements and conditions with respect to the licensee's receipt, possession, use and transfer of radioactive material subject to NAC 459.180 to 459.313, inclusive, as it deems appropriate or necessary in order to:

(a) Minimize danger to public health and safety or property;

(b) Require such reports and the keeping of such records, and to provide for such inspections of activities under the licenses as may be appropriate or necessary; and

(c) Prevent loss or theft of material subject to NAC 459.180 to 459.313, inclusive.

[Bd. of Health, Radiation Control Reg. §§ 3.5.6-3.5.6.2.3, eff. 2-28-80]—(NAC A by R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.198 Terms and conditions of licenses. (NRS 459.201)

1. Each license issued pursuant to NAC 459.180 to 459.950, inclusive, is subject to all the provisions of chapter 459 of NRS, now or hereafter in effect, and to all regulations and orders of the Division.

2. No license issued or granted under NAC 459.180 to 459.950, inclusive, or right to possess or utilize radioactive material granted by any license issued pursuant to those provisions, may be transferred, assigned or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of any license to any person unless the Division, after securing full information, finds that the transfer is in accordance with the provisions of chapter 459 of NRS and gives its consent in writing.

3. Each person licensed by the Division pursuant to NAC 459.180 to 459.950, inclusive, or each person seeking a license, shall:

(a) Confine his use and possession of the material licensed to the locations and purposes authorized in the license.

(b) Inform the Division in writing before the sale or lease of his business if the transaction involves the transfer of a source of radiation to another person.

(c) Inform the Division, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under Title 11 of the United States Code or the appropriate chapter of NRS by or against:

(1) The licensee;

(2) An entity, as that term is defined in 11 U.S.C. § 101(15), which controls the licensee or which lists the licensee as a property of the estate of the entity; or

(3) An affiliate, as that term is defined in 11 U.S.C. § 101(2), of the licensee.

(d) Keep records of information important to the safe and effective decommissioning of the facility where the radioactive material is located in a location identified to the Division until the license is terminated by the Division. If records of information relevant to decommissioning are kept for other purposes, references to these records and their locations may be used. Such information must include:

(1) Records of spills or other unusual occurrences involving the spread of contamination in or around the facility, the equipment of the facility or the site of the facility. These records may be limited to instances when contamination remains after any cleanup procedures or when there is a reasonable likelihood that contaminants may have spread to inaccessible areas, including possible seepage into porous materials such as concrete. These records must include any information known to the licensee on the identification of nuclides, quantities, forms and concentrations involved.

(2) Any available drawings of structures and equipment of the facility, as originally built and as modified, which are located in restricted areas where radioactive materials are used or stored, and of locations of inaccessible areas to which contaminants may spread, such as buried pipes which may be subject to contamination. If drawings are not available, the licensee shall provide to the Division other appropriate records of information concerning these areas.

(3) Records of any performance of an estimate of the costs of decommissioning for incorporation in a plan for financing the decommissioning and any records of the method used for assuring the availability of money for the costs of decommissioning the facility.

4. Each person licensed by the Division pursuant to NAC 459.180 to 459.950, inclusive, who uses a portable gauge shall use a minimum of two independent physical controls that form tangible barriers to secure the portable gauge from unauthorized removal when the portable gauge is not under the control and constant surveillance of the licensee.

[Bd. of Health, Radiation Control Reg. §§ 3.5.7-3.5.7.3, eff. 2-28-80]—(NAC A 9-6-88; 10-22-93; R085-06, 11-13-2006; R149-07, 1-30-2008)

NAC 459.1985 Nationally tracked sources: Assignment of unique serial numbers. (NRS 459.201) Each licensee who manufactures a nationally tracked source on or after January 30, 2008, shall assign a unique serial number to each nationally tracked source. Each unique serial number must be composed only of alpha-numeric characters.

(Added to NAC by Bd. of Health by R149-07, eff. 1-30-2008)

NAC 459.199 Nationally tracked sources: Reporting requirements; reconciliation of inventory data in National Source Tracking System. (NRS 459.201**)**

1. Each licensee who manufactures a nationally tracked source shall complete and submit to the National Source Tracking System a National Source Tracking Transaction Report which must include, without limitation:
(a) The name, address and license number of the licensee;
(b) The name of the person preparing the report;
(c) The manufacturer, model number and serial number of the nationally tracked source;
(d) The radioactive material contained in the nationally tracked source;
(e) The initial source strength in becquerels (curies) of the nationally tracked source at the time of manufacture; and
(f) The date of manufacture of the nationally tracked source.

2. Each licensee who transfers a nationally tracked source to another person shall complete and submit to the National Source Tracking System a National Source Tracking Transaction Report which must include, without limitation:
(a) The name, address and license number of the licensee;
(b) The name of the person preparing the report;
(c) The name, license number and shipping address of the recipient of the nationally tracked source;
(d) The manufacturer, model number and serial number of the nationally tracked source or, if such information is not available, any other information to uniquely identify the nationally tracked source;
(e) The radioactive material contained in the nationally tracked source;
(f) The initial or current source strength in becquerels (curies);
(g) The date for which the source strength is reported;
(h) The date on which the nationally tracked source was shipped;
(i) The estimated arrival date of the nationally tracked source; and
(j) For a nationally tracked source which is transferred as waste under a Uniform Low-Level Radioactive Waste Manifest, the waste manifest number and the container identification number of the nationally tracked source.

3. Each licensee who receives a nationally tracked source shall complete and submit to the National Source Tracking System a National Source Tracking Transaction Report which must include, without limitation:
(a) The name, address and license number of the licensee;
(b) The name of the person preparing the report;
(c) The name, address and license number of the person who provided the nationally tracked source;
(d) The manufacturer, model number and serial number of the nationally tracked source or, if such information is not available, any other information to uniquely identify the nationally tracked source;
(e) The radioactive material contained in the nationally tracked source;
(f) The initial or current source strength in becquerels (curies);
(g) The date for which the source strength is reported;
(h) The date of receipt of the nationally tracked source; and
(i) For a nationally tracked source received under a Uniform Low-Level Radioactive Waste Manifest, the waste manifest number and the container identification number of the nationally tracked source.

4. Each licensee who disassembles a nationally tracked source shall complete and submit to the National Source Tracking System a National Source Tracking Transaction Report which must include, without limitation:
(a) The name, address and license number of the licensee;
(b) The name of the person preparing the report;
(c) The manufacturer, model number and serial number of the nationally tracked source or, if such information is not available, any other information to uniquely identify the nationally tracked source;
(d) The radioactive material contained in the nationally tracked source;
(e) The initial or current source strength in becquerels (curies);
(f) The date for which the source strength is reported; and
(g) The date of disassembly of the nationally tracked source.

5. Each licensee who disposes of a nationally tracked source shall complete and submit to the National Source Tracking System a National Source Tracking Transaction Report which must include, without limitation:
(a) The name, address and license number of the licensee;
(b) The name of the person preparing the report;
(c) The waste manifest number;
(d) The container identification number of the nationally tracked source;
(e) The date of disposal of the nationally tracked source; and
(f) The method of disposal of the nationally tracked source.

6. Any National Source Tracking Transaction Report required pursuant to subsections 1 to 5, inclusive, must be submitted by the close of the next business day after the transaction. A single National Source Tracking Transaction Report may be submitted for multiple sources and transactions. The National Source Tracking Transaction Report must be submitted to the National Source Tracking System:
(a) By the use of the online National Source Tracking System;
(b) By the use of a computer-readable electronic format;
(c) By facsimile;

(d) By mail to the address listed on the National Source Tracking Transaction Report Form (NRC Form 7 or

(e) By telephone with follow-up by facsimile or mail.

7. A licensee shall correct any error in a previously filed National Source Tracking Transaction Report or file a new National Source Tracking Transaction Report for any missed transaction not later than 5 business days after the discovery of the error or missed transaction.

8. Each licensee shall, on or before January 31 of each year:

(a) Reconcile the inventory of nationally tracked sources possessed by the licensee against the data contained in the National Source Tracking System;

(b) Resolve any discrepancies between the National Source Tracking System and the actual inventory of the licensee by filing any necessary National Source Tracking Transaction Report in accordance with the provisions of subsections 1 to 5, inclusive; and

(c) Submit to the National Source Tracking System confirmation that the data in the National Source Tracking System is correct.

9. Each licensee who possesses any Category 1 nationally tracked source on January 30, 2008, shall report its initial inventory of Category 1 nationally tracked sources to the National Source Tracking System not later than February 29, 2008. Each licensee who possesses any Category 2 nationally tracked source on January 30, 2008, shallreport its initial inventory of Category 2 nationally tracked sources to the National Source Tracking System not later than February 29, 2008. The reports may be submitted by any method described in paragraphs (a) to (e), inclusive, of subsection 6 and must include, without limitation:

(a) The name, address and license number of the licensee;

(b) The name of the person preparing the report;

(c) The manufacturer, model number and serial number of each nationally tracked source or, if that information is not available, any other information to uniquely identify the nationally tracked source;

(d) The radioactive material contained in the nationally tracked source;

(e) The initial or current source strength in becquerels (curies); and

(f) The date for which the source strength is reported.

(Added to NAC by Bd. of Health by R149-07, eff. 1-30-2008)

NAC 459.1995 Adoption by reference and revision of certain provisions of federal regulations regarding packaging and transportation of radioactive material. (NRS 459.201**)** The provisions of 10 C.F.R. Part 71, as those provisions existed on January 26, 2004, are hereby adopted by reference, subject to the following:

1. "Byproduct material" as described in 10 C.F.R. § 71.4 shall be deemed to include naturally occurring and accelerator-produced radioactive material.

2. The provisions of 10 C.F.R. §§ 71.6, 71.65 and 71.100 are not adopted by reference.

3. The references in 10 C.F.R. §§ 71.9(e)(1) and 71.9(e)(2) to "NRC Form 3" shall be deemed to be references to "Form NRC-1," Notice to Employees.

4. The reference in 10 C.F.R. § 71.9(e)(1) to "§ 19.11(c)" shall be deemed to be a reference to "subsection 3 of NAC 459.782."

5. The provisions of 10 C.F.R. § 71.9(f) are not adopted by reference.

6. Any reference to "licensee," "applicant," "applicant for a license," "NRC licensee," "NRC applicant," "Commission licensee," "Commission applicant" or "licensee of the Commission" shall be deemed to be a reference to "licensee of the Division" or "applicant for a license issued by the Division," except that the references in 10 C.F.R. § 71.37 to"the applicant" refer to an applicant to the Nuclear Regulatory Commission. Any reference to "license," "NRC license," "Commission license" or "license issued by the Commission" shall be deemed to be a reference to "license issued by the Division."

7. Any reference to "the Commission," "the Nuclear Regulatory Commission" or "the NRC" shall be deemed to be a reference to "the Division," except that any reference to "the Commission," "the Nuclear Regulatory Commission" or "the NRC" described in paragraphs (a) to (v), inclusive, shall not be deemed to be a reference to the Division:

(a) 10 C.F.R. §§ 71.0(a)(2), 71.0(d)(1) and 71.0(g);

(b) 10 C.F.R. § 71.1(a);

(c) 10 C.F.R. § 71.4, definition of "certificate holder";

(d) 10 C.F.R. § 71.4, definition of "package";

(e) 10 C.F.R. § 71.8(b)(2);

(f) 10 C.F.R. § 71.10;

(g) 10 C.F.R. § 71.12;

(h) The reference in 10 C.F.R. § 71.17(a) to "the NRC";

(i) The reference in 10 C.F.R. § 71.17(b) to "the Commission";

(j) 10 C.F.R. § 71.17(c)(3);

(k) 10 C.F.R. § 71.17(e);

(l) 10 C.F.R. §§ 71.19(a), 71.19(c), 71.19(d) and 71.19(e);

(m) The reference in 10 C.F.R. § 71.23(b) to "the Commission";

(n) 10 C.F.R. § 71.38(b);

(o) 10 C.F.R. § 71.39;
(p) 10 C.F.R. §§ 71.41(a), 71.41(b) and 71.41(c);
(q) 10 C.F.R. § 71.55(c);
(r) The reference in 10 C.F.R. § 71.85(c) to "the Commission";
(s) The reference in 10 C.F.R. § 71.93(c) to "the NRC";
(t) The reference in 10 C.F.R. § 71.95(a)(1) to "the NRC";
(u) 10 C.F.R. § 71.99; and
(v) 10 C.F.R. § 71.101(g).
8. The provisions of 10 C.F.R. § 71.100 are not adopted by reference.
(Added to NAC by Bd. of Health by R149-07, eff. 1-30-2008)

NAC 459.200 Expiration and termination of specific licenses; notification of Division before certain events; decommissioning. (NRS 459.030, 459.201**)**

1. Except as otherwise provided in subsections 2 and 3, a specific license expires at the end of the day on the date of expiration set forth on the license.

2. A specific license for which a licensee has, not less than 30 days before the date of expiration set forth on the license, filed an application for renewal pursuant to NAC 459.202 remains effective until the Division makes a final decision on the application. If the decision is to deny the application for renewal, the license expires on the date of the decision or, if the Division specifies a date of expiration in the decision to deny the application for renewal, on the date specified.

3. A specific license revoked by the Division expires on the date of the decision of the Division to revoke the license or on the date specified in the decision of the Division to revoke the license.

4. A specific license continues in effect with respect to the possession of radioactive material until the Division notifies the licensee in writing that the license is terminated. During the time the specific license continues in effect, the licensee shall:

(a) Limit actions involving radioactive material to those related to decommissioning; and

(b) Continue to control entry to restricted areas until they are suitable for release so that there is no undue hazard to public health and safety.

5. Except as otherwise provided in subsection 7, a licensee shall notify the Division in writing within 60 days before:

(a) The decision of the licensee to cease permanently its principal activities at the entire site or in a separate building or outdoor area that contains residual radioactivity if the building or outdoor area is unsuitable for release because of an undue hazard to public health and safety;

(b) The end of a 24-month period in which no principal activities have been conducted pursuant to the license; or

(c) The end of a 24-month period in which no principal activities have been conducted in a separate building or outdoor area that contains residual radioactivity and the building or outdoor area is unsuitable for release because of an undue hazard to public health and safety.

6. Coincident with the notification required by subsection 5, the licensee shall maintain in effect all financial assurances for decommissioning established by the licensee pursuant to NAC 459.1955 in conjunction with the issuance or renewal of a license as required by this section. The amount of the financial assurance must be increased, or may be decreased, as appropriate, to meet the detailed cost estimate for decommissioning. After the Division approves the plan for decommissioning, a licensee may reduce the amount of the financial assurance as decommissioning proceeds and radiological contamination is reduced at the site with the approval of the Division.

7. The Division may grant a request to extend the period during which notification is required pursuant to subsection 5 if the Division determines that such an extension is not detrimental to the public health and safety and is otherwise in the public interest. The request must be submitted not later than 30 days before notification is required pursuant to subsection 5. The schedule for decommissioning may not commence until the Division has made a determination on the request.

8. A plan for decommissioning must be submitted to the Division by the licensee if it is required by a condition of the license or if the procedures for decommissioning have not been approved by the Division and these procedures could increase the potential impacts on the health and safety of workers or the public, including, without limitation, if:

(a) The procedures involve techniques not applied routinely during cleanup or maintenance operations;

(b) The workers would be entering areas not normally occupied where surface contamination and radiation levels are significantly higher than routinely encountered during normal operations;

(c) The procedures could result in a significantly greater airborne concentration of radioactive materials than is present during normal operations; or

(d) The procedures could result in a significantly greater release of radioactive material to the environment than that associated with normal operations.

➥ Such procedures may not be carried out by the licensee without being approved by the Division before they commence.

9. A proposed plan for decommissioning will be approved by the Division if decommissioning will be completed as soon as practical, the health and safety of the workers and the public will be protected and the proposed plan for decommissioning includes:

(a) A description of the conditions of the site, separate building or outdoor area sufficient to evaluate the acceptability of the plan;

(b) A description of the decommissioning activities;

(c) A description of the methods that will be used to ensure the protection of workers and the environment against radiation hazards during decommissioning;

(d) A description of the planned final radiation survey;

(e) An updated and detailed cost estimate for decommissioning, comparison of that estimate with the money set aside for decommissioning and a plan for ensuring the availability of adequate money for completion of decommissioning; and

(f) For a plan for decommissioning in which completion of decommissioning will be later than 24 months after approval of the plan, a justification for the delay based on the criteria set forth in subsection 12.

10. A licensee shall begin decommissioning of the site within 60 days after the plan for decommissioning is approved by the Division.

11. Except as otherwise provided in subsection 12, a licensee:

(a) Shall complete decommissioning of the site, separate building or outdoor area as soon as practicable, but not later than 24 months after decommissioning begins.

(b) Must, if decommissioning involves an entire site, request termination of the license as soon as practicable, but not later than 24 months after decommissioning begins.

12. The Division may approve a request by the licensee for an extension of the period allowed for decommissioning or termination of a license if the Division determines that such an extension is necessary because:

(a) It is not technically feasible to complete decommissioning within 24 months;

(b) There is not sufficient capacity for waste disposal to allow completion of decommissioning within 24 months;

(c) A significant reduction in the volume of wastes requiring disposal will be achieved by allowing short-lived radionuclides to decay;

(d) A significant reduction in radiation exposure to workers can be achieved by allowing short-lived radionuclides to decay; or

(e) There are other site-specific factors that make decommissioning within 24 months undesirable or unfeasible, including, without limitation, the regulatory requirements of other government agencies, lawsuits, activities involving the treatment of groundwater, monitored restoration of natural groundwater, actions that could result in more environmental harm than deferred cleanup and other factors beyond the control of the licensee.

13. As the final step in decommissioning, the licensee shall certify the disposition of all licensed material, including, without limitation, accumulated wastes, by submitting to the Division a completed NRC Form 314 or information that is equivalent to that contained in the completed form and:

(a) Demonstrate that the premises where the licensed activities were carried out satisfy the criteria for decommissioning set forth in NAC 459.316 to 459.3184, inclusive; or

(b) Conduct a radiation survey of the premises and submit to the Division a report of the results of this survey. The radiation survey must demonstrate that the premises are suitable for release and include:

(1) A description of the levels of gamma radiation in units of millirem (millisievert) per hour at 1 meter from surfaces;

(2) A description of the levels of radioactivity, including, without limitation, alpha and beta radiation, in units of:

(I) Microcuries (megabecquerels) per 100 square centimeters, removable and fixed, for surfaces;

(II) Microcuries (megabecquerels) per milliliter for water; and

(III) Picocuries (becquerels) per gram for solids, including, without limitation, soils and concrete; and

(3) A description of the survey instruments used and a statement that each instrument was properly calibrated and tested. The statement must be certified by the person who calibrated and tested the instrument.

14. A specific license, including an expired license, will be terminated by written notice to the licensee that the Division has determined that:

(a) All radioactive material has been disposed of properly;

(b) Reasonable effort has been made by the licensee to eliminate residual radioactive contamination, if present;

(c) All records required to be maintained pursuant to subsection 12 of NAC 459.1955 have been received by the Division; and

(d) The radiation survey performed by the licensee or other information submitted by the licensee demonstrates that the premises are suitable for release in accordance with the criteria for decommissioning set forth in NAC 459.316 to 459.3184, inclusive.

[Bd. of Health, Radiation Control Reg. § 3.5.8, eff. 2-28-80]—(NAC A 4-27-84; 1-21-92; 10-22-93; 11-1-95; R084-98, 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R085-06, 11-13-2006)

NAC 459.202 Renewal of specific licenses. (NRS 459.201**)** Applications for renewal of specific licenses must be filed in accordance with NAC 459.200 and 459.236 and, except as otherwise provided in NAC 459.203, must be accompanied by the appropriate fee as set forth in NAC 459.310. The application for renewal must be received by the Division not later than the date on which the license expires. If the application is not received by that date, the licensee must:

1. Stop all operations involving radioactive materials and place all sources of radiation in storage until they can be transferred to persons authorized to receive them; or

2. Submit to the Division within 5 days after the license expires an application for renewal of the license accompanied by a fee that is equal to twice the amount of the appropriate fee set forth in NAC 459.310.

[Bd. of Health, Radiation Control Reg. §§ 3.5.9-3.5.9.2, eff. 2-28-80]—(NAC A 9-1-89; 1-24-92; R084-98, 1-26-99; R085-06, 11-13-2006)

NAC 459.203 Payment of fees for specific licenses. (NRS 459.201**)**

1. Except as otherwise provided in subsection 2, if the Division issues a specific license pursuant to NAC 459.196, the licensee must, for each year his specific license is valid, submit to the Division the appropriate fee set forth in NAC 459.310.

2. The fee must be received each year by the Division not later than the last day of the same month that is set forth as the date of expiration on the license. If the fee is not received by that date, the licensee must:

(a) Stop all operations involving radioactive materials and place all sources of radiation in storage until they can be transferred to persons authorized to receive them; or

(b) Submit to the Division within 5 days after the license expires an application for renewal of the license accompanied by a fee that is equal to twice the amount of the appropriate fee set forth in NAC 459.310.

(Added to NAC by Bd. of Health, eff. 9-1-89; A 1-24-92; R084-98, 1-26-99)

NAC 459.204 Amendment of license. (NRS 459.201**)** Applications for amendment of a license must be filed in accordance with NAC 459.236 and specify the items which the licensee desires to be amended on his license and the ground for such amendment.

[Bd. of Health, Radiation Control Reg. § 3.5.10, eff. 2-28-80]

NAC 459.206 Action on applications to renew or amend licenses. (NRS 459.201**)** In considering an application by a licensee to renew or amend his license, the Division will apply the criteria set forth in NAC 459.238 to 459.307, inclusive, as applicable.

[Bd. of Health, Radiation Control Reg. § 3.5.11, eff. 2-28-80]

NAC 459.208 Modification, suspension, revocation and termination of licenses. (NRS 459.201**)**

1. The terms and conditions of all licenses will be subject to amendment, revision or modification. The license may be suspended or revoked by reason of amendments to chapter 459 of NRS or by reason of regulations or orders issued by the Division.

2. Any license may be revoked, suspended or modified, in whole or in part, for any material false statement in the application or any statement of fact required under the provisions of chapter 459 of NRS or because of conditions revealed by such application or statement of fact or any report, record or inspection or other means which would warrant the Division to refuse to grant a license on an original application, or for violation of, or failure to observe any of the terms and conditions of chapter 459 of NRS, the license, or regulation or order of the Division.

3. Except in cases of willfulness or those in which the public health, interest or safety requires otherwise, no license will be modified, suspended or revoked unless, prior to the institution of proceedings thereof:

(a) Facts or conduct which may warrant such action have been called to the attention of the licensee in writing; and

(b) The licensee has been accorded an opportunity to demonstrate or achieve compliance with all lawful requirements.

4. The Division may terminate a specific license upon a written request submitted by the licensee to the Division.

[Bd. of Health, Radiation Control Reg. §§ 3.5.13-3.5.13.4, eff. 2-28-80]

NAC 459.210 Reciprocal recognition of licenses. (NRS 459.030, 459.201**)**

1. Subject to the provisions of NAC 459.010 to 459.950, inclusive, a person who holds a specific license from the Nuclear Regulatory Commission or an agreement state issued by the agency having jurisdiction where the licensee maintains an office for directing the licensed activity and at which radiation safety records are normally maintained is hereby granted a general license to conduct within this State the activities authorized in the specific license for a period not in excess of 180 days in any calendar year provided that:

(a) The specific license does not limit the activity authorized by the specific license to specified installations or locations.

(b) The out-of-state licensee notifies the Division in writing at least 3 business days before engaging in the proposed activity and receives written permission from the Division to proceed with the proposed activity. The notification must indicate the location, period and type of proposed possession and use within the State, and must be accompanied by a copy of the specific license. If, for a specific case, the 3-day period would impose an undue hardship on the out-of-state licensee, he may apply to the Division and obtain written permission to proceed sooner. The Division may waive the requirement for filing additional written notifications during the remainder of the calendar year following the receipt of the initial notification from a person engaging in activities under the general license.

(c) The out-of-state licensee complies with all applicable regulations of the Division and with all the terms and conditions of his specific license, except any terms and conditions which may be inconsistent with applicable regulations of the Division.

(d) The out-of-state licensee supplies such other information as the Division may request.

(e) The out-of-state licensee shall not transfer or dispose of radioactive material possessed or used under the general license provided in this section except by transfer to a person:

(1) Specifically licensed by the Division or by the Nuclear Regulatory Commission to receive such material; or

(2) Exempt from the requirements for a license for such material pursuant to NAC 459.184.

2. A licensee must determine the jurisdiction of a temporary job site at a federal facility before radioactive materials may be used at the temporary job site. If the jurisdiction is unknown, the licensee must contact the federal agency to determine whether the job site is under exclusive federal jurisdiction. The jurisdiction of the job site must be obtained in writing from the federal agency, or the name and title of the person at the federal agency who provided the determination must be recorded along with the date of the determination.

3. Before a licensee may use radioactive material at a temporary job site in another state or at a federal facility, the licensee must obtain authorization, if the job site is:

(a) In another state, from:

(1) That state, if that state is an agreement state; or

(2) The Nuclear Regulatory Commission, by filing for reciprocity or a specific license, if the state is not an agreement state or the job site is within an area of exclusive federal jurisdiction.

(b) At a federal facility, from the Nuclear Regulatory Commission by:

(1) Filing an NRC Form 241 in accordance with 10 C.F.R. § 150.20(b), as those provisions existed on January 26, 1999; or

(2) Filing for a specific license.

4. Any person who holds a specific license issued by the Nuclear Regulatory Commission or an agreement state authorizing the holder to manufacture, transfer, install or maintain a device described in NAC 459.216 within areas subject to the jurisdiction of the licensing body is hereby granted a general license to install, transfer, demonstrate or maintain such a device in this State provided that:

(a) The person shall file a report with the Division within 30 days after the end of each calendar quarter in which any such device is transferred to or installed in this State. Each such report must identify each general licensee to whom the device is transferred by name and address, the type of device transferred and the quantity and type of radioactive material contained in the device;

(b) The device has been manufactured, labeled, installed and maintained in accordance with applicable provisions of the specific license issued to the person by the Nuclear Regulatory Commission or an agreement state;

(c) The person must ensure that any labels required to be affixed to the device under regulations of the authority which licensed manufacture of the device bear a statement that: “Removal of this label is prohibited”; and

(d) The holder of the specific license must furnish to each general licensee to whom he transfers the device or on whose premises he installs such device a copy of the general license contained in NAC 459.216.

5. The Division may withdraw, limit or qualify its acceptance of any specific license or equivalent licensing document issued by another agency, or any product distributed pursuant to the licensing document, upon determining that such action is necessary in order to prevent undue hazard to public health and safety or property.

[Bd. of Health, Radiation Control Reg. §§ 3.6-3.6.1.3, eff. 2-28-80]—(NAC A by R084-98, 1-26-99; A by Dep’t of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R149-07, 1-30-2008)

NAC 459.212 General licenses: Source material. (NRS 459.201**)**

1. A general license is issued authorizing the use and transfer of not more than 15 pounds of source material at any one time by persons in the following categories:

(a) Pharmacists using the source material solely for the compounding of medicinals;

(b) Physicians using the source material for medicinal purposes;

(c) Persons receiving possession of source material from pharmacists and physicians in the form of medicinals or drugs;

(d) Commercial and industrial firms, and research, educational and medical institutions for research, development, educational or commercial purposes; and

(e) If the person so licensed does not receive more than a total of 150 pounds of source material in any 1 calendar year.

2. A person who receives, possesses, uses or transfers source material pursuant to the general license issued under this section is exempt from the provisions of NAC 459.320 to 459.374, inclusive, and 459.780 to 459.794, inclusive, to the extent that the activities are within the terms of the general license. This exemption does not apply to any person who also possesses source material under a specific license issued pursuant to NAC 459.180 to 459.313, inclusive.

3. A general license is also issued authorizing the receipt of title to source material without regard to quantity. This general license does not authorize any person to receive, possess, use or transfer source material.

[Bd. of Health, Radiation Control Reg. §§ 3.4-3.4.1.3, eff. 2-28-80]—(NAC A 1-18-94; R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.214 General licenses: Certain devices designed for use as static eliminators or for ionization of air. (NRS 459.201**)**

1. A general license is issued to transfer, receive, acquire, own, possess and use radioactive material incorporated in the following devices or equipment which have been manufactured, tested and labeled by the manufacturer in accordance with a specific license issued to the manufacturer by the Nuclear Regulatory Commission for use pursuant to 10 C.F.R. § 31.3. This general license is subject to the provisions of NAC 459.124 to 459.134, inclusive, subsection 2 of NAC

459.184, NAC 459.198, 459.208, 459.312 and 459.320 to 459.374, inclusive, relating to the labeling of containers, and NAC 459.780 to 459.794, inclusive.

2. The devices included in this license are:

(a) Devices designed for use as static eliminators which contain, as a sealed source or sources, radioactive material consisting of a total of not more than 500 microcuries of polonium 210 per device; and

(b) Devices designed for ionization of air which contain, as a sealed source or sources, radioactive material consisting of a total of not more than 500 microcuries of polonium 210 per device or a total of not more than 50 millicuries of hydrogen 3 (tritium) per device.

[Bd. of Health, Radiation Control Reg. §§ 3.4.2-3.4.2.1.2, eff. 2-28-80]—(NAC A 1-18-94; R149-07, 1-30-2008)

NAC 459.216 General licenses: Certain detecting, measuring, gauging or controlling devices and devices for producing light or ionized atmosphere. (NRS 459.201**)**

1. A general license is issued to commercial and industrial firms, to research, educational and medical institutions, to a person engaged in the conduct of his own business, and to the state and local governments, including the agencies of either, to own, receive, acquire, possess, use or transfer, in accordance with the provisions of subsections 2 and 3 and NAC 459.218, radioactive material, excluding special nuclear material, contained in devices designed and manufactured for the purpose of detecting, measuring, gauging or controlling thickness, density, level, interface location, radiation, leakage or qualitative or quantitative chemical composition or for producing light or an ionized atmosphere.

2. The general license in subsection 1 applies only to radioactive material contained in devices which have been manufactured or initially transferred and labeled in accordance with the specifications contained in a specific license issued by the Division pursuant to NAC 459.282, or in accordance with the specifications contained in a specific license issued by the Nuclear Regulatory Commission or an agreement state.

3. A general licensee may receive a device described in this section only from a specific licensee described in subsection 2 or through a transfer made pursuant to subsection 8 of NAC 459.218 and 459.2185.

4. The general license provided in subsection 1 is subject to the provisions of NAC 459.124 to 459.134, inclusive, 459.198, 459.208, 459.2185, 459.219, 459.287, 459.289, 459.2895, 459.3062 to 459.3068, inclusive, 459.3075, 459.312 and 459.313.

[Bd. of Health, Radiation Control Reg. §§ 3.4.2.2-3.4.2.2.2, 3.4.2.2.4 & 3.4.2.2.5, eff. 2-28-80]—(NAC A by R085-06, 11-13-2006; R149-07, 1-30-2008)

NAC 459.218 Duties and restrictions regarding certain detecting, measuring, gauging or controlling devices and devices for producing light or ionized atmosphere. (NRS 459.201**)** Any person who owns, receives, acquires, possesses, uses or transfers radioactive material in a device pursuant to the general license in subsection 1 of NAC 459.216:

1. Shall ensure that all labels affixed to the device at the time of receipt, and bearing a statement that removal of the label is prohibited, are maintained thereon and comply with all instructions and precautions provided by the labels.

2. Shall ensure that the device is tested for leakage of radioactive material and proper operation of the on-and-off mechanism and indicator, if any, and that such tests are conducted at no longer than 6-month intervals or at such other intervals as are specified in the label, except that:

(a) Devices containing only krypton need not be tested for leakage of radioactive material; and

(b) Devices containing only tritium or not more than 100 microcuries of other beta- or gamma-emitting material, or both, or 10 microcuries of alpha-emitting material and devices held in storage in the original shipping container before initial installation need not be tested for any purpose.

3. Shall ensure that the tests required by subsection 2 and other testing, installation, servicing and removal from installation, involving the radioactive materials, its shielding or containment, are performed and recorded:

(a) In accordance with the instructions provided by the labels; or

(b) By a person holding an applicable specific license from the Division, the Nuclear Regulatory Commission or an agreement state to perform such activities.

4. Shall maintain records showing compliance with the requirements of subsections 2 and 3. The records must show the results of tests. The records also must show the dates of performance of, and the names of persons performing, testing, installing, servicing and removal from installation concerning the radioactive material, its shielding or containment. Records of tests for leakage of radioactive material required by subsection 2 must be maintained until the sealed source is transferred or disposed of. Records of tests of the on-and-off mechanism and indicator required by subsection 2 must be maintained for 1 year after the next required test of the on-and-off mechanism and indicator is performed or until the sealed source is transferred or disposed of. Records which are required by subsection 3 must be maintained for a period of 2 years from the date of the recorded event or until the device is transferred or disposed of.

5. Upon the occurrence of a failure of or damage to, or any indication of a possible failure of or damage to, the shielding of the radioactive material or the on-and-off mechanism or indicator, or upon the detection of 0.005 microcurie (185 becquerels) or more of removable radioactive material:

(a) Shall immediately inform the Radiological Health Section of the Division by telephone;

(b) Shall immediately suspend operation of the device;

(c) Shall, within 30 days, furnish to the Division a report containing a brief description of the event and the remedial

action taken;

(d) Shall, in a case of detection of 0.005 microcurie (185 becquerels) or more of radioactive material or failure of or damage to a source likely to result in contamination of the premises or the environs, furnish to the Division a plan for ensuring that the premises and environs are acceptable for unrestricted use; and

(e) Shall not, in a case of detection of 0.005 microcurie (185 becquerels) or more of radioactive material or failure of or damage to a source likely to result in contamination of the premises and the environs, operate the device until it has been repaired by the manufacturer or other person holding a specific license to repair the device issued pursuant to 10 C.F.R. Parts 30 and 32 or equivalent regulations of an agreement state.

6. Shall not abandon the device containing radioactive material.

7. Except as otherwise provided in subsection 8, may transfer or dispose of the device containing radioactive material only by transfer to a specific licensee of the Division, the Nuclear Regulatory Commission or an agreement state whose specific license authorizes him to receive the device or whose license authorizes waste collection. Within 30 days after transfer of a device to a specific licensee, the person shall furnish to the Division a report containing identification of the device by the manufacturer's or initial transferor's name, the model number and serial number of the device transferred, the name, address and license number of the person receiving the device and the date of the transfer. A transferor shall not transfer the device to any specific licensee not described in this subsection without first obtaining approval of the transfer from the Division.

8. May transfer the device to another general licensee only:

(a) Where the device remains in use at a particular location. In such a case the transferor shall give the transferee a copy of NAC 459.010 to 459.794, inclusive, and any safety documents identified in the label on the device and, within 30 days after the transfer, shall report to the Division the manufacturer's or initial transferor's name, the model number and serial number of the device transferred, the name, title, telephone number and address of the transferee, and the name and position of a person who may constitute a point of contact between the Division and the transferee and who has knowledge of, and authority to take actions to ensure compliance with, the appropriate regulations and requirements; or

(b) Where the device is held in storage by an intermediate person in the original shipping container at its intended location of use before initial use by a general licensee.

9. Shall comply with the provisions of NAC 459.369 and 459.3695 for reporting radiation incidents, theft or loss of licensed material, but is exempt from the other requirements of NAC 459.320 to 459.374, inclusive, and 459.780 to 459.794, inclusive.

10. Except as otherwise provided in this subsection, shall respond to written requests from the Division to provide information relating to the general license within 30 calendar days after the date of the request or within the time specified in the request. If the general licensee cannot provide the requested information within the allotted time, the licensee shall, within the allotted time, request in writing additional time to comply with the request from the Division pursuant to the provisions of NAC 459.134.

11. Shall appoint a person responsible for having knowledge of the appropriate regulations and requirements and the authority for taking required actions to comply with those regulations and requirements. The general licensee, through the person appointed pursuant to this subsection, shall ensure daily compliance with all applicable regulations and requirements. The provisions of this subsection do not relieve the licensee of any responsibility or obligation under this chapter or chapter 459 of NRS.

12. Except for a person who holds a general license issued by the Nuclear Regulatory Commission or an agreement state and who uses a device described in paragraph (a) in areas subject to the jurisdiction of the Division for a period of less than 180 days in any calendar year, shall:

(a) Register any device which contains:

(1) Ten millicuries (370 megabecquerels) or more of cesium-137;

(2) One-tenth millicuries (3.7 megabecquerels) or more of strontium-90;

(3) One millicurie (37 megabecquerels) or more of cobalt-60;

(4) One millicurie (37 megabecquerels) or more of americium-241; or

(5) One millicurie (37 megabecquerels) or more of any other transuranic element, that is, an element with an atomic number greater than uranium-92,

➥ based on the activity indicated on the label. The general licensee shall register the device annually with the Division and shall pay the appropriate fee. In registering the device, the person shall verify, correct and, as appropriate, add to the information provided in a request from the Division for registration. The registration information must be submitted to the Division within 30 days after the date of the request for registration made by the Division, unless otherwise indicated in the request.

(b) In complying with the registration requirements of paragraph (a), in addition to any other information specifically requested by the Division, provide, without limitation, the following information:

(1) The name and mailing address of the general licensee;

(2) The name of the manufacturer or initial transferor of each device;

(3) The model number, serial number, radioisotope and activity, as indicated on the label, of each device;

(4) The name, title and telephone number of the responsible person designated as a representative of the general licensee pursuant to subsection 11;

(5) The address of the physical location at which each device is used and stored or, in the case of a portable device,

the address of the primary place of storage;

(6) A certification by the responsible person designated as the representative of the general licensee pursuant to subsection 11 that the information provided in the registration has been verified through a physical inventory and check of label information; and

(7) A certification by the responsible person designated as the representative of the general licensee pursuant to subsection 11 that the responsible person is aware of the requirements of the general license.

13. Shall report to the Division any change to the mailing address for a location of use, including any change in the name of the general licensee, within 30 days after the effective date of the change. For a portable device, the general licensee is required to report only a change in the address of the primary place of storage of the portable device.

14. Shall not hold a device that is not in use for more than 2 years, except that a device that is kept in standby for future use is excluded from the 2-year time limit if the general licensee performs physical inventories of those devices held in standby on a quarterly basis. If a device with shutters is not being used, the shutters must be locked in the closed position. If a device is put back into service or is transferred to another person and was not tested during the required test interval, the device must be tested for leakage before use or transfer and the shutter must be tested before use. The Division may determine the eligibility for release for unrestricted use of such a device in accordance with the provisions of NAC 459.3178.

[Bd. of Health, Radiation Control Reg. §§ 3.4.2.2.3-3.4.2.2.3.9, eff. 2-28-80]—(NAC A 9-6-88; 1-18-94; R085-06, 11-13-2006)

NAC 459.2185 Requirements for transfer of certain detecting, measuring, gauging or controlling devices and devices for producing light or ionized atmosphere to intended users or intermediate transferees. (NRS 459.201**)**

1. Except as otherwise provided in subsection 2, before a person may transfer a device containing radioactive material to the intended user of the device or an intermediate transferee for use by the intended user:

(a) Pursuant to a general license issued pursuant to NAC 459.216, the person must be licensed pursuant to NAC 459.216 and 459.282 to distribute such devices and shall, before the initial transfer of the device, provide to the intended user of the device and each intermediate transferee:

(1) A copy of the general license of the transferor issued pursuant to NAC 459.216, except that if subsections 2, 3, 4 and 12 of NAC 459.218 do not apply to the device those provisions may be omitted;

(2) A copy of the provisions of NAC 459.124, subsection 1 of NAC 459.194 and NAC 459.369 and 459.3695;

(3) A list of the services that can be performed only by a specific licensee;

(4) Information concerning acceptable disposal options, including, without limitation, information concerning estimated costs of disposal; and

(5) Notice that it is the policy of the Division to take enforcement action for improper disposal.

(b) Pursuant to a general license which is equivalent to a license issued pursuant to NAC 459.216 and which is issued pursuant to the regulations of the Nuclear Regulatory Commission or an agreement state, the person must be licensed pursuant to NAC 459.216 and shall, before the initial transfer of the device, provide to the intended user of the device and each intermediate transferee:

(1) A copy of the provisions of NAC 459.124, subsection 1 of NAC 459.194 and NAC 459.216 and 459.369 and a copy of the equivalent regulations of the Nuclear Regulatory Commission or agreement state, except that any provisions of the regulations of the Nuclear Regulatory Commission or agreement state which do not apply to the device may be omitted;

(2) If a copy of the regulations of the Nuclear Regulatory Commission is provided in lieu of a copy of the regulations of the agreement state pursuant to subparagraph (1), a statement that the use of the device is regulated by the agreement state;

(3) A list of the services that can be performed only by a specific licensee;

(4) Information concerning acceptable disposal options, including, without limitation, information concerning estimated costs of disposal; and

(5) The name or title, address and telephone number of the contact person at the Nuclear Regulatory Commission or appropriate regulatory agency of the agreement state from whom additional information may be obtained.

2. A licensee described in paragraph (a) or (b) of subsection 1 may propose an alternative method of informing an intended user of the device or other transferee of the type of information set forth in subsection 1 and may use the proposed method upon approval by the Division.

3. A general licensee who is subject to the provisions of paragraph (b) of subsection 1 and who transfers a device containing radioactive material after November 13, 2006, must comply with the provisions of NAC 459.282 concerning the labeling of the device.

(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.219 Requirements for separate locations of use of certain detecting, measuring, gauging or controlling devices and devices for producing light or ionized atmosphere. (NRS 459.201**)** Each address for a location of use described in subparagraph (5) of paragraph (b) of subsection 12 of NAC 459.218 is deemed to represent a separate general license and requires separate registration and payment of a separate fee.

(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.220 General licenses: Luminous safety devices for aircraft. (NRS 459.201)

1. A general license is issued to own, receive, acquire, possess and use tritium or promethium-147 contained in luminous safety devices for use in aircraft, if:

(a) Each device contains not more than 10 curies of tritium or 300 millicuries of promethium-147; and

(b) Each device has been manufactured, assembled or imported in accordance with a specific license issued by the Nuclear Regulatory Commission, or each device has been manufactured or assembled in accordance with the specifications contained in a specific license issued by the Division or any agreement state to the manufacturer or assembler of such device pursuant to licensing requirements equivalent to those in 10 C.F.R. § 32.53 of the regulations of the Nuclear Regulatory Commission.

2. Persons who own, receive, acquire, possess or use luminous safety devices pursuant to the general license in subsection 1 are exempt from the requirements of NAC 459.320 to 459.374, inclusive, and 459.780 to 459.794, inclusive, except that they shall comply with the provisions of NAC 459.369 and 459.3695.

3. This general license does not authorize:

(a) The manufacture, assembly or repair of luminous safety devices containing radioactive material.

(b) The ownership, receipt, acquisition, possession or use of promethium-147 contained in instrument dials.

4. This general license is subject to the provisions of NAC 459.124 to 459.134, inclusive, 459.198, 459.208 and 459.312.

[Bd. of Health, Radiation Control Reg. §§ 3.4.2.3-3.4.2.3.5, eff. 2-28-80]—(NAC A 1-18-94; R149-07, 1-30-2008)

NAC 459.222 General licenses: Ownership of radioactive material. (NRS 459.201) A general license is issued to own radioactive material without regard to quantity. This general license does not authorize the manufacture, production, transfer, receipt, possession or use of radioactive material.

[Bd. of Health, Radiation Control Reg. § 3.4.2.4, eff. 2-28-80]

NAC 459.224 General licenses: Calibration and reference sources. (NRS 459.201)

1. A general license is hereby issued to those persons listed to own, receive, acquire, possess, use and transfer, in accordance with the provisions of subsections 4 and 5, americium-241 in the form of calibration or reference sources:

(a) Any person who holds a specific license issued by the Division which authorizes him to receive, possess, use and transfer radioactive material; and

(b) Any person who holds a specific license issued by the Nuclear Regulatory Commission which authorizes him to receive, possess, use and transfer special nuclear material.

2. A general license is hereby issued to own, receive, possess, use and transfer plutonium in the form of calibration or reference sources in accordance with the provisions of subsections 4 and 5 to any person who holds a specific license issued by the Division which authorizes him to receive, possess, use and transfer radioactive material.

3. A general license is hereby issued to own, receive, possess, use and transfer radium-226 in the form of calibration or reference sources in accordance with the provisions of subsections 4 and 5 to any person who holds a specific license issued by the Division which authorizes him to receive, possess, use and transfer radioactive material.

4. The general licenses in paragraphs (a), (b) and (d) of subsection 5 apply only to calibration or reference sources which have been manufactured in accordance with the specifications contained in a specific license issued to the manufacturer or importer of the sources by the Nuclear Regulatory Commission pursuant to 10 C.F.R. § 32.57 or § 70.39 or which have been manufactured in accordance with specifications contained in a specific license issued to the manufacturer by the Division or any agreement state pursuant to licensing requirements equivalent to those contained in 10 C.F.R. § 32.57 or § 70.39 of the regulations of the Nuclear Regulatory Commission.

5. The general licenses provided in subsections 1, 2 and 3 are subject to the provisions of NAC 459.124 to 459.134, inclusive, 459.198, 459.208, 459.312, 459.320 to 459.374, inclusive, and 459.780 to 459.794, inclusive. In addition, persons who own, receive, acquire, possess, use or transfer one or more calibration or reference sources pursuant to NAC 459.180 to 459.313, inclusive:

(a) Shall not possess at any one time or at any one location of storage or use more than 5 microcuries of americium-241, 5 microcuries of plutonium and 5 microcuries of radium-226 in those sources;

(b) Shall not receive, possess, use or transfer such a source unless the source or its storage container bears a label which includes the following statement or a substantially similar statement:

The receipt, possession, use and transfer of this source, Model ....., Serial No. ....., are subject to a general license and the regulations of the Nuclear Regulatory Commission or of a state with which the Commission has entered into an agreement for the exercise of regulatory authority. Do not remove this label.

CAUTION - RADIOACTIVE MATERIAL - THIS SOURCE CONTAINS (AMERICIUM-241) (PLUTONIUM) (RADIUM-226). DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE.

.....

Name of manufacturer or importer

(c) Shall ensure that the label required by paragraph (b) shows only the name of the appropriate material;

(d) Shall not transfer, abandon or dispose of such source except by transfer to a person authorized by a license from the Division, the Nuclear Regulatory Commission or an agreement state to receive the source;

(e) Shall store such source, except when the source is being used, in a closed container adequately designed and constructed to contain americium-241, plutonium or radium-226 which might otherwise escape during storage; and

(f) Shall not use such source for any purpose other than the calibration of radiation detectors or the standardization of other sources.

6. These general licenses do not authorize the manufacture of calibration or reference sources containing americium-241, plutonium or radium-226.

[Bd. of Health, Radiation Control Reg. §§ 3.4.2.5-3.4.2.5.6, eff. 2-28-80]—(NAC A 1-18-94; R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.228 General licenses: Prepackaged units of radioactive material for in vitro testing. (NRS 459.201**)** A general license is issued to any physician, clinical laboratory or hospital to receive, acquire, possess, transfer or use, for any of the following stated tests, in accordance with the provisions of NAC 459.230, the following radioactive materials in prepackaged units:

1. Iodine 125, iodine 131, selenium 75, cobalt 57 and carbon 14 in units not exceeding 10 microcuries each for use in in vitro clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings or animals.

2. Hydrogen 3 (tritium) in units not exceeding 50 microcuries each for use in in vitro clinical or laboratory tests not involving internal or external administration of radioactive material, or its radiation, to human beings or animals.

3. Iron 59 in units not exceeding 20 microcuries each for use in in vitro clinical or laboratory tests not involving internal or external administration or radioactive material, or its radiation, to human beings or animals.

4. Mock iodine 125 reference or calibration sources in units not exceeding 0.05 microcurie of iodine 129 and 0.005 microcurie of americium 241 each for use in in vitro clinical or laboratory tests not involving internal or external administration of radioactive material, or radiation from it to human beings or animals.

[Bd. of Health, Radiation Control Reg. §§ 3.4.2.7-3.4.2.7.1.4, eff. 2-28-80]

NAC 459.230 Duties and restrictions regarding prepackaged units of radioactive material for in vitro testing. (NRS 459.201**)**

1. A person may not receive, acquire, possess, use or transfer radioactive material pursuant to the general license established by NAC 459.228, until he has filed division form NRC-8, "Certificate - In Vitro Testing with Radioactive Material Under General License," with the Division and received from the Division a validated copy of division form NRC-8 with certification number assigned. The physician, clinical laboratory or hospital shall furnish on division form NRC-8 the following information and any other information required by that form:

(a) Name and address of the physician, clinical laboratory or hospital;

(b) The location of use; and

(c) A statement that the physician, clinical laboratory or hospital has appropriate radiation measuring instruments to carry out in vitro clinical or laboratory tests with radioactive material as authorized under the general license in NAC 459.228, and that tests will be performed only by personnel competent in the use of the instruments and in the handling of the radioactive material.

2. A person who receives, acquires, possesses or uses radioactive material pursuant to the general license established by NAC 459.228, shall comply with the following:

(a) The general licensee shall not possess at any one time, pursuant to the general license in NAC 459.228, at any one location of storage or use a total amount of iodine 125, iodine 131, selenium 75, iron 59 or cobalt 57 in excess of 200 microcuries.

(b) The general licensee shall store the radioactive material, until used, in the original shipping container or in a container providing equivalent radiation protection.

(c) The general licensee shall use the radioactive material only for the uses authorized by NAC 459.228.

(d) The general licensee shall not transfer the radioactive material to a person who is not authorized to receive it pursuant to a license issued by the Division, the Nuclear Regulatory Commission or any agreement state, nor transfer the radioactive material in any manner other than in the unopened, labeled shipping container as received from the supplier.

(e) The general licensee must dispose of the mock iodine 125 reference or calibration sources described in subsection 4 of NAC 459.228, as required by NAC 459.3355 and 459.359 to 459.3615, inclusive.

3. The general licensee shall not receive, acquire, possess or use radioactive material pursuant to NAC 459.228:

(a) Except as prepackaged units which are labeled in accordance with the provisions of an applicable specific license issued by the Nuclear Regulatory Commission or any agreement state which authorizes the manufacture and distribution of iodine 125, iodine 131, carbon 14, hydrogen 3 (tritium), selenium 75, iron 59, cobalt 57 or mock iodine 125 for distribution to persons generally licensed under NAC 459.228 or its equivalent; and

(b) Unless the following statement or a substantially similar statement, which contains the information in the following

statement, appears on a label affixed to each prepackaged unit or appears in a leaflet or brochure which accompanies the package:

> This radioactive material must be received, acquired, possessed and used only by physicians, clinical laboratories or hospitals and only for in vitro clinical or laboratory tests not involving internal or external administration of the material, or the radiation therefrom, to human beings or animals. Its receipt, acquisition, possession, use and transfer are subject to the regulations and a general license of the Nuclear Regulatory Commission or of a state with which the Commission has entered into an agreement for the exercise of regulatory authority.
>
> .....
> Name of manufacturer

4. The physician, clinical laboratory or hospital possessing or using radioactive material under the general license of NAC 459.228 shall report in writing to the Division any changes in the information furnished by him in the "Certificate - In Vitro Testing with Radioactive Material Under General License," division form NRC-8. The report must be furnished within 30 days after the effective date of such change.

5. Any person using radioactive material pursuant to the general license of NAC 459.228 is exempt from the requirements of NAC 459.320 to 459.374, inclusive, and 459.780 to 459.794, inclusive, with respect to radioactive material covered by that general license except that such persons using mock iodine 125 described in subsection 4 of NAC 459.228 shall comply with the provisions of NAC 459.3355, 459.359 to 459.3615, inclusive, 459.369 and 459.3695.

[Bd. of Health, Radiation Control Reg. §§ 3.4.2.7.2-3.4.2.7.6, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.232 General licenses: Ice detection devices. (NRS 459.201)

1. A general license is issued to own, receive, acquire, possess, use and transfer strontium-90 contained in ice detection devices, if each device contains not more than 50 microcuries of strontium-90 and each device has been manufactured or imported in accordance with a specific license issued by the Nuclear Regulatory Commission or each device has been manufactured in accordance with the specifications contained in a specific license issued by the Division or any agreement state to the manufacturer of a device pursuant to licensing requirements equivalent to those in 10 C.F.R. § 32.61 of the regulations of the Nuclear Regulatory Commission.

2. Persons who own, receive, acquire, possess, use or transfer strontium-90 contained in ice detection devices pursuant to the general license in subsection 1:

(a) Shall, upon occurrence of visually observable damage, such as a bend or crack or discoloration from overheating to the device, discontinue use of the device until it has been inspected, tested for leakage and repaired by a person holding a specific license from the Division, the Nuclear Regulatory Commission or an agreement state to manufacture or service such devices or shall dispose of the device pursuant to the provisions of NAC 459.3355 and 459.359 to 459.3615, inclusive;

(b) Shall ensure that all labels affixed to the device at the time of receipt, and which bear a statement which prohibits removal of the labels, are maintained; and

(c) Are exempt from the requirements of NAC 459.320 to 459.374, inclusive, and 459.780 to 459.794, inclusive, except that the persons shall comply with the provisions of NAC 459.3355, 459.359 to 459.3615, inclusive, 459.369 and 459.3695.

3. This general license does not authorize the manufacture, assembly, disassembly or repair of strontium-90 in ice detection devices.

4. This general license is subject to the provisions of NAC 459.124 to 459.134, inclusive, 459.198, 459.208 and 459.312.

[Bd. of Health, Radiation Control Reg. §§ 3.4.2.8-3.4.2.8.4, eff. 2-28-80]—(NAC A 1-18-94; R149-07, 1-30-2008)

NAC 459.234 General licenses: Intrastate transportation of radioactive material. (NRS 459.201)

1. A general license is issued to any common or contract carrier to transport and store radioactive material in the regular course of carriage for another or storage incident thereto if the transportation and storage is in accordance with the applicable requirements of the regulations, appropriate to the mode of transport, of the Department of Transportation relating to the loading and storage of packages, placarding of the transporting vehicle and incident reporting. Any notification of incidents referred to in the federal regulations must be filed with, or made to, the Division. Persons who transport and store radioactive material pursuant to this general license are exempt from the requirements of NAC 459.320 to 459.374, inclusive, and 459.780 to 459.794, inclusive.

2. A general license is issued to any private carrier to transport radioactive material, provided the transportation is in accordance with the applicable requirements of the regulations, appropriate to the mode of transport, of the Department of Transportation relating to the loading and storage of packages, placarding of the transporting vehicle and incident reporting. Incidents must be reported as described in subsection 1.

3. Persons who transport radioactive material pursuant to a general license issued under this section are exempt from the requirements of NAC 459.320 to 459.374, inclusive, and 459.780 to 459.794, inclusive, to the extent that they transport radioactive material.

4. Physicians, are exempt from the requirements of subsection 2 to the extent that they transport radioactive material for use in the practice of medicine.

[Bd. of Health, Radiation Control Reg. §§ 3.4.3-3.4.3.2.2, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.236 Specific licenses: Application. (NRS 459.201**)**

1. Applications for specific licenses must be filed on a form prescribed by the Division and accompanied by the appropriate fee as prescribed in NAC 459.310.

2. The Division may at any time after the filing of the original application, and before the expiration of the license, require further statements in order to enable the Division to determine whether the application should be granted or denied or whether a license should be modified or revoked.

3. Each application must be signed by the applicant or licensee or a person duly authorized to act for and on his behalf.

4. An application for a license may include a request for a license authorizing one or more activities.

5. In his application, the applicant may incorporate by reference information contained in previous applications, statements or reports filed with the Division provided such references are clear and specific.

6. Applications and documents submitted to the Division may be made available for public inspection except that the Division may withhold any document or part thereof from public inspection if disclosure of its content is not required in the public interest and would adversely affect the interest of a person concerned.

7. An application for a specific license to use radioactive material in the form of a sealed source or in a device that contains a sealed source must:

(a) Identify the source or device by manufacturer and model number as registered with the Nuclear Regulatory Commission pursuant to the provisions of NAC 459.289 or 459.2895 or 10 C.F.R. § 32.210 or registered with an agreement state pursuant to an equivalent regulation of the agreement state; or

(b) Contain the information identified in NAC 459.289 or 459.2895, 10 C.F.R. § 32.210 or an equivalent regulation of an agreement state.

8. If applicable pursuant to NAC 459.1955, an application for a specific license must contain a proposed plan for financing decommissioning or a certification of financial assurance for decommissioning.

[Bd. of Health, Radiation Control Reg. §§ 3.5-3.5.1.6, eff. 2-28-80]—(NAC A 9-1-89; R085-06, 11-13-2006)

NAC 459.238 Specific licenses: General requirements; reasons for denial. (NRS 459.201**)**

1. An application for a license will be approved if the Division determines that:

(a) The applicant is qualified by reason of training and experience to use the material in question for the purpose requested in accordance with the provisions of NAC 459.010 to 459.950, inclusive, in a manner to minimize danger to public health and safety or property;

(b) The applicant's proposed equipment, facilities and procedures are adequate to minimize danger to public health and safety or property;

(c) The issuance of the license will not be inimical to the health and safety of the public; and

(d) The applicant satisfies any applicable special requirements in NAC 459.2434 to 459.307, inclusive.

2. The Division will deny an application for a license if the Division determines that:

(a) The issuance of the license would be inimical to the health and safety of the public;

(b) The applicant does not satisfy the requirements of paragraph (a), (b) or (d) of subsection 1; or

(c) The applicant has held a license authorizing a similar use of radioactive material issued by the Division or by the appropriate licensing agency in another jurisdiction and the license has either been revoked or the licensee has been cited for a violation, which the Division deems significant, of a regulation relating to matters of health and safety.

[Bd. of Health, Radiation Control Reg. §§ 3.5.2-3.5.2.4, eff. 2-28-80]—(NAC A 10-22-93; R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.2434 Specific licenses: Application, amendment or renewal of license for medical use of radioactive material. (NRS 459.201**)**

1. An application for a license for medical use of radioactive material must be made by submitting an original and one copy of NRC Form 5 to the Division. NRC Form 5 and its instructions may be obtained at no charge from the Division.

2. An application for amendment to a license or renewal of a license for medical use of radioactive material must be made by submitting an original and one copy of a letter of request to the Division.

(Added to NAC by Bd. of Health by R084-98, eff. 1-26-99)

NAC 459.2565 Specific licenses: Use of sealed sources for diagnosis. (NRS 459.201**)**

1. A licensee may use the following sealed sources for diagnosis in accordance with the radiation safety and handling instructions of the manufacturer:

(a) Iodine-125, americium-241 and gadolinium-153 in a device for bone mineral analysis; and

(b) Iodine-125 in a portable imaging device.

2. A licensee who uses radioactive material as a sealed source for diagnosis shall have in his possession a portable radiation detection survey instrument capable of:

(a) Detecting dose rates that range from 0.1 millirem per hour to 100 millirem per hour; or
(b) Measuring dose rates that range from 1 millirem per hour to 1000 millirem per hour.
(Added to NAC by Bd. of Health by R084-98, eff. 1-26-99)

NAC 459.261 Specific licenses: Use of sealed sources in well logging. (NRS 459.201**)**

1. In addition to the requirements set forth in NAC 459.238, a specific license for use of sealed sources in well logging will be issued if:

(a) The applicant develops a satisfactory program for training logging supervisors and logging assistants and submits to the Division a description of the program which specifies the:

(1) Initial training;

(2) On-the-job training;

(3) Annual safety reviews that will be made by the licensee;

(4) Means the applicant will use to demonstrate the logging supervisor's knowledge and understanding of and ability to comply with the Division's regulations and licensing requirements and the applicant's operating and emergency procedures; and

(5) Means the applicant will use to demonstrate the logging assistant's knowledge and understanding of an ability to comply with the applicant's operating and emergency procedures.

(b) The applicant has established and submits to the Division satisfactory written operating and emergency procedures.

(c) The applicant has established and submits to the Division a satisfactory program for annual inspections of the job performance of each logging supervisor to ensure that the Division's regulations, licensing requirements and the applicant's operating and emergency procedures are followed.

(d) The applicant submits to the Division a satisfactory description of its overall organizational structure as it applies to the radiation safety responsibilities in well logging, including specified delegations of authority and responsibility.

2. If an applicant wants to perform leak testing of sealed sources, he must submit to the Division the identification of the manufacturers and the model numbers of the leak test kits to be used.

3. If an applicant wants to analyze his own wipe samples he must submit satisfactory procedures to the Division which describe:

(a) The instruments that will be used;

(b) The methods of performing the analysis; and

(c) The pertinent experience of the person who will analyze the wipe samples.

(Added to NAC by Bd. of Health, eff. 4-27-84; A 9-6-88)

NAC 459.262 Broad licenses: General requirements. (NRS 459.201**)**

1. NAC 459.180 to 459.274, inclusive, prescribe requirements for the issuance of specific licenses of broad scope for radioactive material, called "broad licenses" herein, and regulations governing holders of the licenses.

2. Authority to transfer possession or control by the manufacturer, processor or producer of any equipment, device, commodity or other product containing source material or by-product material whose subsequent possession, use, transfer and disposal by all other persons are exempted from regulatory requirements may be obtained only from the Nuclear Regulatory Commission, Washington, D.C. 20555.

[Bd. of Health, Radiation Control Reg. § 3.5.4, eff. 2-28-80]—(NAC A by R149-07, 1-30-2008)

NAC 459.264 Broad licenses: Types of licenses. (NRS 459.201**)** The types of broad licenses available are:

1. A "type A specific license of broad scope" is a specific license authorizing receipt, acquisition, ownership, possession, use and transfer of any chemical or physical form of the radioactive material specified in the license, not exceeding quantities specified in the license, for any authorized purpose, including, without limitation, medical use of radioactive material. The quantities specified are usually in the multicurie range.

2. A "type B specific license of broad scope" is a specific license authorizing receipt, acquisition, ownership, possession, use and transfer of any chemical or physical form of radioactive material specified in NAC 459.266, for any authorized purpose. The possession limit for a type B broad license, if only one radionuclide is possessed under the license, is the quantity specified for that radionuclide in Column I of NAC 459.266. If two or more radionuclides are possessed, the possession limit for each is determined as follows: For each radionuclide, determine the ratio of the quantity possessed to the applicable quantity specified in Column I of NAC 459.266 for that radionuclide. The sum of the ratios for all radionuclides possessed under the license must not exceed unity.

3. A "type C specific license of broad scope" is a specific license authorizing receipt, acquisition, ownership, possession, use and transfer of any chemical or physical form of radioactive material specified in NAC 459.266 for any authorized purpose. The possession limit for a type C broad license, if only one radionuclide is possessed, is the quantity specified for that radionuclide in Column II of NAC 459.266. If two or more radionuclides are possessed, the possession limit is determined for each as follows: For each radionuclide, determine the ratio of the quantity possessed to the applicable quantity specified in Column II of NAC 459.266 for that radionuclide. The sum of the ratios for all radionuclides possessed under the license must not exceed unity.

[Bd. of Health, Radiation Control Reg. §§ 3.5.4.1-3.5.4.1.3, eff. 2-28-80]—(NAC A by R084-98, 1-26-99)

NAC 459.266 Broad licenses: Table of limits. (NRS 459.201) The limits for radioactive material for broad licenses are:

Radioactive Material	Column I Curies	Column II Curies
Antimony-122	1.0	0.01
Antimony-124	1.0	0.01
Antimony-125	1.0	0.01
Arsenic-73	10.0	0.1
Arsenic-74	1.0	0.01
Arsenic-76	1.0	0.01
Arsenic-77	10.0	0.1
Barium-131	10.0	0.1
Barium-140	1.0	0.01
Beryllium-7	10.0	0.1
Bismuth-210	0.1	0.001
Bromine-82	10.0	0.1
Cadmium-109	1.0	0.01
Cadmium-115m	1.0	0.01
Cadmium-115	10.0	0.1
Calcium-45	1.0	0.01
Calcium-47	10.0	0.1
Carbon-14	100.0	1.0
Cerium-141	10.0	0.1
Cerium-143	10.0	0.1
Cerium-144	0.1	0.001
Cesium-131	100.0	1.0
Cesium-134m	100.0	1.0
Cesium-134	0.1	0.001
Cesium-135	1.0	0.01
Cesium-136	10.0	0.1
Cesium-137	0.1	0.001
Chlorine-36	1.0	0.01
Chlorine-38	100.0	1.0
Chromium-51	100.0	1.0
Cobalt-57	10.0	0.1
Cobalt-58m	100.0	1.0
Cobalt-58	1.0	0.01
Cobalt-60	0.1	0.001
Copper-64	10.0	0.1
Dysprosium-165	100.0	1.0
Dysprosium-166	10.0	0.1
Erbium-169	10.0	0.1
Erbium-171	10.0	0.1
Europium-152 (9.2 h)	10.0	0.1
Europium-152 (13 y)	0.1	0.001
Europium-154	0.1	0.001
Europium-155	1.0	0.01
Fluorine-18	100.0	1.0
Gadolinium-153	1.0	0.01
Gadolinium-159	10.0	0.1
Gallium-72	10.0	0.1
Germanium-71	100.0	1.0
Gold-198	10.0	0.1
Gold-199	10.0	0.1
Hafnium-181	1.0	0.01
Holmium-166	10.0	0.1
Hydrogen-3	100.0	1.0
Indium-113m	100.0	1.0
Indium-114m	1.0	0.01
Indium-115m	100.0	1.0
Indium-115	1.0	0.01
Iodine-125	0.1	0.001

Iodine-126	0.1	0.001
Iodine-129	0.1	0.001
Iodine-131	0.1	0.001
Iodine-132	10.0	0.1
Iodine-133	1.0	0.01
Iodine-134	10.0	0.1
Iodine-135	1.0	0.01
Iridium-192	1.0	0.01
Iridium-194	10.0	0.1
Iron-55	10.0	0.1
Iron-59	1.0	0.01
Krypton-85	100.0	1.0
Krypton-87	10.0	0.1
Lanthanum-140	1.0	0.01
Lutetium-177	10.0	0.1
Manganese-52	1.0	0.01
Manganese-54	1.0	0.01
Manganese-56	10.0	0.1
Mercury-197m	10.0	0.1
Mercury-197	10.0	0.1
Mercury-203	1.0	0.01
Molybdenum-99	10.0	0.1
Neodymium-147	10.0	0.1
Neodymium-149	10.0	0.1
Nickel-59	10.0	0.1
Nickel-63	1.0	0.01
Nickel-65	10.0	0.1
Niobium-93m	1.0	0.01
Niobium-95	1.0	0.01
Niobium-97	100.0	1.0
Osmium-185	1.0	0.01
Osmium-191m	100.0	1.0
Osmium-191	10.0	0.1
Osmium-193	10.0	0.1
Palladium-103	10.0	0.1
Palladium-109	10.0	0.1
Phosphorus-32	1.0	0.01
Platinum-191	10.0	0.1
Platinum-193m	100.0	1.0
Platinum-193	10.0	0.1
Platinum-197m	100.0	1.0
Platinum-197	10.0	0.1
Polonium-210	0.01	0.0001
Potassium-42	1.0	0.01
Praseodymium-142	10.0	0.1
Praseodymium-143	10.0	0.1
Promethium-147	1.0	0.01
Promethium-149	10.0	0.1
Radium-226	0.01	0.0001
Rhenium-186	10.0	0.1
Rhenium-188	10.0	0.1
Rhodium-103m	1,000.0	10.0
Rhodium-105	10.0	0.1
Rubidium-86	1.0	0.01
Rubidium-87	1.0	0.01
Ruthenium-97	100.0	1.0
Ruthenium-103	1.0	0.01
Ruthenium-105	10.0	0.1
Ruthenium-106	0.1	0.001
Samarium-151	1.0	0.01
Samarium-153	10.0	0.1
Scandium-46	1.0	0.01
Scandium-47	10.0	0.1
Scandium-48	1.0	0.01
Selenium-75	1.0	0.01
Silicon-31	10.0	0.1

Silver-105	1.0	0.01
Silver-110m	0.1	0.001
Silver-111	10.0	0.1
Sodium-22	0.1	0.001
Sodium-24	1.0	0.01
Strontium-85m	1,000.0	10.0
Strontium-85	1.0	0.01
Strontium-89	1.0	0.01
Strontium-90	0.01	0.0001
Strontium-91	10.0	0.1
Strontium-92	10.0	0.1
Sulphur-35	10.0	0.1
Tantalum-182	1.0	0.01
Technetium-96	10.0	0.1
Technetium-97m	10.0	0.1
Technetium-97	10.0	0.1
Technetium-99m	100.0	1.0
Technetium-99	1.0	0.01
Tellurium-125m	1.0	0.01
Tellurium-127m	1.0	0.01
Tellurium-127	10.0	0.1
Tellurium-129m	1.0	0.01
Tellurium-129	100.0	1.0
Tellurium-131m	10.0	0.1
Tellurium-132	1.0	0.01
Terbium-160	1.0	0.01
Thallium-200	10.0	0.1
Thallium-201	10.0	0.1
Thallium-202	10.0	0.1
Thallium-204	1.0	0.01
Thulium-170	1.0	0.01
Thulium-171	1.0	0.01
Tin-113	1.0	0.01
Tin-125	1.0	0.01
Tungsten-181	1.0	0.01
Tungsten-185	1.0	0.01
Tungsten-187	10.0	0.1
Vanadium-48	1.0	0.01
Xenon-131m	1,000.0	10.0
Xenon-133	100.0	1.0
Xenon-135	100.0	1.0
Ytterbium-175	10.0	0.1
Yttrium-90	1.0	0.01
Yttrium-91	1.0	0.01
Yttrium-92	10.0	0.1
Yttrium-93	1.0	0.01
Zinc-65	1.0	0.01
Zinc-69m	10.0	0.1
Zinc-69	100.0	1.0
Zirconium-93	1.0	0.01
Zirconium-95	1.0	0.01
Zirconium-97	1.0	0.01
Any radioactive material other than source material, special nuclear material, or alpha-emitting radioactive material not listed above	0.1	0.001

[Bd. of Health, Radiation Control Reg. Art. 3, Appendix C, eff. 2-28-80]

NAC 459.268 Broad licenses: Application for type A specific license of broad scope. (NRS 459.201**)** An application for a type A specific license of broad scope will be approved if:

1. The applicant satisfies the general requirements specified in NAC 459.238;

2. The applicant has engaged in a reasonable number of activities involving the use of radioactive materi[redacted]d

3. The applicant has established administrative controls and provisions relating to organization and management, procedures, recordkeeping, material control and accounting, and management review that are necessary to ensure safe operations, including:

(a) The establishment of a radiation safety committee composed of such persons as a radiation safety officer, a representative of management and persons trained and experienced in the safe use of radioactive material;

(b) The appointment of a radiation safety officer who is qualified by training and experience in radiation protection and is available for advice and assistance on radiation safety matters; and

(c) The establishment of appropriate administrative procedures to ensure:

(1) Control of procurement and use of radioactive material;

(2) Completion of safety evaluations of proposed uses of radioactive material which take into consideration matters such as the adequacy of facilities and equipment, training and experience of the user, and the operating or handling procedures; and

(3) Review, approval and recording by the radiation safety committee of safety evaluations of proposed uses prepared in accordance with subparagraph (2) prior to use of the radioactive material.

[Bd. of Health, Radiation Control Reg. §§ 3.5.4.2-3.5.4.2.3.3.3, eff. 2-28-80]

NAC 459.270 Broad licenses: Application for type B specific license of broad scope. (NRS 459.201**)** An application for a type B specific license of broad scope will be approved if:

1. The applicant satisfies the general requirements specified in NAC 459.238; and

2. The applicant has established administrative controls and provisions relating to organization and management, procedures, recordkeeping, material control and accounting and management review that are necessary to ensure safe operations, including:

(a) The appointment of a radiation safety officer who is qualified because of training and experience in radiation protection and is available for advice and assistance on radiation safety matters; and

(b) The establishment of appropriate administrative procedures to ensure:

(1) Control of procurement and use of radioactive material;

(2) Completion of safety evaluations of proposed uses of radioactive material which take into consideration such matters as the adequacy of facilities and equipment, training and experience of the user, and the operating or handling procedures; and

(3) Review, approval and recording by the radiation safety officer of safety evaluation of proposed uses prepared in accordance with subparagraph (2) prior to the use of the radioactive material.

[Bd. of Health, Radiation Control Reg. §§ 3.5.4.3-3.5.4.3.2.2.3, eff. 2-28-80]

NAC 459.272 Broad licenses: Application for type C specific license of broad scope. (NRS 459.201**)** An application for a type C specific license of broad scope will be approved if:

1. The applicant satisfies the general requirements specified in NAC 459.238;

2. The applicant submits a statement that radioactive material will be used only by, or under the direct supervision of, persons who have received:

(a) A college degree at the bachelor level or equivalent training and experience in the physical or biological sciences or in engineering; and

(b) At least 40 hours of training and experience in the safe handling of radioactive material, the characteristics of ionizing radiation, units of radiation dose and quantities, radiation detection instrumentation and biological hazards of exposure to radiation appropriate to the type and forms of radioactive material to be used; and

3. The applicant has established administrative controls and provisions relating to procurement of radioactive material, procedures, recordkeeping, material control and accounting and management review necessary to ensure safe operations.

[Bd. of Health, Radiation Control Reg. §§ 3.5.4.4-3.5.4.4.3, eff. 2-28-80]

NAC 459.274 Broad licenses: Conditions of license. (NRS 459.030**,** 459.201**)** Specific licenses of broad scope are subject to the following conditions:

1. Unless specifically authorized, persons licensed pursuant to NAC 459.262 may not:

(a) Conduct tracer studies in the environment involving direct release of radioactive material;

(b) Receive, acquire, own, possess, use or transfer devices containing 100,000 curies or more of radioactive material in sealed sources used for irradiation of materials;

(c) Conduct activities for which a specific license issued by the Division under NAC 459.2434, 459.2565 and 459.276 to 459.307, inclusive, is required; or

(d) Add or cause the addition of radioactive material to any food, beverage, cosmetic, drug or other product designed for ingestion or inhalation by, or application to, a human being.

2. Each type A specific license of broad scope issued under NAC 459.180 to 459.274, inclusive, will be subject to the condition that radioactive material possessed under the license may only be used by, or under the direct supervision of, persons approved by the radiation safety committee of the licensee.

3. Each type B specific license of broad scope issued under this article is subject to the condition that radioactive

material possessed under the license may only be used by, or under the direct supervision of, persons approved by the radiation safety officer of the licensee.

4. Each type C specific license of broad scope issued under this article is subject to the condition that radioactive material possessed under the license may only be used by, or under the direct supervision of, persons who satisfy the requirements of NAC 459.272.

[Bd. of Health, Radiation Control Reg. §§ 3.5.4.5-3.5.4.5.4, eff. 2-28-80]—(NAC A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R085-06, 11-13-2006; R149-07, 1-30-2008)

NAC 459.276 Specific licenses: Introduction of exempt concentrations of radioactive material into certain products or materials. (NRS 459.201)

1. In addition to the requirements set forth in NAC 459.238, a specific license authorizing the introduction of radioactive material into a product or material owned by or in the possession of the licensee or another to be transferred to persons exempt pursuant to NAC 459.184 will be issued if:

(a) The applicant submits a description of the product or material into which the radioactive material will be introduced, intended use of the radioactive material and the product or material into which it is introduced, method of introduction, initial concentration of the radioactive material in the product or material, control methods to ensure that no more than the specified concentration is introduced into the product or material, estimated time interval between introduction and transfer of the product or material, and estimated concentration of the radioactive material in the product or material at the time of transfer; and

(b) The applicant provides reasonable assurance that the concentrations of radioactive material at the time of transfer will not exceed the concentrations in NAC 459.186, that reconcentration of the radioactive material in concentrations exceeding those in NAC 459.186 is not likely, that use of lower concentrations is not feasible, and that the product or material is not likely to be incorporated in any food, beverage, cosmetic, drug or other commodity or product designed for ingestion or inhalation by, or application to, a human being.

2. Each person licensed under this section must file an annual report with the Division which identifies the type and quantity of each product or material into which radioactive material has been introduced during the reporting period; the name and address of the person who owned or possessed the product or material into which radioactive material has been introduced, at the time of introduction; the type and quantity of radionuclide introduced into each such product or material; and the initial concentrations of the radionuclide in the product or material at time of transfer of the radioactive material by the licensee. If no transfers of radioactive material have been made pursuant to this section during the reporting period, the report must so indicate. The report must cover the year ending June 30, and be filed with the Division within 30 days.

[Bd. of Health, Radiation Control Reg. §§ 3.5.5.1-3.5.5.1.2, eff. 2-28-80]

NAC 459.278 Specific licenses: Distribution of radioactive material in exempt quantities. (NRS 459.201)

1. An application for a specific license to distribute radioactive material other than source or by-product material to persons exempted from NAC 459.010 to 459.794, inclusive, pursuant to NAC 459.184 will be approved if:

(a) The radioactive material is not contained in any food, beverage, cosmetic, drug or other commodity designed for ingestion or inhalation by, or application to, a human being;

(b) The radioactive material is in the form of processed chemical elements, compounds, mixtures, tissue samples, bioassay samples, counting standards, plated or encapsulated sources or similar substances, identified as radioactive and to be used for its radioactive properties, but is not incorporated into any manufactured or assembled commodity, product or device intended for commercial distribution; and

(c) The applicant submits copies of prototype labels and brochures and the Division approves the labels and brochures.

2. The license issued under subsection 1 is subject to the following conditions:

(a) No more than ten exempt quantities may be sold or transferred in any single transaction. An exempt quantity may be composed of fractional parts of one or more of the exempt quantity provided the sum of the fractions does not exceed unity.

(b) Each exempt quantity must be separately and individually packaged. No more than ten packaged exempt quantities may be contained in any outer package for transfer to persons exempt pursuant to NAC 459.184. The outer package must be such that the dose rate at the external surface of the package does not exceed 0.5 millirem per hour.

(c) The immediate container of each quantity or separately packaged fractional quantity of radioactive material must bear a durable, legible label which:

(1) Identifies the radionuclide and the quantity of radioactivity; and

(2) Bears the words "Radioactive Material."

(d) In addition to the labeling information required by paragraph (c) the label affixed to the immediate container or an accompanying brochure must:

(1) State that the contents are exempt from the Nuclear Regulatory Commission or agreement state requirements;

(2) Bear the words "Radioactive Material - Not for Human Use - Introduction into Foods, Beverages, Cosmetics, Drugs, Medicines or Products Manufactured for Commercial Distribution is Prohibited - Exempt Quantities Should not be Combined"; and

(3) Set forth appropriate radiation safety precautions and instructions relating to the handling, use, storage and

disposal of the radioactive material.

3. Each person licensed under this section shall maintain records identifying, by name and address, each person to whom radioactive material is transferred for use under NAC 459.184 or the equivalent regulations of an agreement state, and stating the kinds and quantities of radioactive material transferred. An annual summary report stating the total quantity of each radionuclide transferred under the specific license must be filed with the Division. Each report must cover the year ending June 30, and be filed within 30 days. If no transfers of radioactive material have been made pursuant to this section during the reporting period, the report must so indicate.

4. The provisions of subsection 2 of NAC 459.262 apply to this section.

[Bd. of Health, Radiation Control Reg. §§ 3.5.5.2-3.5.5.2.3, eff. 2-28-80]

NAC 459.280 Specific licenses: Incorporation of naturally occurring or accelerator-produced radioactive material into gas and aerosol detectors. (NRS 459.030**,** 459.201**)** An application for a specific license authorizing the incorporation of a naturally occurring or accelerator-produced radioactive material, other than source or by-product material, into gas and aerosol detectors to be distributed to persons exempt under NAC 459.192 will be approved if:

1. The application satisfies requirements equivalent to those contained in 10 C.F.R. § 32.26 of the regulations of the Nuclear Regulatory Commission; and

2. The amount of radium 226 to be incorporated in each device does not exceed 0.1 microcurie (3.7 kilobecquerels).

[Bd. of Health, Radiation Control Reg. § 3.5.5.3, eff. 2-28-80]—(NAC A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R085-06, 11-13-2006)

NAC 459.282 Specific licenses: Manufacture or distribution of devices. (NRS 459.201**)** An application for a specific license to manufacture or distribute devices containing radioactive material, excluding special nuclear material, to persons generally licensed under NAC 459.216 or equivalent regulations of the Nuclear Regulatory Commission or an agreement state will be approved if:

1. The applicant satisfies the general requirements of NAC 459.238.

2. The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control, labels, proposed uses, installation, servicing, leak testing, operating and safety instructions and potential hazards of the device to provide reasonable assurance that:

(a) The device can be safely operated by persons not having training in radiological protection;

(b) Under ordinary conditions of handling, storage and use of the device, the radioactive material contained in the device will not be released or inadvertently removed from the device, and it is unlikely that any person will receive in any period of 1 year a dose in excess of 10 percent of the limits specified in NAC 459.325; and

(c) In an accident such as fire or explosion, associated with handling, storage and use of the device, it is unlikely that any person would receive an external radiation dose or dose commitment in excess of the following organ doses:

(1) Whole body, head and trunk, active blood-forming organs, gonads or lens of eye..... 15 rems

(2) Hands and forearms, feet and ankles, localized areas of skin averaged over areas not larger than 1 square centimeter..... 200 rems

(3) Other organs..... 50 rems

3. Each device bears a durable, legible, clearly visible label or labels approved by the Division which contain in a clearly identified and separate statement:

(a) Instructions and precautions necessary to assure safe installation, operation and maintenance of the device. Documents such as operating and service manuals may be identified in the label and used to provide this information.

(b) The requirement, or lack of requirement, for leak testing, or for testing any on-and-off mechanism and indicator, including the maximum time interval for such testing, and the identification of radioactive material by isotope, quantity of radioactivity and date of determination of the quantity.

(c) The information called for in the following statement, in the same or substantially similar form:

> The receipt, possession, use and transfer of this device model, serial number, are subject to a general license or the equivalent and the regulations of the Nuclear Regulatory Commission or a state with which the Nuclear Regulatory Commission has entered into an agreement for the exercises of regulatory authority. This label must be maintained on the device in a legible condition. Removal of this label is prohibited.
>
> CAUTION - RADIOACTIVE MATERIAL
>
> .....
> (Name of manufacturer or distributor)

(d) The model, serial number and name of the manufacturer or distributor may be omitted from the label required by this subsection if the information is specified elsewhere and labeling is affixed to the device.

4. Each device that has a separable source housing that provides primary shielding for the source also bears, on the

source housing, a durable label listing the model number and serial number of the device, the isotope and quantity, the radiation symbol described in NAC 459.355, the words "CAUTION - RADIOACTIVE MATERIAL" and the name of the manufacturer or initial distributor of the device.

5. Each device described in paragraph (a) of subsection 12 of NAC 459.218 bears a permanent label, including, without limitation, an embossed, etched, engraved or a stamped label, affixed to the source housing if separable or to the device if the source housing is not separable, which contains the words "CAUTION - RADIOACTIVE MATERIAL" and the radiation symbol described in NAC 459.355, if practicable.

[Bd. of Health, Radiation Control Reg. §§ 3.5.5.4-3.5.5.4.1.3.3.1, eff. 2-28-80]—(NAC A 1-18-94; R085-06, 11-13-2006)

NAC 459.286 Information required for manufacture and distribution of devices. (NRS 459.201**)** If the applicant desires that the general licensee under NAC 459.216 or under equivalent regulations of the Nuclear Regulatory Commission or an agreement state be authorized to install the device, collect the sample to be analyzed by a specific licensee for leakage or radioactive material, perform service upon the device, test the on-and-off mechanism and indicator or remove the device from installation, he shall include in his application written instructions to be followed by the general licensee, estimated calendar quarter doses associated with such activity or activities and bases for such estimates. The submitted information must demonstrate that performance of the activity by a person untrained in radiological protection, in addition to other handling, storage and use of devices under the general licensee, is unlikely to cause that person to receive in 1 year a dose in excess of 10 percent of the limits specified in NAC 459.325.

[Bd. of Health, Radiation Control Reg. § 3.5.5.4.3, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.287 Manufacturer or distributor of devices: Provision of record of final disposition of bankruptcy proceeding. (NRS 459.201**)** If a person licensed pursuant to NAC 459.282 is required to provide notice of a bankruptcy proceeding pursuant to subsection 3 of NAC 459.198, the licensee shall, upon request of the Division, the Nuclear Regulatory Commission or the equivalent agency of an agreement state, provide a record of the final disposition of the bankruptcy proceeding to the requesting agency.

(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.288 Distribution of devices. (NRS 459.201**)** Each person licensed under NAC 459.282 to distribute devices to generally licensed persons shall:

1. Furnish a copy of the general license contained in NAC 459.216 to each person to whom he directly or through an intermediate person transfers radioactive material in a device for use pursuant to the general license contained in NAC 459.216.

2. Furnish a copy of the general license contained in the Nuclear Regulatory Commission's or agreement state's regulation equivalent to NAC 459.216, or alternatively, furnish a copy of the general license contained in NAC 459.216 to each person to whom he directly or through an intermediate person transfers radioactive material in a device for use pursuant to the general license of the Nuclear Regulatory Commission or the agreement state. If a copy of the general license in NAC 459.216 is furnished to such a person, it must be accompanied by a note explaining that the use of the device is regulated by the Nuclear Regulatory Commission or an agreement state under requirements substantially the same as those in NAC 459.216.

3. Report to the Division all transfers of devices to persons for use under the general license in NAC 459.216. The report must identify each general licensee by name and address; a person by name and position who may constitute a point of contact between the Division and the general licensee; the type and model number of device transferred; and the quantity and type of radioactive material contained in the device. If one or more intermediate persons will temporarily possess the device at the intended place of use prior to its possession by the user, the report must include identification of each intermediate person by name, address, contact and relationship to the intended user. If no transfers have been made to the persons generally licensed under NAC 459.216 during the reporting period, the report must so indicate. The report must cover each calendar quarter and be filed within 30 days thereafter.

4. Reports to other agencies, for example:

(a) Report to the Nuclear Regulatory Commission all transfers of devices for use under the Nuclear Regulatory Commission general license in 10 C.F.R. § 31.5.

(b) Report to the responsible agreement state agency all transfers of devices for use under a general license in that agreements state's regulations equivalent to NAC 459.216.

(c) The reports must identify each general licensee by name and address; a person by name and position who may constitute a point of contact between the agency and the general licensee; the type and model of the device transferred; and the quantity and type of radioactive material contained in the device. If one or more intermediate persons will temporarily possess the device at the intended place of use prior to its possession by the user, the report must include identification of each intermediate person by name, address, contact and relationship to the intended user. The report must be submitted within 30 days after the end of each calendar quarter in which such a device is transferred to the generally licensed person.

(d) If no transfers have been made to Nuclear Regulatory Commission licensees during the reporting period, this information must be reported to the Nuclear Regulatory Commission.

(e) If no transfers have been made to a particular agreement state during the reporting period, this information must be reported to the responsible agreement state agency upon request of the agency.

5. Keep records showing the name, address and the point of contact for each general licensee to whom he directly or through an intermediate person transfers radioactive material in devices for use pursuant to the general license provided in NAC 459.216 or equivalent regulations to the Nuclear Regulatory Commission or an agreement state. The records must show the date of each transfer, the radionuclide and the quantity of radioactivity in each device transferred, the identity of any intermediate person and compliance with the report requirements of this section.

[Bd. of Health, Radiation Control Reg. §§ 3.5.5.4.4-3.5.5.4.4.5, eff. 2-28-80]

NAC 459.289 Report of transfer of device to or receipt of device from person who has general license issued by State. (NRS 459.201)

1. A person who is licensed pursuant to NAC 459.282 to transfer devices containing radioactive material initially to a person who has been issued a general license pursuant to NAC 459.216 or who received such a device from a person who has been issued a general license pursuant to NAC 459.216 shall, in accordance with the provisions of NAC 459.134, report to the Division each such transfer and receipt of devices containing radioactive material.

2. The report required pursuant to subsection 1 must:

(a) Cover each calendar quarter;

(b) Be filed within 30 days after each calendar quarter;

(c) Clearly indicate the calendar quarter covered by the report;

(d) Clearly identify the licensee submitting the report and include the license number of the licensee;

(e) If the person making the report transferred a device containing radioactive material to a general licensee, be submitted on Nuclear Regulatory Commission Form 653, Transfers of Industrial Devices Report (To General Licensees), or in a clear and legible report containing all the data required on Form 653, including, without limitation:

(1) The identity of each general licensee who received such a device, by name and mailing address for the location of use of the device or, if there is no mailing address for the location of use, an alternate address for the general licensee and a description of the location of use;

(2) The name, title and telephone number of the person identified by the general licensee as having knowledge of and authority to take required actions to ensure compliance with the appropriate regulations and requirements;

(3) The date of the transfer;

(4) The type, model number and serial number of the device transferred; and

(5) The quantity and type of radioactive material contained in the device transferred;

(f) If one or more intermediate persons will temporarily possess the device at the intended place of use before the intended user takes possession of the device, include the information required in this subsection for each intermediate person and must clearly designate each intermediate person;

(g) If the person making the report received a device containing radioactive material from a general licensee, include, without limitation:

(1) The name and address of the general licensee;

(2) The type, model number and serial number of the device received;

(3) The date of receipt; and

(4) In the case of devices not initially transferred by the person required to make the report, the name of the manufacturer or initial transferor of the device; and

(h) If, during the calendar quarter, no transfers have been made to or from a general licensee who is licensed pursuant to NAC 459.216, indicate that no transfers were made during the calendar quarter.

3. If a person required to make a report pursuant to this section makes a change to a device possessed by a general licensee who is licensed pursuant to NAC 459.216, such that the label must be changed to update required information, the report described in subsection 2, in addition to all other requirements of this section, must:

(a) Identify, by name and address, the general licensee and the person who possesses the device;

(b) Identify the device by type, model number and serial number; and

(c) Note the changes to the information on the label of the device.

4. A person required to make a report pursuant to this section shall maintain all information concerning transfers and receipts of devices containing radioactive material that supports the report for at least 3 years following the date of the recorded event.

5. If a license of a person required to make a report pursuant to this section is to be terminated for any reason, the licensee shall, upon request, provide the information described in subsection 4 to the Division.

(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.2895 Report of transfer of device to or receipt of device from person who has general license issued by Nuclear Regulatory Commission or agreement state. (NRS 459.201)

1. A person who is licensed pursuant to NAC 459.282 to transfer devices containing radioactive material initially to a person who has been issued a general license by the Nuclear Regulatory Commission or an agreement state or who received such a device from a person who has been issued a general license by the Nuclear Regulatory Commission or an agreement state shall report those transfers and receipts of devices containing radioactive material to the Nuclear

Regulatory Commission or appropriate regulatory agency of the agreement state.

2. The report required pursuant to subsection 1 must:

(a) Cover each calendar quarter;

(b) Be filed within 30 days after each calendar quarter;

(c) Clearly indicate the calendar quarter covered by the report;

(d) Clearly identify the licensee submitting the report and include the license number of the licensee;

(e) If the person making the report transferred a device containing radioactive material to a general licensee, be submitted on Nuclear Regulatory Commission Form 653, Transfers of Industrial Devices Report (To General Licensee), or in a clear and legible report containing all the data required by Form 653, including, without limitation:

(1) The identity of each general licensee who holds a general license issued by the Nuclear Regulatory Commission or an agreement state and who received such a device, by name and mailing address for the location of use or, if there is no mailing address for the location of use, an alternate address for the general licensee and a description of the location of use;

(2) The name, title and telephone number of the person identified by the general licensee as having knowledge of and authority to take required actions to ensure compliance with the appropriate regulations and requirements;

(3) The date of the transfer;

(4) The type, model number and serial number of the device transferred; and

(5) The quantity and type of radioactive material contained in the device transferred;

(f) If one or more intermediate persons will temporarily possess the device at the intended place of use before the intended user takes possession of the device, include the information required in this subsection for each intermediate person and must clearly designate each intermediate person;

(g) If the person making the report received a device containing radioactive material from a general licensee, include:

(1) The name and address of the general licensee;

(2) The type, model number and serial number of the device received;

(3) The date of receipt; and

(4) In the case of devices not initially transferred by the person required to make the report, the name of the manufacturer or initial transferor of the device; and

(h) If, during the calendar quarter, no transfers have been made to or from a general licensee who is licensed by the Nuclear Regulatory Commission or an agreement state, upon request from the Nuclear Regulatory Commission or agreement state, indicate that no transfers were made during the calendar quarter.

3. If a person required to make a report pursuant to this section makes a change to a device possessed by a person who holds a general license issued by the Nuclear Regulatory Commission or an agreement state, such that the label must be changed to update required information, the report described in subsection 2, in addition to all other requirements of this section, must:

(a) Identify, by name and address, the general licensee and the person who possesses the device;

(b) Identify the device by type, model number and serial number; and

(c) Note the changes to the information on the label of the device.

4. A person required to make a report pursuant to this section shall maintain all information concerning transfers and receipts of devices containing radioactive material that supports the report for at least 3 years following the date of the recorded event.

5. If a license of a person required to make a report pursuant to this section is to be terminated for any reason, the licensee shall, upon request, provide the information described in subsection 4 to the Nuclear Regulatory Commission or the equivalent agency of an agreement state.

(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.290 Specific licenses: Manufacture, assembly or repair of luminous safety devices for use in aircraft. (NRS 459.201**)** An application for a specific license to manufacture, assemble or repair luminous safety devices containing tritium or promethium 147 for use in aircraft, for distribution to persons generally licensed under NAC 459.220, will be approved subject to the following conditions:

1. The applicant satisfies the general requirements specified in NAC 459.238; and

2. The applicant satisfies the requirements of 10 C.F.R. §§ 32.53-32.56 & 32.101 or their equivalent.

[Bd. of Health, Radiation Control Reg. §§ 3.5.5.5-3.5.5.5.2, eff. 2-28-80]

NAC 459.292 Specific licenses: Manufacture of calibration and reference sources. (NRS 459.201**)** An application for a specific license to manufacture calibration and reference sources containing americium 241, plutonium or radium 226 to persons generally licensed under NAC 459.224 will be approved subject to the following conditions:

1. The applicant satisfies the general requirement of NAC 459.238; and

2. The applicant satisfies the requirements of 10 C.F.R. §§ 32.57-32.59 & 32.102 and 10 C.F.R. § 70.39 or their equivalent.

[Bd. of Health, Radiation Control Reg. §§ 3.5.5.6-3.5.5.6.2, eff. 2-28-80]

NAC 459.296 Specific licenses: Manufacture or distribution of radioactive material for in vitro clinical or

laboratory testing. (NRS 459.201**)** An application for a specific license to manufacture or distribute radioactive material for use under the general license of NAC 459.228 will be approved if:

1. The applicant satisfies the general requirements specified in NAC 459.238.
2. The radioactive material is to be prepared for distribution in prepackaged units of:

(a) Iodine 125 in units not exceeding 10 microcuries each.
(b) Iodine 131 in units not exceeding 10 microcuries each.
(c) Carbon 14 in units not exceeding 10 microcuries each.
(d) Hydrogen 3 (tritium) in units not exceeding 50 microcuries each.
(e) Iron 59 in units not exceeding 20 microcuries each.
(f) Cobalt 57 in units not exceeding 10 microcuries each.
(g) Selenium 75 in units not exceeding 10 microcuries each.
(h) Mock iodine 125 in units not exceeding 0.05 microcurie of iodine 129 and 0.005 microcurie of americium 241 each.

3. Each prepackaged unit bears a durable, clearly visible label:

(a) Identifying the radioactive contents as to chemical form and radionuclide, and indicating that the amount of radioactivity does not exceed:
(1) Ten microcuries of iodine 125, iodine 131, selenium 75, cobalt 57 or carbon 14;
(2) Fifty microcuries of hydrogen 3 (tritium);
(3) Twenty microcuries of iron 59; or
(4) For mock iodine 125, 0.05 microcurie of iodine 129 and 0.005 microcurie of americium 241 each.

(b) Displaying the radiation caution symbol described in NAC 459.355 and the words, "CAUTION - RADIOACTIVE MATERIAL," and "Not for Internal or External Use in Humans or Animals."

4. The following statement, or a substantially similar statement which contains the information called for in the following statement, appears on a label affixed to each prepackaged unit or appears in leaflet or brochure which accompanies the package:

> This radioactive material may be received, acquired, possessed and used only by physicians, clinical laboratories or hospitals and only for in vitro clinical or laboratory tests not involving internal or external administration of the material, or the radiation therefrom, to human beings or animals. Its receipt, acquisition, possession, use and transfer are subject to the regulations and a general license of the Nuclear Regulatory Commission or of a state with which the Commission has entered into an agreement for the exercise of regulatory authority.
>
> .....
> Name of Manufacturer

5. The label affixed to the unit, or the leaflet or brochure which accompanies the package, contains adequate information regarding the precautions to be observed in handling and storing such radioactive material. In the case of the mock iodine 125 reference or calibration source, the information accompanying the source must also contain directions to the licensee regarding the waste disposal requirements of NAC 459.3355 and 459.359 to 459.3615, inclusive.

[Bd. of Health, Radiation Control Reg. §§ 3.5.5.8-3.5.5.8.5, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.298 Specific licenses: Manufacture and distribution of ice detection devices. (NRS 459.201**)** An application for a specific license to manufacture and distribute ice detection devices to persons generally licensed under NAC 459.232 will be approved subject to the following conditions:

1. The applicant satisfies the general requirements of NAC 459.238; and
2. The criteria of 10 C.F.R. §§ 32.61, 32.62 & 32.103 are met.

[Bd. of Health, Radiation Control Reg. § 3.5.5.9, eff. 2-28-80]

NAC 459.300 Specific licenses: Manufacture, preparation or transfer for commercial distribution of radioactive drugs. (NRS 459.201**)**

1. An application for a specific license to manufacture, prepare or transfer for commercial distribution radioactive drugs containing radioactive material for use by persons authorized under a license issued by the Nuclear Regulatory Commission or any other agreement state will be approved if:

(a) The applicant satisfies the general requirements specified in NAC 459.238;
(b) The applicant submits evidence that the applicant is:
(1) Registered or licensed as a drug manufacturer by:
(I) The United States Food and Drug Administration; or
(II) An agency of this State;
(2) Licensed as a pharmacy by the State Board of Pharmacy; or
(3) Operating as a nuclear pharmacy within a medical facility;
(c) The applicant submits information on the radionuclide, chemical and physical form, maximum activity per vial,

syringe, generator or other container of the radioactive drug and shielding provided by the packaging of the radioactive material to demonstrate that it is appropriate for safe handling and storage of radioactive drugs by licensees authorized to use radioactive material for medical use; and

(d) The applicant complies with the following labeling requirements:

(1) A label must be affixed to each transport radiation shield of the radioactive drug, including, without limitation, shields made of lead, glass or plastic, to be transferred for commercial distribution. The label must set forth or contain the radiation symbol, the words "CAUTION, RADIOACTIVE MATERIAL" or "DANGER, RADIOACTIVE MATERIAL," the name of the radioactive drug, or its abbreviation, and the quantity of radioactivity at the time and date specified on the label. For radioactive drugs with a half-life of more than 100 days, the time may be omitted from the label.

(2) A label must be affixed to each syringe, vial or other container used to hold a radioactive drug to be transferred for commercial distribution. The label must set forth the radiation symbol, the words "CAUTION, RADIOACTIVE MATERIAL" or "DANGER, RADIOACTIVE MATERIAL" and an identifier that ensures that the syringe, vial or other container can be correlated with the information on the transport radiation shield label.

2. A licensee who is licensed as a pharmacy by the State Board of Pharmacy or who is operating as a nuclear pharmacy within a medical facility:

(a) May prepare a radioactive drug for medical use if the radioactive drug is prepared by an authorized nuclear pharmacist.

(b) May allow a pharmacist to work as an authorized nuclear pharmacist if the pharmacist is an authorized nuclear pharmacist.

(c) May designate a pharmacist as an authorized nuclear pharmacist if the pharmacist is identified, as of November 13, 2006, as an authorized user on a license for a nuclear pharmacy issued by the Division, the Nuclear Regulatory Commission pursuant to 10 C.F.R. Part 32 or an agreement state.

(d) Shall provide to the Division:

(1) A copy of the certification, license or permit for each pharmacist that authorizes the pharmacist to perform any of the activities set forth in this subsection within 30 days after performing such activities; and

(2) A copy of the license or registration of the pharmacy or nuclear pharmacy within 30 days after the pharmacist performs any of the activities set forth in this subsection.

3. A licensee who prepares radioactive drugs for medical use pursuant to this section shall:

(a) Possess and use an instrument to measure the radioactivity of alpha-, beta- or photon-emitting radioactive drugs;

(b) Have procedures for the use of the instrument;

(c) Measure, by direct measurement or by a combination of measurements and calculations, the amount of radioactivity in dosages of alpha-, beta- or photon-emitting radioactive drugs before transfer for commercial distribution;

(d) Perform tests before initial use, periodically and following repair on each instrument for accuracy, linearity and geometry dependence, as appropriate for the instrument, and make adjustments to the instrument if necessary; and

(e) Check each instrument for constancy and proper operation at the beginning of each day of use.

4. No provision of this section relieves a licensee of his duty to comply with any other federal, state or local requirement governing the receipt, administration or use of drugs or radioactive drugs.

[Bd. of Health, Radiation Control Reg. §§ 3.5.5.10-3.5.5.10.1.4.2, eff. 2-28-80]—(NAC A 9-6-88; 11-1-95; R084-98, 1-26-99; R085-06, 11-13-2006; R149-07, 1-30-2008)

NAC 459.302 Specific licenses: Manufacture and distribution of generators or reagent kits for preparing radioactive drugs. (NRS 459.201**)** An application for a specific license to manufacture and distribute generators or reagent kits containing radioactive material for preparation of radioactive drugs by persons authorized under a license issued by the Nuclear Regulatory Commission or any other agreement state will be approved if:

1. The applicant satisfies the general requirements specified in NAC 459.238;

2. The applicant submits evidence that:

(a) The generator or reagent kit is to be manufactured, labeled and packaged in accordance with the Federal Food, Drug and Cosmetic Act or the Public Health Service Act, such as a new drug application approved by the Food and Drug Administration, a biologic product license issued by the Administration, or a Notice of Claimed Investigational Exemption for a New Drug that has been accepted by the Administration; or

(b) The manufacture and distribution of the generator or reagent kit are not subject to the Federal Food, Drug and Cosmetic Act and Public Health Service Act;

3. The applicant submits information on the radionuclide, chemical and physical form, packaging, including maximum activity per package, and shielding provided by the packaging of the radioactive material contained in the generator or reagent kit;

4. The label affixed to the generator or reagent kit contains information on the radionuclide, quantity and date of assay; and

5. The label affixed to the generator or reagent kit, or the leaflet or brochure which accompanies the generator or reagent kit, contains:

(a) Adequate information from a radiation safety standpoint on the procedures to be followed and the equipment and shielding to be used in eluting the generator or processing radioactive material with the reagent kit; and

(b) A statement that this generator or reagent kit is approved for use by persons licensed by the Nuclear Regulatory

Commission or an agreement state. The labels, leaflets or brochures required by this paragraph are in addition to the labeling required by the Administration, and they may be separate from or, with the approval of the Administration, may be combined with the labeling required by the Administration.

[Bd. of Health, Radiation Control Reg. §§ 3.5.5.11-3.5.5.11.1.5.2, eff. 2-28-80]—(NAC A 9-6-88; 11-1-95; R085-06, 11-13-2006; R149-07, 1-30-2008)

NAC 459.304 Manufacture and distribution of reagent kits not containing radioactive material. (NRS 459.201**)** Although the Division does not regulate the manufacture and distribution of reagent kits that do not contain radioactive material, it does regulate the use of such reagent kits for the preparation of radioactive drugs containing radioactive material as part of its licensing and regulation of the users of radioactive material. Any resident manufacturer of reagent kits not containing radioactive material who desires to have his reagent kits approved by the Division may submit the pertinent information specified in NAC 459.302.

[Bd. of Health, Radiation Control Reg. § 3.5.5.11.1.5.2, Note, eff. 2-28-80]—(NAC A 9-6-88; 11-1-95; R085-06, 11-13-2006; R149-07, 1-30-2008)

NAC 459.306 Specific licenses: Manufacture and distribution of sources and devices for medical use. (NRS 459.201**)** An application for a specific license to manufacture and distribute sources and devices containing radioactive material to persons licensed pursuant to 10 C.F.R. Part 35 or equivalent regulations of an agreement state, for use as a calibration or reference source or for the uses listed in 10 C.F.R. §§ 35.400, 35.500 and 35.600 or equivalent regulations of an agreement state, will be approved if:

1. The applicant satisfies the general requirements in NAC 459.238;
2. The applicant submits sufficient information regarding each type of source or device pertinent to an evaluation of its radiation safety, including:

(a) The radioactive material contained, its chemical and physical form, and amount;

(b) Details of design and construction of the source or device;

(c) Procedures for, and results of, prototype tests to demonstrate that the source or device will maintain its integrity under stresses likely to be encountered in normal use and in accidents;

(d) For devices containing radioactive material, the radiation profile of a prototype device;

(e) Details of quality control procedures to ensure that production sources and devices meet the standards of the design and prototype tests;

(f) Procedures and standards for calibrating sources and devices;

(g) Legends and methods for labeling sources and devices as to their radioactive content; and

(h) Instructions for handling and storing the source or device from the radiation safety standpoint, which instructions must be included on a durable label attached to the source or device or attached to a permanent storage container for the source or device, provided that instructions which are too lengthy for the label may be summarized on the label and printed in detail on a brochure which is referenced on the label; and

3. The label affixed to the source, device or permanent storage container for the source or device contains information on the radionuclide, quantity and date of assay, and a statement that the source or device is approved by the Division for distribution to persons licensed to use radioactive material identified in 10 C.F.R. §§ 35.57, 35.400, 35.500 and 35.600 or to persons who hold equivalent licenses of the Nuclear Regulatory Commission or an agreement state.

[Bd. of Health, Radiation Control Reg. §§ 3.5.5.12-3.5.5.12.1.3, eff. 2-28-80]—(NAC A 9-6-88; 11-1-95; R085-06, 11-13-2006; R149-07, 1-30-2008)

NAC 459.3062 Adoption by reference and revision of certain provisions of federal regulations regarding medical use of radioactive material. (NRS 459.201**)**

1. The provisions of 10 C.F.R. Part 35, as they existed on September 16, 2004, are hereby adopted by reference, subject to the following:

(a) 10 C.F.R. §§ 35.8, 35.4001 and 35.4002 are not adopted by reference.

(b) Except as otherwise provided in this chapter, the implementation date described in 10 C.F.R. §§ 35.10(a) and 35.10(d) is November 13, 2006.

(c) Except as otherwise provided in this chapter, the October 24, 2002, date described in 10 C.F.R. § 35.57(a)(1) shall be deemed to mean November 13, 2006.

(d) Except as otherwise provided in this section, any reference in 10 C.F.R. Part 35 to:

(1) "10 CFR Part 19" or "10 CFR 19" shall be deemed to mean "NAC 459.780 to 459.794, inclusive."

(2) "10 CFR 19.12" or "§ 19.12" shall be deemed to mean "NAC 459.784."

(3) "10 CFR Part 20" or "10 CFR 20" shall be deemed to mean "NAC 459.320 to 459.374, inclusive."

(4) "10 CFR 20.1101" or "§ 20.1101" shall be deemed to mean "paragraph (a) of subsection 1 of NAC 459.321."

(5) "10 CFR 20.1301(a)(1)" or "§ 20.1301(a)(1)" shall be deemed to mean "paragraph (a) of subsection 1 of NAC 459.335."

(6) "10 CFR 20.1301(c)" or "§ 20.1301(c)" shall be deemed to mean "paragraph (c) of subsection 1 of NAC 459.335."

(7) "10 CFR 20.1501" or "§ 20.1501" shall be deemed to mean "NAC 459.337."

(8) "10 CFR Part 30" or "10 CFR 30" shall be deemed to mean "NAC 459.180 to 459.313, inclusive."
(9) "10 CFR 30.34(b)" or "§ 30.34(b)" shall be deemed to mean "subsection 2 of NAC 459.198."
(10) "10 CFR 30.6" or "§ 30.6" shall be deemed to mean "NAC 459.134."
(11) "10 CFR 32.72(b)(4)" or "§ 32.72(b)(4)" shall be deemed to mean "paragraph (c) of subsection 2 of NAC 459.300."
(12) "10 CFR Part 33" or "10 CFR 33" shall be deemed to mean "NAC 459.262 to 459.274, inclusive."
(13) "10 CFR 33.13" or "§ 33.13" shall be deemed to mean "NAC 459.268."
(14) "10 CFR Part 170," "10 CFR 170," "10 CFR Part 171" or "10 CFR 171" shall be deemed to mean "NAC 459.310."
(15) "Byproduct material" shall be deemed a reference to "radioactive material."
(16) "Commission" or "NRC" shall be deemed a reference to "Division."
(17) "Commission's regulations," "federal regulations" or "NRC regulations" shall be deemed a reference to "NAC 459.010 to 459.950, inclusive."
(18) "NRC Form 313" shall be deemed a reference to "NRC Form 5," Application for Radioactive Material License, described in NAC 459.2434.
(19) "NRC license" shall be deemed a reference to "license issued by the Division pursuant to NAC 459.010 to 459.950, inclusive."
(20) "NRC Operations Center" or "Director, Office of Nuclear Safety and Safeguards" shall be deemed a reference to "the provisions of NAC 459.134 and the contact information described in the State of Nevada Radiological Emergency Response Plan."
(21) "NRC or an Agreement State," "Commission or an Agreement State" or "Commission or by an Agreement State" shall be deemed a reference to "Division, Nuclear Regulatory Commission or an agreement state."
(e) The full text of any sentence that contains a reference to "10 CFR Part 21," "10 CFR 21," "10 CFR 30.7," "§ 30.7," "10 CFR 30.9," "§ 30.9," "10 CFR 30.10" or "§ 30.10" shall be deemed omitted.
2. A copy of the volume containing 10 C.F.R. Part 35 may be obtained by mail from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 979050, St. Louis, Missouri 63197-9000, or by toll-free telephone at (866) 512-1800, at a cost of $61, or free of charge at the Internet address http://www.gpoaccess.gov/cfr/index.html.
(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006; A by R149-07, 1-30-2008)

NAC 459.3064 Written attestations not required for authorized users who have license issued by Nuclear Regulatory Commission or agreement state. (NRS 459.201**)** The written attestations described in 10 C.F.R. §§ 35.14(a), 35.50(d), 35.51(b)(2), 35.55(b)(2), 35.190(c)(2), 35.290(c)(2), 35.390(b)(2), 35.392(c)(3), 35.394(c)(3), 35.396(d)(3), 35.490(b)(3), 35.491(b)(3) and 35.690(b)(3) are not required for authorized users who have been named on a radioactive material license issued by the Nuclear Regulatory Commission or an agreement state before November 13, 2006.
(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.3066 Satisfaction of training requirements for radiation safety officer, authorized medical physicist, authorized nuclear pharmacist or authorized user. (NRS 459.201**)**
1. Before April 29, 2008, a licensee shall satisfy the training requirements for a radiation safety officer, an authorized medical physicist, an authorized nuclear pharmacist or an authorized user by complying with:
(a) The appropriate provisions of 10 C.F.R. Part 35, Subpart J; or
(b) The appropriate provisions of 10 C.F.R. Part 35, Subpart B or Subparts D to H, inclusive.
2. On or after April 29, 2008, a licensee shall satisfy the training requirements for a radiation safety officer, an authorized medical physicist, an authorized nuclear pharmacist or an authorized user by complying with the provisions of 10 C.F.R. Part 35, Subpart B or Subparts D to H, inclusive.
(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.3068 Additional requirements for persons registered to use sealed source to engage in medical use. (NRS 459.201**)** Except as otherwise provided in NAC 459.3064 and 459.3066, in addition to any applicable requirement of NAC 459.010 to 459.794, inclusive, a person registered with the Division to use a sealed source to engage in medical use of a radioactive material shall comply with all applicable requirements of, and may rely on all applicable exclusions or exemptions included in, the provisions of 10 C.F.R. Part 35, as adopted by reference pursuant to NAC 459.3062.
(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.307 Testing sealed sources for leakage. (NRS 459.030, 459.201**)**
1. Any licensee who possesses sealed sources shall have each sealed source containing radioactive material tested for leakage at intervals not to exceed 6 months, unless a longer interval is authorized by the Division, the Nuclear Regulatory Commission or an agreement state in the Sealed Source and Device Registry maintained by the Nuclear Regulatory Commission. In the absence of a certificate from a transferor indicating that a test has been made within 6 months before the transfer, the sealed sources should not be used until tested, but no leak tests are required when:

(a) The source contains only radioactive material with a half-life of less than 30 days;
(b) The source contains only radioactive material as a gas;
(c) The source contains 100 microcuries (3.7 megabecquerels) or less of beta- or gamma-emitting material or 10 microcuries (370 kilobecquerels) or less of alpha-emitting material;
(d) The sealed source is stored and is not being used. The sources must be tested for leakage before any use or transfer unless they have been leak tested within 6 months before the date of use or transfer; or
(e) The source is seeds of iridium-192 encased in nylon ribbon.

2. The leak test must be capable of detecting the presence of 0.005 microcurie (185 becquerels) of radioactive material on the test sample. The test sample must be taken from the sealed source or from the surfaces of the device in which the sealed source is permanently mounted or stored on which contamination might be expected to accumulate. Records of leak test results must be maintained for 5 years for inspection by the Division and, for persons licensed pursuant to the provisions of this chapter for the medical use of radioactive material, must include, without limitation:
(a) The model number and serial number, if one has been assigned, of each sealed source tested;
(b) The identity of each source by radionuclide and its estimated activity;
(c) The results of the test of each sealed source;
(d) The date of the test of each sealed source; and
(e) The name of the person who performed each test.

3. If the leak test reveals the presence of 0.005 microcurie (185 becquerels) or more of removable contamination, or 0.001 microcurie (37 becquerels) of radon 222 in a 24-hour period if the sealed source is a brachytherapy source manufactured to contain radium, the licensee shall immediately inform the Radiological Health Section of the Division by telephone, withdraw the sealed source, or the device in which it is permanently mounted, from use and cause it to be placed in locked storage. A written report must be filed with the Division within 5 days of the test and must include, without limitation:
(a) A description of the equipment involved;
(b) The model number and serial number, if assigned, of the leaking source;
(c) The radionuclide of the leaking source and its estimated activity;
(d) The test results;
(e) The date of the test; and
(f) A description of the action taken.

[Bd. of Health, Radiation Control Reg. §§ 3.5.3.3.5-3.5.3.3.5.3, eff. 2-28-80]—(NAC A 9-6-88; A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R085-06, 11-13-2006)

NAC 459.3075 Sealed source or device containing sealed source intended for use under specific license: Request for evaluation and registration; manufacture and distribution. (NRS 459.201**)**

1. A manufacturer or initial distributor of a sealed source or device containing a sealed source whose product is intended for use under a specific license may submit a request to the Nuclear Regulatory Commission or an agreement state for evaluation of the radiation safety information concerning its product and for registration of the product.

2. A request for review submitted pursuant to subsection 1 must be sent to the Office of Nuclear Material Safety and Safeguards of the United States Nuclear Regulatory Commission by a method listed in 10 C.F.R. § 30.6(a) or to the equivalent agency of an agreement state.

3. A request for review of a sealed source submitted pursuant to subsection 1 must include, without limitation, sufficient information concerning the:
(a) Design of the sealed source;
(b) Manufacture of the sealed source;
(c) Prototype testing of the sealed source;
(d) Quality control program proposed for the sealed source;
(e) Labeling of the sealed source;
(f) Proposed uses of the sealed source; and
(g) Leak testing of the source,

➥ to provide reasonable assurance that the radiation safety properties of the sealed source are adequate to protect health and minimize the danger to life and property.

4. A request for review of a device containing a sealed source submitted pursuant to subsection 1 must include, without limitation, sufficient information concerning the:
(a) Design of the device;
(b) Manufacture of the device;
(c) Prototype testing of the device;
(d) Quality control program proposed for the device;
(e) Labeling of the device;
(f) Proposed uses of the device;
(g) Leak testing of the device;
(h) Installation of the device;
(i) Service and maintenance of the device;

(j) Operating and safety instructions concerning the device; and
(k) Potential hazards associated with the device,
➥ to provide reasonable assurance that the radiation safety properties of the device are adequate to protect health and minimize the danger to life and property.

5. If the Nuclear Regulatory Commission or agreement state completes an evaluation pursuant to a request made pursuant to subsection 1 and issues a certificate of registration to the manufacturer or initial distributor of a sealed source or device containing a sealed source who made the request pursuant to subsection 1, the manufacturer or initial distributor shall manufacture and distribute the product in accordance with:

(a) The statements and representations, including, without limitation, the quality control program, contained in the request submitted pursuant to subsection 1; and
(b) The provisions of the certificate of registration.

(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

NAC 459.310 Fees of Division. (NRS 439.150**,** 459.201**)** Except as otherwise provided in NAC 459.203, the Division will not issue a new specific license or a renewed specific license to a person until the appropriate nonrefundable fee has been paid to the Division, as prescribed in the following table:

Material and use	Fee
1. Special nuclear material:	
(a) As sealed source	$2,000
(b) In unsealed form	2,000
2. Source materials for other than milling operations	$2,200
3. By-product material, artificially produced radioactive material and radium:	
(a) Manufacturing or distribution, or both	$2,200
(b) Nuclear pharmacy	6,600
(c) Industrial radiography	5,500
(d) Category 1 (self-shielded) irradiator	1,650
(e) Academic, broad scope	8,800
(f) Academic, other research and development	1,320
(g) Service or laboratory	1,760
(h) Fixed gauge	1,100
(i) Gas chromatograph	496
(j) In vitro	105
(k) Portable gauge or X-ray fluorescence analyzer	1,320
(l) All other uses of radioactive material except those set forth in subsections 4 to 8, inclusive	1,000
4. Well logging	$3,300
5. Medical use or veterinary use of radioactive material:	
(a) Medical use or veterinary use	$4,400
(b) General license for in vitro use	125
6. Civil defense	$276
7. Registration of devices generally licensed pursuant to paragraph (a) of subsection 12 of NAC 459.218	$250
8. Any use of radioactive material by a person who holds a specific license issued by the Nuclear Regulatory Commission or any agreement state	See appropriate fee category above

[Bd. of Health, Radiation Control Reg. § 3.1.1.1, eff. 10-15-81]—(NAC A 10-14-82; 4-26-84; 11-1-85; 3-9-87; 2-18-88; 12-15-88; 9-1-89; 1-31-90; 4-18-90; 8-1-91; 1-21-92; 1-24-92; 10-22-93; 11-1-95; R034-04, 4-7-2004; R085-06, 11-13-2006; R149-07, 1-30-2008)

NAC 459.312 Transfer of material. (NRS 459.201**)**

1. A licensee may transfer radioactive material only as authorized in this section.
2. Except as otherwise provided in his license and subject to the provisions of subsections 3 and 4, any licensee may transfer radioactive material:
(a) To the Division but only after receiving prior approval from the Division;
(b) To the United States Department of Energy;

(c) To any person exempt from the provisions of NAC 459.180 to 459.313, inclusive, to the extent permitted under the exemption;

(d) To any person authorized to receive the material under terms of a general license or its equivalent, or a specific license or equivalent licensing document, issued by the Division, the Nuclear Regulatory Commission or any agreement state, or to any person otherwise authorized to receive material by the Federal Government or any agency thereof, the Division or any agreement state; or

(e) As otherwise authorized by the Division in writing.

3. Before transferring radioactive material to a specific licensee of the Division, the Nuclear Regulatory Commission, an agreement state, or to a general licensee who is required to register with the Nuclear Regulatory Commission or an agreement state before receipt of the radioactive material, the licensee transferring the material shall verify that the transferee's license authorizes the receipt of the type, form and quantity of radioactive material to be transferred.

4. The following methods for the verification required by subsection 3 are acceptable:

(a) The transferor may have in his possession, and read, a current copy of the transferee's specific license or registration certificate;

(b) The transferor may have in his possession a written certification by the transferee that he is authorized by license or registration certificate to receive the type, form and quantity of radioactive material to be transferred, specifying the license or registration certificate number, issuing agency and expiration date;

(c) For emergency shipments, the transferor may accept oral certification confirmed in writing within 10 days by the transferee that he is authorized by license or registration certificate to receive the type, form and quantity of radioactive material to be transferred, specifying the license or registration certificate number, issuing agency and expiration date;

(d) The transferor may obtain other sources of information compiled by a reporting service from official records of the Division, the Nuclear Regulatory Commission or the licensing agency of an agreement state as to the identity of licensees and the scope and expiration dates of licenses and registration; or

(e) When none of the methods of verification described in paragraphs (a) to (d), inclusive, are readily available or when a transferor desires to verify that information received by one of such methods is correct or up to date, the transferor may obtain and record confirmation from the Division, the Nuclear Regulatory Commission or the licensing agency of an agreement state that the transferee is licensed to receive the radioactive material.

[Bd. of Health, Radiation Control Reg. §§ 3.5.12-3.5.12.5, eff. 2-28-80]—(NAC A by R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.313 Shipment of radioactive waste for ultimate disposal at licensed land disposal facility. (NRS 459.201**)**

1. A licensee who ships radioactive waste intended for ultimate disposal at a licensed land disposal facility must document the information required on Nuclear Regulatory Commission Form 541, Uniform Low-Level Radioactive Waste Manifest, and transfer the recorded manifest information to the intended consignee in accordance with the provisions of Appendix G.

2. Each manifest described in subsection 1 must include a certification by the waste generator as provided in section II of Appendix G.

3. Each person involved in the transfer for disposal or the disposal of radioactive waste, including, without limitation, the waste generator, waste collector, waste processor and disposal facility operator, shall comply with the requirements of section III of Appendix G.

(Added to NAC by Bd. of Health by R085-06, eff. 11-13-2006)

Radiological Criteria for Termination of License

NAC 459.316 Definitions. (NRS 459.030, 459.201**)** As used in NAC 459.316 to 459.3184, inclusive, unless the context otherwise requires, the words and terms defined in NAC 459.3164, 459.3166 and 459.3168 have the meanings ascribed to them in those sections.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003; A by Bd. of Health by R085-06, 11-13-2006)

NAC 459.3164 "Critical group" defined. (NRS 459.030**)** "Critical group" means the group of natural persons that, for any particular set of circumstances, are reasonably expected to receive the greatest exposure to residual radioactivity.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

NAC 459.3166 "Distinguishable from background radiation" defined. (NRS 459.030**)** "Distinguishable from background radiation" means that, using adequate measurement technology, survey and statistical techniques, the detectable concentration of a radionuclide is statistically different from the background concentration of that radionuclide:

1. In the site; or

2. In the case of a structure, in similar materials.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

NAC 459.3168 "Residual radioactivity" defined. (NRS 459.030)

1. "Residual radioactivity" means the amount of radioactivity detectable in structures, material, soils, groundwater or other media at a site that is attributable to activities under the control of a licensee, including all licensed or unlicensed sources of radiation used by a licensee.

2. The term includes the detectable amount of radioactivity attributable to radioactive materials remaining at the site from routine or accidental releases, or burials, of radioactive materials at the site.

3. The term does not include the detectable amount of radioactivity attributable to background radiation.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

NAC 459.317 Applicability. (NRS 459.030, 459.201)

1. Except as otherwise provided in subsection 2, the provisions of NAC 459.027, 459.200 and 459.316 to 459.3184, inclusive, apply to any facility licensed by the Division pursuant to NAC 459.010 to 459.950, inclusive.

2. A facility licensed by the Division pursuant to NAC 459.010 to 459.950, inclusive, is not subject to the provisions of NAC 459.027, 459.200 and 459.316 to 459.3184, inclusive, if the facility:

(a) Has been decommissioned before May 30, 2003, pursuant to:

(1) The federal Site Decommissioning Management Plan of April 16, 1992, set forth at 57 Fed. Reg. 13,389; or

(2) Other criteria approved by the Division; or

(b) Submitted a decommissioning plan before August 20, 1998, that, except for any day-to-day extension granted by the Division for the submission of an environmental impact statement, was approved by the Division before August 20, 1999, pursuant to the federal Site Decommissioning Management Plan of April 16, 1992, set forth at 57 Fed. Reg. 13,389.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003; A by Bd. of Health by R149-07, 1-30-2008)

NAC 459.3172 Explanation of total effective dose equivalent to average member of critical group used. (NRS 459.030) For the purposes of NAC 459.316 to 459.3184, inclusive, the total effective dose equivalent to the average member of the critical group used is the peak annual total effective dose equivalent expected within the first 1,000 years after decommissioning.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

NAC 459.3174 Requirements for issuance of any license. (NRS 459.030, 459.201) An applicant for any license issued by the Division pursuant to NAC 459.010 to 459.950, inclusive, except an applicant for the renewal of a license, must describe in the application how facility design and procedures for operation will:

1. Minimize, to the extent practicable, the:

(a) Contamination of the facility and environment; and

(b) Generation of radioactive waste; and

2. Facilitate eventual decommissioning.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003; A by Bd. of Health by R149-07, 1-30-2008)

NAC 459.3176 Additional cleanup of decommissioned site. (NRS 459.030) The Division will require a licensee to perform additional cleanup to a site that has been decommissioned and the license for which has been terminated pursuant to NAC 459.316 to 459.3184, inclusive, if, based on new information, the Division determines that:

1. The criteria for decommissioning and license termination set forth in NAC 459.316 to 459.3184, inclusive, were not met; and

2. The residual radioactivity distinguishable from background radiation remaining at the site could result in a significant threat to public health and safety.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

NAC 459.3178 Property of decommissioned facility: Eligibility for release for unrestricted use. (NRS 459.030) The property of a decommissioned facility is eligible for release for unrestricted use if the residual radiation, distinguishable from background radiation, including groundwater sources of drinking water:

1. Results in the average member of the critical group receiving a total effective dose equivalent that does not exceed 25 millirem (0.25 millisievert) per year; and

2. Is as low as is reasonably achievable.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

NAC 459.318 Property of decommissioned facility: Eligibility for release for restricted use. (NRS 459.030, 459.201)

1. The property of a decommissioned facility that is not eligible for release for unrestricted use is eligible for release for restricted use if the licensee:

(a) Demonstrates that further reductions in residual radioactivity necessary to comply with NAC 459.3178:

(1) Would result in net increase in harm to the public or environment; or

(2) Were not being made because the levels of residual radioactivity associated with restricted conditions are as low as is reasonably achievable.

(b) Establishes that the licensee has provided for institutional controls that:

(1) Are legally enforceable;

(2) Provide reasonable assurance that the average member of the critical group will receive a total effective dose equivalent from residual radioactivity at the site distinguishable from background radiation that does not exceed 25 millirem (0.25 millisievert) per year; and

(3) Will not impose an undue burden on the community to be affected by the decommissioning or any person or institution therein.

(c) Provides, by a method set forth in subsection 4, sufficient financial assurance to enable a third party, including a governmental custodian of the site, to assume and carry out responsibilities for any necessary control and maintenance of the site.

(d) Submits to the Division a decommissioning plan that:

(1) Declares the intent of the licensee to decommission in accordance with NAC 459.1955;

(2) Specifies that the licensee intends to decommission by restricting the use of the site; and

(3) Documents how the advice of persons and institutions in the community that may be affected by the decommissioning has been sought, analyzed and, if appropriate, incorporated into the decommissioning plan.

(e) Provides reasonable assurance that the residual radioactivity at the site distinguished from background radiation has been reduced to levels such that, even in the absence of the institutional controls required by paragraph (b), the average member of the critical group will receive a total effective dose equivalent, from residual radioactivity at the site distinguishable from background radiation, that:

(1) Is as low as is reasonably achievable; and

(2) Except as otherwise provided in subsection 2, does not exceed 100 millirem (1 millisievert) per year.

2. A licensee may satisfy the requirements of subparagraph (2) of paragraph (e) of subsection 1 if the licensee:

(a) Provides reasonable assurance that the average member of the critical group will receive a total effective dose equivalent, from residual radioactivity at the site distinguishable from background radiation, that does not exceed 500 millirem (5 millisieverts) per year;

(b) Demonstrates that reducing residual radioactivity to the level necessary to comply with the 100 millirem (1 millisievert) requirement of subparagraph (2) of paragraph (e) of subsection 1 is not technically feasible, would be prohibitively expensive, or would likely result in net harm to the public or environment;

(c) Makes provisions for durable institutional controls; and

(d) Provides, by a mechanism set forth in subsection 4, sufficient financial assurance to enable a third party, including a governmental custodian of the site:

(1) To carry out periodic rechecks of the site not less frequently than every 5 years to ensure that the institutional controls remain in place as necessary to meet the criteria of paragraph (b) of subsection 1; and

(2) To assume and carry out responsibility for any necessary control and maintenance of those controls.

3. Before a licensee may submit to the Division a decommissioning plan pursuant to subsection 1, the licensee must seek advice from natural persons and institutions in the community who may be affected by the decommissioning concerning whether the licensee's proposed plan of decommissioning satisfies each of the requirements of paragraphs (b) and (c) of subsection 1.

4. A licensee, to satisfy the requirements of this section relating to the provision of financial assurance, may use any of the following methods:

(a) The deposit of an amount of money in cash or liquid assets into an account that is segregated from the assets of the licensee and outside the administrative control of the licensee as described in paragraph (a) of subsection 11 of NAC 459.1955;

(b) Provision of a surety, including insurance, or other guarantee, as described in paragraph (b) of subsection 11 of NAC 459.1955;

(c) If the licensee is a federal, state or local governmental entity, a statement of intent as described in paragraph (d) of subsection 11 of NAC 459.1955; or

(d) If a federal, state or local governmental entity is assuming custody and ownership of the site, any arrangement or mechanism for financial assurance that the governmental entity determines is adequate.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003; A by Bd. of Health by R085-06, 11-13-2006)

NAC 459.3182 Property of decommissioned facility: Alternate criteria for release for restricted or unrestricted use. (NRS 459.030)

1. The Division may terminate a license and release the property of a decommissioned facility for restricted or unrestricted use using alternate criteria greater than the dose criterion of 25 millirem (0.25 millisievert) per year set forth in NAC 459.3178 and paragraph (b) of subsection 1 of NAC 459.318 if the licensee:

(a) By submitting an analysis of possible sources of exposure, provides reasonable assurance that:

(1) The public health and safety will continue to be protected; and

(2) It is unlikely that the dose from all man-made sources combined, other than medical, would be [redacted] than the limit of 0.1 rem (1 millisievert) per year set forth in NAC 459.335;

(b) Has employed, to the extent practical, restrictions on site use according to the provisions of NAC 459.318 in minimizing exposures at the site;

(c) Reduces doses to levels that are as low as is reasonably achievable; and

(d) Submits to the Division a decommissioning plan that:

(1) Declares the intent of the licensee to decommission in accordance with NAC 459.1955;

(2) Specifies that the licensee proposes to decommission pursuant to the alternate criteria provisions of this section; and

(3) Documents how the advice of natural persons and institutions in the community that may be affected by the decommissioning has been sought, analyzed and, if appropriate, incorporated into the decommissioning plan.

2. To satisfy the public comment requirement of subparagraph (3) of paragraph (d) of subsection 1, a licensee shall:

(a) Provide an opportunity for participation by representatives of a broad cross section of community interests;

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

(c) Make publicly available a summary of the results of all such discussions, including, without limitation:

(1) A description of the individual viewpoints of the participants on the issues; and

(2) The extent of agreement and disagreement among the participants on the issues.

3. Before the Division terminates a license using the alternate criteria of this section, the Division will consider the recommendations of the staff of the Division concerning any comments provided by the Environmental Protection Agency and any public comments submitted pursuant to NAC 459.3184.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

NAC 459.3184 Notice to public; public comment. (NRS 459.030)

1. The Division will notify the public and seek public comment:

(a) Upon receipt of a decommissioning plan;

(b) Upon receipt of a proposal for the release of a site pursuant to NAC 459.318 or 459.3182; or

(c) If the Commission determines such notice to be in the public interest under the circumstances.

2. Notice will be given and comment will be sought from:

(a) State and local governments and any Indian nation or other indigenous people that have treaty or statutory rights:

(1) In the vicinity of the site; and

(2) That could be affected by the decommissioning;

(b) Some segment of the general public; and

(c) If the proposal is to release a site pursuant to the alternate criteria set forth in NAC 459.3182, the Environmental Protection Agency.

3. Notice to the public must be accomplished by publication in a forum that is readily accessible to natural persons in the vicinity of the site, including, without limitation:

(a) Newspapers;

(b) Letters sent directly to state or local organizations; and

(c) Any other appropriate forum.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

Standards for Protection Against Radiation

NAC 459.320 Purpose; applicability; reasonable effort required. (NRS 459.030, 459.201)

1. The provisions of NAC 459.320 to 459.374, inclusive, establish standards for protection against radiation hazards. It is the purpose of those sections to control the receipt, possession, use, disposal and transfer of licensed or registered sources of radiation by any licensee or registrant in such a manner that the total dose to a natural person, including exposures to licensed or unlicensed or registered or unregistered sources of radiation, whether in the possession of the licensee, registrant or any other person, but not including exposure to radiation from natural background sources, medical diagnosis and therapy, natural persons who have been administered radioactive drugs or have received permanent implants containing radioactive material and have been released from the control of a licensee pursuant to 10 C.F.R. § 35.75, or voluntary participation in medical research does not exceed the standards of radiation protection set forth in NAC 459.320 to 459.374, inclusive. Those sections will not be construed as limiting actions that may be necessary to protect the health and safety of the public.

2. Except as otherwise specifically provided, NAC 459.320 to 459.374, inclusive, apply to all licensees or registrants. Those sections do not limit the intentional exposure of natural persons to radiation for the purpose of medical use or the intentional exposure of natural persons to radiation who are voluntarily participating in programs for medical research.

3. In addition to complying with the requirements set forth in NAC 459.320 to 459.374, inclusive, a licensee or registrant shall make every reasonable effort to maintain exposures and releases of radioactive materials in effluents to unrestricted areas, as low as is reasonably achievable.

[Bd. of Health, Radiation Control Reg. §§ 4.1-4.1.2, eff. 2-28-80]—(NAC A 1-18-94; R084-98, 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R085-06, 11-13-2006)

NAC 459.3205 Adoption by reference of certain provisions of federal regulations. (NRS 459.201**)** The State Board of Health hereby adopts by reference appendices A, B and C to 10 C.F.R. §§ 20.1001 to 20.2402, inclusive, as those provisions existed on October 13, 1999. A copy of the volume containing these appendices may be purchased by mail from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 979050, St. Louis, Missouri 63197-9000, or by toll-free telephone at (866) 512-1800, for the price of $39, or are available, free of charge, at the Internet address http://www.gpoaccess.gov/cfr/index.html.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R084-98, 1-26-99; R085-06, 11-13-2006)

NAC 459.321 Development, implementation and review of program for protection against radiation; establishment of constraint on air emissions to environment of radioactive material. (NRS 459.030, 459.201**)**

1. Each licensee and registrant shall:

(a) Develop, document and carry out a program for protection against radiation commensurate with the scope of its licensed or registered activities and sufficient to ensure compliance with the provisions of NAC 459.010 to 459.950, inclusive.

(b) Use, to the extent practicable, procedures and engineering controls, based upon sound principles of protection against radiation, to achieve occupational doses and doses to members of the public that are as low as is reasonably achievable.

(c) Review, at intervals not to exceed 12 months, the content and implementation of the program for protection against radiation.

2. A licensee or registrant shall, to achieve doses to members of the public that are as low as is reasonably achievable pursuant to paragraph (b) of subsection 1, establish a constraint on air emissions to the environment of radioactive material, excluding radon 222 and its decay products, such that the individual member of the public likely to receive the highest dose from such emissions will not be expected to receive a total effective dose equivalent in excess of 10 millirems (0.1 millisievert).

3. A licensee or registrant that causes, permits or is otherwise responsible for air emissions of radioactive material to the environment that exceed the constraint established pursuant to subsection 2 shall:

(a) Submit to the Division the report required by NAC 459.371; and

(b) Promptly take appropriate corrective action to prevent any recurrence.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R084-98, 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R149-07, 1-30-2008)

NAC 459.323 Weighting factors. (NRS 459.201**)**

1. For calculating the effective dose equivalent, the values of the weighting factor are as follows:

Organ Dose Weighting Factors

Organ or Tissue	Weighting Factor
Gonads	0.25
Breast	0.15
Red bone marrow	0.12
Lung	0.12
Thyroid	0.03
Bone surfaces	0.03
Remainder	0.30
Whole Body	1.00

2. For the purposes of weighting the remainder dose, 0.30 results from 0.06 of each of five remainder organs, excluding the skin and the lens of the eye, that receive the highest doses.

3. The use of other weighting factors for external exposure must first be approved by the Division.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.3235 Quality factors for converting absorbed dose to dose equivalent. (NRS 459.201**)**

1. Except as otherwise provided in subsection 2, the quality factors for converting an absorbed dose to a dose equivalent are as follows:

Quality Factors and Absorbed Dose Equivalencies

	Absorbed

Type of Radiation	Quality Factor	Dose Equal to a Unit Dose Equivalent
X, gamma, or beta radiation and high-speed electrons	1	1
Alpha particles, multiple-charged particles, fission fragments and heavy particles of unknown charge	20	0.05
Neutrons of unknown energy	10	0.1
High-energy protons	10	0.1

2. If it is more convenient to measure the neutron fluence rate than to determine the neutron dose equivalent rate in rems per hour, as provided in subsection 1, 1 rem of neutron radiation of unknown energies may, for the purposes of NAC 459.010 to 459.950, inclusive, be assumed to result from a total fluence of 25,000,000 neutrons per square centimeter incident upon the body. If sufficient information exists to estimate the approximate energy distribution of the neutrons, the licensee or registrant may use the fluence rate per unit dose equivalent or the appropriate quality factor value from the following table to convert a measured tissue dose in rads to dose equivalent in rem:

Mean Quality Factors and Fluence per Unit Dose Equivalent for Monoenergetic Neutrons

	Neutron Energy (MeV)	Quality Factor	Fluence per Unit Dose Equivalent (neutrons cm^2 rem^{-1})
(thermal)	2.5E-8	2	980E+6
	1E-7	2	980E+6
	1E-6	2	810E+6
	1E-5	2	810E+6
	1E-4	2	840E+6
	1E-3	2	980E+6
	1E-2	2.5	1010E+6
	1E-1	7.5	170E+6
	5E-1	11	39E+6
	1	11	27E+6
	2.5	9	29E+6
	5	8	23E+6
	7	7	24E+6
	10	6.5	24E+6
	14	7.5	17E+6
	20	8	16E+6
	40	7	14E+6
	60	5.5	16E+6
	1E+2	4	20E+6
	2E+2	3.5	19E+6
	3E+2	3.5	16E+6
	4E+2	3.5	14E+6

3. For the purposes of subsection 2, the quality factor must be measured at the point where the dose equivalent is maximum in a 30-centimeter diameter cylinder tissue-equivalent phantom.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R084-98, 1-26-99; R085-06, 11-13-2006; R149-07, 1-30-2008)

NAC 459.325 Limits on occupational doses for adults. (NRS 459.030**,** 459.201**)**

1. Except as otherwise provided in subsection 5, a licensee or registrant shall control occupational doses, except for planned special exposures, to ensure that no adult receives annually occupational doses in excess of the following limits:

(a) The lesser of:

(1) A total effective dose equivalent of 5 rems (50 millisieverts); or

(2) The sum of the deep-dose equivalent and the committed dose equivalent to any individual organ or tissue, other than the lens of the eye, of 50 rems (500 millisieverts);

(b) A lens dose equivalent of 15 rems (150 millisieverts); and

(c) A shallow-dose equivalent to the skin of the whole body or the skin of any extremity of 50 rems (500 millisieverts).

2. Occupational doses received in excess of the annual limits specified in subsection 1, including doses received during accidents, emergencies and planned special exposures, must be subtracted from the limits for planned special exposures that a person may receive during a current year and during his lifetime.

3. The assigned deep-dose equivalent must be for the portion of the body receiving the highest exposure. The assigned shallow-dose equivalent must be the dose averaged over the contiguous 10 square centimeters of skin receiving the highest exposure. The deep-dose equivalent, lens dose equivalent and shallow-dose equivalent may be assessed from surveys or other radiation measurements for the purpose of demonstrating compliance with the limits for occupational doses, if the personnel monitoring equipment was not in the region of highest potential exposure, or the results of personnel monitoring are unavailable.

4. The derived air concentration and annual limit on intake values that are set forth in table I of appendix B may be used to determine the occupational dose of a person and to demonstrate compliance with the limits for occupational doses.

5. Notwithstanding the annual limits, a licensee shall limit a person's intake of soluble uranium to 10 milligrams in 1 week.

6. The licensee or registrant shall reduce the occupational dose that a person is allowed to receive in a current year by the amount of the occupational dose that person received during the year while employed by another person.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R085-06, 11-13-2006)

NAC 459.3255 Compliance with requirements for summation of external and internal doses. (NRS 459.030**,** 459.201**)**

1. If a licensee is required to monitor a person pursuant to subsections 1 and 2 of NAC 459.339, the licensee shall demonstrate compliance with the limits set forth in NAC 459.325 by adding external and internal doses. The licensee may demonstrate compliance with the requirements for summation of external and internal doses by meeting one of the conditions specified in subsection 2 and the conditions specified in subsections 3 and 4. The lens dose equivalent and the dose equivalents for the skin and the extremities are not required to be included in the summation, but are subject to separate limits set forth in NAC 459.325. If a licensee or registrant is required to monitor a person pursuant to subsection 1 of NAC 459.339 only or pursuant to subsection 2 of NAC 459.339 only, the summation of the doses is not required.

2. If the only intake of radionuclides is by inhalation, the limit for the total effective dose equivalent is not exceeded if the deep-dose equivalent divided by the limit for the total effective dose equivalent, and one of the following, does not exceed unity:

(a) The sum of the fractions of the annual limit on intake by inhalation for each radionuclide.

(b) The total number of derived air concentration-hours for all radionuclides, divided by 2,000.

(c) The sum of the committed effective dose equivalents to all significantly irradiated organs or tissues, calculated from bioassay data using appropriate biological models and expressed as a fraction of the annual limit. For the purposes of this subsection, an organ or tissue shall be deemed to be irradiated significantly if, for that organ or tissue, the product of the weighting factors and the committed dose equivalent, per unit intake, is greater than 10 percent of the maximum weighted value of the committed dose equivalent, per unit intake for any organ or tissue.

3. If a person who receives an occupational exposure also receives an intake of radionuclides by oral ingestion in an amount greater than 10 percent of the applicable annual limit on intake by oral ingestion, the licensee shall account for this intake and include it in demonstrating compliance with the limits set forth in NAC 459.325.

4. Except as otherwise provided in this subsection, the licensee shall evaluate and, to the extent practical, account for the intake of radiation through wounds or absorption through the skin. Any intake through intact skin is not required to be evaluated or accounted for pursuant to this subsection.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.327 Determination of external dose from airborne radioactive material. (NRS 459.030**,** 459.201**)**

1. Licensees shall, when determining the external dose from airborne radioactive material, include the deep-dose equivalent, lens dose equivalent and shallow-dose equivalent caused by external exposure to the cloud of airborne

radioactive material.

2. Measurements of airborne radioactive material and derived air concentration must not be used as the primary means to assess the deep-dose equivalent if the airborne radioactive material includes radionuclides other than noble gases or if the cloud of airborne radioactive material is not relatively uniform. The determination of the deep-dose equivalent must be based upon measurements using instruments or personnel monitoring equipment.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.3275 Determination of compliance with limits for occupational doses. (NRS 459.201**)**

1. For the purposes of assessing the dose used to determine compliance with the limits for occupational doses set forth in NAC 459.325, a licensee shall, if required pursuant to subsection 2 of NAC 459.339, take suitable and timely measurements of:

(a) Concentrations of radioactive materials in the air in work areas;

(b) Quantities of radionuclides in the body;

(c) Quantities of radionuclides excreted from the body; or

(d) Any combination of the measurements listed in paragraphs (a), (b) and (c).

2. Unless a respiratory protective device is used or the assessment of intake is based on bioassays, the licensee shall assume that a person inhales radioactive material at the airborne concentration in which the person is present.

3. When specific information on the physical and biochemical properties of the radionuclides taken into the body or the behavior of the material in a person is known, the licensee may:

(a) Use that information to calculate the committed effective dose equivalent;

(b) Upon prior approval of the Division, adjust the values for the derived air concentration or the annual limit on intake to reflect the actual physical and chemical characteristics of airborne radioactive material; and

(c) Separately assess the contribution of fractional intakes of compounds of a given radionuclide in Class D, W or Y to the committed effective dose equivalent.

➥ If a licensee uses the information to calculate the committed effective dose equivalent pursuant to paragraph (a), the licensee shall document that information in the record of the person.

4. If the licensee chooses to assess intakes of material in Class Y using the measurements taken pursuant to paragraph (b) or (c) of subsection 1, the licensee may delay the recording and reporting of the assessments for not more than 7 months in order to make additional measurements basic to the assessments, unless he is otherwise required to record and report the assessments by NAC 459.3695 or 459.371.

5. If the identity and concentration of each radionuclide in a mixture are known, the fraction of the derived air concentration applicable to the mixture that is used to calculate derived air concentration-hours must be:

(a) The sum of the ratios of the concentration to the appropriate value for the derived air concentration from Appendix B for each radionuclide in the mixture; or

(b) The ratio of the total concentration for all radionuclides in the mixture to the most restrictive value for the derived air concentration for any radionuclide in the mixture.

6. If the identity of each radionuclide in a mixture is known, but the concentration of one or more of the radionuclides in the mixture is not known, the derived air concentration for the mixture must be the most restrictive derived air concentration of any radionuclide in the mixture.

7. If a mixture of radionuclides in air exists, a licensee may disregard certain radionuclides in the mixture if:

(a) The licensee uses the total activity of the mixture in demonstrating compliance with the limits specified in NAC 459.325 and in complying with the monitoring requirements specified in subsection 2 of NAC 459.339;

(b) The concentration of any radionuclide disregarded is less than 10 percent of its derived air concentration; and

(c) The sum of these percentages for all of the radionuclides disregarded in the mixture does not exceed 30 percent.

8. When determining the committed effective dose equivalent, the following information may be considered:

(a) The licensee or registrant may assume that the inhalation of one annual limit on intake, or an exposure of 2,000 derived air concentration-hours, results in a committed effective dose equivalent of 5 rems for radionuclides that have their annual limits on intake or derived air concentrations based on the committed effective dose equivalent.

(b) For an annual limit on intake and the associated derived air concentration determined by the nonstochastic organ dose limit of 50 rems, the intake of radionuclides that would result in a committed effective dose equivalent of 5 rems is listed in parentheses in Table I of Appendix B. In this case, the licensee may use the stochastic annual limit on intake to determine the committed effective dose equivalent. If the licensee uses the stochastic annual limit on intake, the licensee shall also demonstrate that the limits specified in subparagraph (2) of paragraph (a) of subsection 1 of NAC 459.325 are met.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.329 Requirements for planned special exposures. (NRS 459.201**)** A licensee or registrant may permit a worker who is an adult to receive a planned special exposure, in addition to and accounted for separately from the doses received under the limits specified in NAC 459.325, if each of the following conditions is satisfied:

1. The licensee or registrant notifies the Division of the planned special exposure in writing at least 10 working days before the planned special exposure is scheduled to occur, and verifies that the Division has received the letter of notification.

2. The planned special exposure is to occur in an exceptional situation when alternatives that might av[illegible]he higher exposure are unavailable or impractical.

3. The licensee or registrant, and employer if the employer is not the licensee or registrant, specifically authorizes the planned special exposure, in writing, before the exposure occurs.

4. Before the planned special exposure, the licensee or registrant ensures that each person involved is:

(a) Informed of the purpose of the planned special exposure;

(b) Informed of the estimated doses and associated potential risks, and the specific radiation levels or other conditions that might be involved in performing the task; and

(c) Instructed in the measures to be taken to keep the dose as low as is reasonably achievable considering other risks that may be present.

5. Before permitting a person to participate in a planned special exposure, the licensee or registrant ascertains previous doses received by the person during his lifetime as required pursuant to NAC 459.365.

6. The planned special exposure would not cause a person to receive a dose from all planned special exposures and all doses in excess of:

(a) The numerical values of any of the limits specified in subsection 1 of NAC 459.325 in any year; and

(b) Five times the annual limits specified in subsection 1 of NAC 459.325 during the lifetime of the person.

7. The licensee or registrant maintains records of the conduct of the planned special exposure in accordance with NAC 459.3655 and submits a written report in accordance with NAC 459.3715.

8. The licensee or registrant records the best estimate of the dose resulting from the planned special exposure in the record of the person receiving the dose and informs that person, in writing, of the dose within 30 days after the date of the planned special exposure. The dose from planned special exposures must not be considered in controlling the future occupational dose of the person pursuant to subsection 1 of NAC 459.325, but must be included in the determinations required to be made pursuant to subsections 5 and 6.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.331 Annual limits for occupational doses for minors. (NRS 459.201**)** The limits for the annual occupational dose for minors are 10 percent of the limits for the annual occupational dose specified in NAC 459.325 for adult workers.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.333 Dose equivalents to embryos. (NRS 459.030**,** 459.201**)**

1. Except as otherwise provided in subsection 4, a licensee or registrant shall ensure that the dose equivalent to an embryo during the entire pregnancy, resulting from occupational exposure of a woman who has declared her pregnancy, does not exceed 0.5 rem (5 millisieverts).

2. The licensee or registrant shall make efforts to avoid any substantial variation from a uniform monthly exposure rate to a woman who has declared her pregnancy so as to satisfy the limits specified in subsection 1.

3. The dose equivalent to an embryo is the sum of:

(a) The deep-dose equivalent to the woman who has declared her pregnancy; and

(b) The dose equivalent to the embryo resulting from radionuclides in the embryo and radionuclides in the woman who has declared her pregnancy.

4. If, by the time a woman declares her pregnancy to the licensee or registrant, the dose equivalent to the embryo has exceeded 0.5 rem (5 millisieverts), or is within 0.05 rem (0.5 millisievert) of that dose, the licensee or registrant shall be deemed to be in compliance with subsection 1 if the additional dose equivalent to the embryo does not exceed 0.05 rem (0.5 millisievert) during the remainder of the pregnancy.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.335 Dose limits for individual members of public; application for authorization to increase annual dose limit; imposition of additional restrictions; standards for nuclear power operations. (NRS 459.030**,** 459.201**)**

1. Except as otherwise provided in this section and subsection 2 of NAC 459.321, each licensee and registrant shall conduct operations to ensure that:

(a) The total effective dose equivalent to any member of the public from its licensed or registered operation does not exceed 0.1 rem (1 millisievert) per year, not including the dose contribution from background radiation, any medical administration the member of the public has received, exposure to natural persons who have been administered radioactive material and have been released from the control of a licensee pursuant to 10 C.F.R. § 35.75, voluntary participation in medical research, and the disposal by the licensee of radioactive material into sanitary sewerage in accordance with NAC 459.3605; and

(b) The dose in any unrestricted area from external sources, not including the dose contributions from natural persons who have been administered radioactive material and have been released from the control of a licensee pursuant to 10 C.F.R. § 35.75, does not exceed 0.002 rem (0.02 millisievert) in any 1 hour.

2. Notwithstanding the provisions of paragraph (a) of subsection 1, a licensee may allow a visitor to a person who cannot be released pursuant to 10 C.F.R. § 35.75 to receive a radiation dose greater than 0.1 rem (1 millisievert) if:

(a) The radiation dose does not exceed 0.5 rem (5 millisieverts); and

(b) Before the visit, the licensee has determined that the visit is appropriate.

3. A licensee, a registrant or an applicant for a license or registration may apply to the Division for authorization to operate up to an annual dose limit for a member of the public of 0.5 rem (5 millisieverts) per year. The application must include:

(a) A demonstration of the need for and the expected duration of operations in excess of the limit specified in paragraph (a) of subsection 1;

(b) A description of the program of the licensee or registrant to assess and control the dose within the annual limit of 0.5 rem (5 millisieverts); and

(c) The procedures to be followed to maintain the dose as low as is reasonably achievable.

4. The Division may impose additional restrictions on radiation levels in unrestricted areas and on the total quantity of radionuclides that a licensee may release in effluents in order to restrict the collective dose.

5. In addition to the requirements of this section, a licensee who is subject to the provisions of 40 C.F.R. Part 190 shall comply with the standards set forth therein.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R085-06, 11-13-2006)

NAC 459.3355 Compliance with dose limits for individual members of public. (NRS 459.201**)**

1. A licensee or registrant shall make or cause to be made surveys of radiation levels in unrestricted areas and radioactive materials in effluents released to unrestricted areas in order to demonstrate compliance with the limits specified in NAC 459.335 for members of the public.

2. A licensee or registrant shall demonstrate compliance with the annual limits specified in NAC 459.335 by:

(a) Demonstrating by measurement or calculation that the total effective dose equivalent to the member of the public likely to receive the highest dose from the licensed or registered operation does not exceed the annual limits; or

(b) Demonstrating that:

(1) The annual average concentrations of radioactive material released in gaseous and liquid effluents at the boundary of the unrestricted area do not exceed the values specified in Table II of Appendix B; and

(2) If a person were continually present in an unrestricted area, the dose from external sources would not exceed 0.002 rem in 1 hour and 0.05 rem in 1 year.

3. Upon approval from the Division, the licensee may adjust the concentration values for effluents in Table II of Appendix B for members of the public to take into account the actual physical and chemical characteristics of the effluents.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.336 Orders requiring bioassay services. (NRS 459.201**)** Where necessary or desirable in order to aid in determining the extent of a person's exposure to concentrations of radioactive material, the Division may incorporate license provisions or issue an order requiring a licensee or registrant to make available to the person appropriate bioassay services and to furnish a copy of the reports of those services to the Division.

[Bd. of Health, Radiation Control Reg. § 4.2.7, eff. 2-28-80]

NAC 459.337 Surveys and monitoring. (NRS 459.030**,** 459.201**)**

1. Each licensee and registrant shall make, or cause to be made, surveys that:

(a) Are necessary for the licensee or registrant to comply with NAC 459.010 to 459.950, inclusive; and

(b) Are necessary under the circumstances to evaluate:

(1) The magnitude and extent of radiation levels;

(2) Concentrations or quantities of radioactive material; and

(3) The potential radiological hazards.

2. The licensee or registrant shall ensure that instruments and equipment used for quantitative radiation measurements are calibrated for the radiation measured at intervals not to exceed 12 months.

3. All personnel dosimeters, except for direct and indirect reading pocket ionization chambers and those dosimeters used to measure the dose to any extremity, that require processing to determine the dose of radiation and that are used by licensees and registrants to comply with NAC 459.325, with other applicable provisions of NAC 459.010 to 459.950, inclusive, or with conditions specified in a license or registration, must be processed and evaluated by a dosimetry processor who is accredited by the National Voluntary Laboratory Accreditation Program of the National Institute of Standards and Technology for the type of radiation or radiations included in the program that most closely approximate the type of radiation for which the person wearing the dosimeter is monitored.

4. The licensee or registrant shall ensure that adequate precautions are taken to prevent a deceptive exposure of personnel monitoring equipment.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R084-98, 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R149-07, 1-30-2008)

NAC 459.339 Precautionary procedures: Conditions requiring individual monitoring of external and internal occupational doses. (NRS 459.030**,** 459.201**)** Each licensee and registrant shall monitor exposures from sources of

radiation at levels sufficient to demonstrate compliance with the limits for occupational doses specified in NAC 459.010 to 459.950, inclusive. As a minimum:

1. Each licensee and registrant shall monitor occupational exposure to radiation from licensed and unlicensed sources under the control of the licensee or registrant and shall supply and require the use of personnel monitoring equipment by:

(a) Adults who are likely to receive in 1 year, from sources of radiation external to the body, a dose in excess of 10 percent of the limits specified in NAC 459.325;

(b) Minors who are likely to receive in 1 year, from sources of radiation external to the body, a deep-dose equivalent in excess of 0.1 rem (1 millisievert), a lens dose equivalent in excess of 0.15 rem (1.5 millisieverts), or a shallow-dose equivalent to the skin or extremities in excess of 0.5 rem (5 millisieverts);

(c) Women who have declared their pregnancy and are likely to receive, during the entire pregnancy, from sources of radiation external to the body, a deep-dose equivalent in excess of 0.1 rem (1 millisievert); and

(d) Any person entering a high or very high radiation area.

2. Each licensee shall monitor, to determine compliance with NAC 459.3275, the occupational intake of radioactive material by and assess the committed effective dose equivalent to:

(a) Adults who are likely to receive, in 1 year, an intake in excess of 10 percent of the applicable annual limit on intake in columns 1 and 2 of table I of appendix B;

(b) Minors who are likely to receive, in 1 year, a committed effective dose equivalent in excess of 0.1 rem (1 millisievert); and

(c) Women who have declared their pregnancy and are likely to receive, during the entire pregnancy, a committed effective dose equivalent in excess of 0.1 rem (1 millisievert).

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R084-98, 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R149-07, 1-30-2008)

NAC 459.341 Precautionary procedures: Control of access to high radiation areas. (NRS 459.201)

1. Except as otherwise provided in this section, a licensee or registrant shall ensure that each entrance to a high radiation area has one or more of the following features:

(a) A control device that, upon entry into the radiation area, causes the level of radiation to be reduced below the level at which a person could receive a deep-dose equivalent of 0.1 rem in 1 hour at 30 centimeters from the source of radiation or from any surface that the radiation penetrates.

(b) A control device that energizes a conspicuous visible or audible alarm so that a person entering the high radiation area and the supervisor of the activity in the area are made aware of the entry.

(c) Entrances that are locked, except during periods when access to the area is required with positive control over each individual entrance.

2. In place of the controls required pursuant to subsection 1, the licensee or registrant may substitute continuous direct or electronic surveillance that is capable of preventing unauthorized entry into the radiation area.

3. The licensee or registrant may apply to the Division for authorization to use alternative methods for controlling access to high radiation areas.

4. The licensee or registrant shall establish the controls required pursuant to subsections 1 and 3 in a manner that does not prevent a person from leaving a high radiation area.

5. The licensee is not required to control each entrance to a high radiation area that contains only radioactive materials prepared for transport and packaged and labeled in accordance with the regulations of the United States Department of Transportation if:

(a) The packages do not remain in the area for more than 3 days; and

(b) The dose at 1 meter from the external surface of any package does not exceed 0.01 rem per hour.

6. The licensee is not required to control each entrance to a room or other area in a hospital solely because of the presence of a patient whose treatment requires the use of radioactive material if there are persons in attendance who will take the necessary precautions to:

(a) Prevent the exposure of a person to radiation or radioactive material in excess of the limits specified in NAC 459.325, 459.331, 459.333 and 459.335; and

(b) Ensure that any doses are as low as are reasonably achievable.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.343 Precautionary procedures: Control of access to very high radiation areas.(NRS 459.201) In addition to the requirements specified in NAC 459.341, a licensee or registrant shall institute measures to ensure that a person is not able to gain unauthorized or inadvertent access to areas in which radiation levels could be encountered at 500 rads or more in 1 hour at 1 meter from a source of radiation or any surface through which the radiation penetrates.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.345 Precautionary procedures: Control of access to very high radiation area with sealed radioactive sources used to irradiate materials. (NRS 459.201)

1. Except as otherwise provided in this section, each area in which there may exist radiation levels in excess of 500 rads in 1 hour at 1 meter from a sealed radioactive source that is used to irradiate materials must meet the following

requirements:

(a) Each entrance must be equipped with entry control devices which:

(1) Function automatically to prevent any person from inadvertently entering a very high radiation area;

(2) Permit deliberate entry into the area only after the control device is actuated and causes the radiation level within the area, from the source of radiation, to be reduced below that at which it would be possible for a person to receive a deep-dose equivalent in excess of 0.1 rem in 1 hour; and

(3) Prevent operation of the source of radiation if it would produce radiation levels in the area that could result in a deep-dose equivalent to a person in excess of 0.1 rem in 1 hour.

(b) Additional control devices must be provided so that, upon failure of the entry control devices to function as required pursuant to paragraph (a):

(1) The radiation level within the area, from the source of radiation, is reduced below the level at which it would be possible for a person to receive a deep-dose equivalent in excess of 0.1 rem in 1 hour; and

(2) Conspicuous visible and audible alarms are generated to make any person who is attempting to enter the area aware of the hazard and to make at least one other authorized person, who is physically present, familiar with the activity and prepared to render or summon assistance, aware of the failure of the entry control devices.

(c) The licensee shall provide control devices that ensure that, upon the failure or removal of physical radiation barriers other than the shielded storage container of the sealed source:

(1) The radiation level from the source is reduced below the level at which it would be possible for a person to receive a deep-dose equivalent in excess of 0.1 rem in 1 hour; and

(2) Conspicuous visible and audible alarms are generated to make potentially affected persons aware of the hazard and to make the licensee, or at least one other person who is familiar with the activity and prepared to render or summon assistance, aware of the failure or removal of the physical barrier.

(d) When the shield for stored sealed sources is a liquid, the licensee shall provide a means to monitor the integrity of the shield and to signal, automatically, loss of adequate shielding.

(e) Physical radiation barriers that comprise permanent structural components and have no reasonable probability of failure or removal in ordinary circumstances are not required to meet the requirements of paragraph (c) or (d).

(f) Each area must be equipped with devices that will automatically generate conspicuous visible and audible alarms to alert persons in the area before the source of radiation can be put into operation and in time for any persons in the area to operate a clearly identified control device, which must be installed in the area and which is able to prevent the source of radiation from being put into operation.

(g) Each area must be controlled by the use of such administrative procedures and such devices as are necessary to ensure that the area is cleared of persons before each use of the source of radiation.

(h) Each area must be checked by a radiation measurement to ensure that, before any person enters the area after any use of the source of radiation, the radiation level from the source of radiation in the area is below the level at which it would be possible for a person to receive a deep-dose equivalent in excess of 0.1 rem in 1 hour.

(i) The entry control devices required pursuant to paragraph (a) must be tested for proper functioning in the following manner:

(1) Testing must be conducted before the initial operation of the source of radiation on any day, unless operations were continued uninterrupted from the previous day;

(2) Testing must be conducted before the resumption of operation of the source of radiation after any unintentional interruption; and

(3) The licensee shall submit and adhere to a schedule for periodic tests of the entry control devices and warning systems.

(j) The licensee shall not conduct operations, other than those necessary to place the source of radiation in safe condition or to effect repairs on control devices, unless control devices are functioning properly.

(k) Entry and exit portals that are used in transporting materials to and from the area and that are not intended for use by persons to enter or exit the area, must be controlled by such devices and administrative procedures as are necessary to protect and warn against inadvertent entry by any person through these portals. Exit portals which are for irradiated materials must be equipped to detect and signal the presence of any loose radioactive material that is carried toward such a portal and automatically to prevent loose radioactive material from being carried out of the area.

2. Licensees or applicants for licenses who are subject to the provisions of subsection 1 and will use the source of radiation in a variety of positions or in locations which make it impracticable to comply with the requirements of subsection 1, may apply to the Division for approval of alternative safety measures. Alternative safety measures must provide persons with protection that is at least equivalent to the protection specified in subsection 1. At leastone of the alternative measures must include an inter-lock control device that is designed to prevent entry based on a measurement of the radiation and that ensures the absence of high radiation levels before a person can gain access to the area where such sources of radiation are used.

3. The entry control devices required by subsections 1 and 2 must be established in such a manner that no person will be prevented from leaving the area.

4. As used in this section, sealed radioactive source means any by-product, source or special nuclear material that is used in sealed sources in irradiators that are not self-shielded.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.347 Precautionary procedures: Use of process or other engineering controls; alternative controls; consideration of other safety factors. (NRS 459.201)

1. A licensee shall use, to the extent practicable, process or other engineering controls, including, without limitation, containment, decontamination and ventilation, to control the concentrations of radioactive material in the air.

2. If it is not practicable to apply process or other engineering controls to control the concentrations of radioactive material in the air to levels below those that define an area of airborne radioactivity, the licensee shall, consistent with maintaining the total effective dose equivalent as low as is reasonably achievable, increase monitoring and limit intakes by one or more of the following:

(a) Controlling access to the area;

(b) Limiting exposure times;

(c) Using respiratory protective devices; or

(d) Using any other means available to control concentrations of radioactive material in the air.

3. If the licensee performs an analysis of exposures to radiation to determine what exposure level is as low as is reasonably achievable and to determine whether respiratory protective devices should be used, the licensee may consider safety factors other than radiological safety factors, including, without limitation, consideration of the effect of respiratory protective devices on the industrial health and safety of workers.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R085-06, 11-13-2006)

NAC 459.349 Precautionary procedures: Use of respiratory protective devices. (NRS 459.201)

1. If a licensee uses respiratory protective devices to limit intakes as required pursuant to NAC 459.347, the licensee shall comply with the following requirements:

(a) Except as otherwise provided in paragraph (b), the licensee shall use only a respiratory protective device that is tested and certified, or has had certification extended, by the National Institute for Occupational Safety and Health.

(b) If the licensee wishes to use equipment that has not been tested or certified by the National Institute for Occupational Safety and Health, or for which there is no schedule for testing or certification, the licensee shall submit an application for authorized use of that equipment. The application must include evidence that the material and performance characteristics of the equipment are capable of providing the proposed degree of protection under anticipated conditions of use. The evidence must be acquired from tests performed on the equipment by the licensee or based on information obtained from other reliable tests that have been performed on the equipment.

(c) The licensee shall implement and maintain a program for respiratory protection that includes, without limitation:

(1) A sampling of the air that is sufficient to identify any potential hazard, permit the proper selection of equipment and estimate doses;

(2) Surveys and bioassays, as necessary, to evaluate actual intakes;

(3) Testing respiratory protective devices for operability immediately before each use, including, without limitation, user-performed seal checks for face-sealing respirators and functional checks for all other respirators;

(4) Written procedures regarding:

(I) Testing, including, without limitation, fit testing;

(II) The supervision and training of users of respiratory protective devices;

(III) Recordkeeping;

(IV) Monitoring, including, without limitation, sampling air and bioassays;

(V) Selection of respiratory protective devices;

(VI) Breathing air quality;

(VII) Inventory and control of respiratory protective devices;

(VIII) Storage, issuance, maintenance, repair and quality assurance of respiratory protective devices; and

(IX) Limitations on periods of use of respiratory protective devices and relief from use of respiratory protective devices; and

(5) The determination by a physician that each user of a face-sealing respirator or nonface-sealing respirator is medically fit to use the respirator before the initial fitting of a face-sealing respirator or before the first use of a nonface-sealing respirator and:

(I) At least once every 12 months after the initial fitting; or

(II) Periodically at a frequency that is determined by the physician.

(d) The licensee shall perform fit testing for a respirator before the first field use of a respirator with a tight-fitting facepiece and not less than annually thereafter. The fit test must be performed with the facepiece of the respirator operating in the negative pressure mode and the fit factor:

(1) For a negative pressure respirator must be greater than or equal to 10 times the air pressure flow; and

(2) For a positive pressure, continuous flow or pressure demand respirator must exceed 500.

(e) The licensee shall advise each user of a respiratory protective device that the user may leave the area at any time for relief from the use of the respiratory protective device if:

(1) The device malfunctions;

(2) He suffers physical or psychological distress;

(3) There is a failure of communication or procedures;

(4) There is a significant deterioration in the operating conditions; or

(5) There are any other conditions that might require relief from use of the device.

(f) The licensee shall:

(1) Consider limitations appropriate to the type of respiratory protective device and the intended mode of use of the respiratory protective device;

(2) When selecting a respiratory protective device, provide for vision correction, adequate communication, low-temperature work environments and the concurrent use of other safety and radiological protection equipment; and

(3) Use equipment in a manner that does not interfere with the proper operation of the respiratory protective device.

(g) The licensee shall provide standby rescue personnel when a person is using a one-piece atmosphere-supplying suit or any combination of a supplied-air respirator and personnel protective equipment from which the person would have difficulty extricating himself. The standby rescue personnel must:

(1) Be equipped with respiratory protective devices or other equipment appropriate to the potential hazards.

(2) Visually observe the person who is using a one-piece atmosphere-supplying suit or any combination of a supplied-air respirator and personnel protective equipment or maintain continuous communication with such person through visual, voice, signal line, telephone, radio or other suitable means of communication.

(3) Be immediately available to assist the person who is using a one-piece atmosphere-supplying suit or any combination of a supplied-air respirator and personnel protective equipment in case of a failure of air supply or for any other reason that requires relief from distress.

(4) Be sufficient in number and training to provide immediate assistance to the person who is using a one-piece atmosphere-supplying suit or any combination of a supplied-air respirator and personnel protective equipment and to provide effective emergency rescue if needed.

(h) The licensee shall ensure that atmosphere-supplying respirators are supplied with desirable air of grade D quality or better as defined in Publication G-7.1, *Commodity Specification for Air* (1997), and the provisions of 29 C.F.R. §§ 1910.134(i)(1)(ii)(A) to 1910.134(i)(1)(ii)(E), inclusive. A hard copy of Publication G-7.1, *Commodity Specification for Air* (1997), published by the Compressed Gas Association, may be obtained at a cost of $32 for a member of the Compressed Gas Association or $58 for a nonmember at the Internet address http://www.cganet.com/publication.asp. An electronic copy of the publication may be obtained free of charge for a member of the Compressed Gas Association or at a cost of $44 for a nonmember at the Internet address http://www.cganet.com/publication.asp.

(i) The licensee shall ensure that no objects, materials or substances, including, without limitation, facial hair, or any conditions which could interfere with the face-to-facepiece seal or valve function and which are under the control of the user of the respirator are present between the skin of the face of the user of the respirator and the sealing surface of a tight-fitting facepiece.

(j) In measuring the dose to persons from the intake of airborne radioactive material, the licensee must assume initially that the concentration of radioactive material in the air that is inhaled when a respirator is worn is the ambient concentration of radioactive material in the air without a respirator divided by the assigned protection factor of the respirator. If the licensee later finds that the actual dose is greater than the estimated dose, the actual dose must be used. If the actual dose is later found to be less than the estimated dose, the actual dose may be used.

2. A licensee shall obtain authorization from the Division before using assigned respiratory protection factors in excess of those specified in Appendix A. The Division may authorize a licensee to use higher assigned protection factors upon receipt of an application that:

(a) Describes the situation for which a need exists for higher protection factors; and

(b) Demonstrates that the respiratory protective device provides these higher protection factors under the proposed conditions of use.

3. In addition to any restrictions imposed pursuant to the provisions of this section and NAC 459.347, the Division may impose restrictions on the use of respiratory protective devices by a licensee to:

(a) Ensure that the respiratory protection program of the licensee is adequate to limit doses to persons from the intake of airborne radioactive material consistent with maintaining the total effective dose equivalent as low as is reasonably achievable; and

(b) Limit the extent to which a licensee may use respiratory protective devices instead of processes or engineering controls to limit doses to persons from the intake of airborne radioactive material.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R084-98, 1-26-99; A by R085-06, 11-13-2006)

NAC 459.352 Precautionary procedures: Radiation machines. (NRS 459.201**)** All radiation machines must be labeled in a manner which cautions people that radiation is produced when the machine is being operated.

[Bd. of Health, Radiation Control Reg. § 4.3.3.7, eff. 2-28-80]

NAC 459.3525 Precautionary procedures: Control of licensed radioactive material and radiation machines in unrestricted areas and not in storage. (NRS 459.201**)**

1. A licensee shall control and maintain constant surveillance of licensed radioactive material that is in an unrestricted area and that is not in storage or related to the care of a patient.

2. A registrant shall maintain control of radiation machines that are in an unrestricted area and that are not in storage.

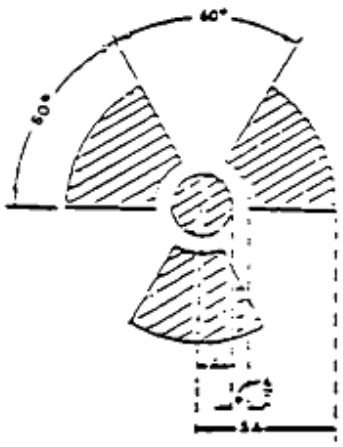
(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.353 Precautionary procedures: Security of stored material. (NRS 459.201**)** A licensee or registrant shall secure from unauthorized removal or access licensed or registered sources of radiation that are stored in unrestricted areas.
(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.354 Precautionary procedures: Instruction of personnel. (NRS 459.201**)** Instructions are required for persons working in or frequenting any portion of a restricted area as specified in NAC 459.784.
[Bd. of Health, Radiation Control Reg. § 4.3.5, eff. 2-28-80]

NAC 459.355 Precautionary procedures: Radiation symbol; labels; additional information. (NRS 459.201**)**
1. Except as otherwise provided in this section or as otherwise authorized by the Division, a licensee or registrant shall use a radiation symbol with a three-bladed design as follows:
(a) Each cross-hatched area must be magenta, purple or black; and
(b) The background must be yellow.

Radiation symbol



2. A licensee may label sources of radiation, holders for sources of radiation or device components containing sources of radiation that are subjected to high temperatures with conspicuously etched or stamped radiation symbols that do not comply with the requirements for color set forth in subsection 1.
3. In addition to the contents of signs and labels required by NAC 459.010 to 459.950, inclusive, a licensee or registrant shall provide, on or near the required signs and labels, additional information, as appropriate, to make persons aware of potential exposures and to minimize those exposures.
4. A radiation symbol or the labels described in NAC 459.010 to 459.950, inclusive, must only be used when conditions exist that warrant their use.
(Added to NAC by Bd. of Health, eff. 1-18-94; A by R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.3555 Precautionary procedures: Requirements for posting signs. (NRS 459.201**)** Except as otherwise provided in NAC 459.3565:
1. A licensee or registrant shall post in each radiation area a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, RADIATION AREA."
2. A licensee or registrant shall post in each high radiation area a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, HIGH RADIATION AREA" or "DANGER, HIGH RADIATION AREA."
3. A licensee or registrant shall post in each very high radiation area a conspicuous sign or signs bearing the radiation symbol and the words "GRAVE DANGER, VERY HIGH RADIATION AREA."
4. A licensee shall post in each area of airborne radioactivity a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, AIRBORNE RADIOACTIVITY AREA" or "DANGER, AIRBORNE RADIOACTIVITY AREA."
5. A licensee shall post in each area or room in which there is used or stored an amount of licensed radioactive material exceeding 10 times the quantity of such material specified in Appendix C a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, RADIOACTIVE MATERIAL(S)" or "DANGER, RADIOACTIVE MATERIAL(S)."
(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.3565 Precautionary procedures: Exceptions to requirements for posting signs. (NRS 459.030, 459.201**)**

1. A licensee or registrant is not required to post signs pursuant to NAC 459.3555 in an area or room containing sources of radiation for periods of less than 8 hours if:

(a) The sources of radiation are constantly attended during these periods by a person who takes the precautions necessary to prevent the exposure of persons to sources of radiation in excess of the limits established in NAC 459.325, 459.331, 459.333 and 459.335; and

(b) The area or room is subject to the control of the licensee or registrant.

2. A room or other area in a hospital that is occupied by a patient is not required to be posted with signs pursuant to NAC 459.3555 if:

(a) The patient is being treated with sealed sources of radiation or has been treated with unsealed radioactive material in quantities of less than 30 millicuries (1.11 gigabecquerels), or the measured dose rate at 1 meter from the patient is less than 0.005 rem (0.05 millisievert) per hour;

(b) The licensee is authorized to release the patient from confinement pursuant to 10 C.F.R. § 35.75; and

(c) There are personnel in attendance who will take the necessary precautions to prevent the exposure of persons to radiation or radioactive materials in excess of the limits specified in NAC 459.325, 459.331, 459.333 and 459.335, and to maintain the level of radiation at a level which is as low as is reasonably achievable.

3. A room or area is not required to be posted with signs pursuant to NAC 459.3555 because of the presence of a sealed source of radiation if the level of radiation at 30 centimeters from the surface of the container or housing for the sealed source does not exceed 0.005 rem (0.05 millisievert) per hour.

4. A room in a hospital or clinic that is used for teletherapy is not required to be posted with signs pursuant to NAC 459.3555 if there are personnel in attendance who will take the necessary precautions to prevent the exposure of any person to radiation or radioactive materials in excess of the limits established in NAC 459.325, 459.331, 459.333 and 459.335, and to maintain the level of radiation at a level that is as low as is reasonably achievable.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R085-06, 11-13-2006)

NAC 459.357 Precautionary procedures: Requirements for labeling containers and radiation machines. (NRS 459.201**)** Except as otherwise provided in NAC 459.3575:

1. Each licensee shall ensure that each container of licensed radioactive material bears a durable, clearly visible label bearing the radiation symbol and the words "CAUTION, RADIOACTIVE MATERIAL" or "DANGER, RADIOACTIVE MATERIAL." The label must provide information to permit persons handling or using the container, or working in the vicinity of the container, to take precautions to avoid or minimize exposures. The information on the label may include, but is not limited to:

(a) The radionuclides present;

(b) An estimate of the quantity of radioactivity;

(c) The date for which the activity is estimated;

(d) The levels of radiation;

(e) The kinds of radioactive materials present; and

(f) The mass enrichment.

2. Each licensee shall, before the removal or disposal of empty uncontaminated containers in unrestricted areas, remove or deface the label required pursuant to subsection 1, or otherwise clearly indicate that the container no longer contains radioactive material.

3. Each registrant shall ensure that each radiation machine is labeled in a conspicuous manner which cautions persons that radiation is produced when the machine is energized.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.3575 Precautionary procedures: Exceptions to requirements for labeling containers. (NRS 459.201**)** A licensee is not required to label a container pursuant to NAC 459.357 if the container is:

1. Holding licensed radioactive material in quantities that are less than the quantities listed in Appendix C.

2. Holding licensed radioactive material in concentrations that are less than those specified in Table III of Appendix B.

3. Attended by a person who takes the precautions necessary to prevent the exposure of persons in excess of the limits established by NAC 459.010 to 459.950, inclusive.

4. In transport and is packaged and labeled in accordance with the regulations of the United States Department of Transportation.

5. Accessible only to persons authorized to work in the vicinity of the container or authorized to handle or use the container, if the contents of the container are identified to those persons by a readily available written record which is retained while the container is in use for the purpose indicated on the record.

6. Installed manufacturing or process equipment.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.3585 Precautionary procedures: Receiving, monitoring and opening packages. (NRS 459.201**)**

1. Each licensee who expects to receive a package containing quantities of radioactive material in excess of a type A quantity, as defined in 10 C.F.R. § 71.4, as that section existed on January 1, 1993, shall make arrangements to receive:

(a) The package when the carrier offers it for delivery; or

(b) Notification of the arrival of the package at the terminal of the carrier and to take possession of the package expeditiously.

2. Except as otherwise provided in subsection 6, each licensee shall monitor the external surfaces of a package known to contain radioactive material for radioactive contamination and radiation levels if the package:

(a) Is labeled as containing radioactive material; or

(b) Has evidence of potential contamination.

3. The licensee shall perform the monitoring required pursuant to subsection 2 as soon as practicable after receipt of the package, but not later than 3 hours after the package is received at the facility of the licensee if the package is received during the normal working hours of the licensee. If the package is received after the normal working hours of the licensee, the monitoring must be performed not later than 3 hours after the beginning of the next normal working day of the licensee.

4. A licensee shall immediately notify the carrier who made the final delivery of a package and, by telephone and telegram, mailgram or facsimile, the Division, if:

(a) Removable radioactive contamination on the surface of the package is detected that exceeds 22,000 disintegrations per minute per 100 square centimeters of package surface; or

(b) The radiation level at 1 meter from the surface of the package exceeds 10 milliroentgens per hour.

5. Each licensee shall:

(a) Establish, maintain and retain written procedures for safely opening packages in which radioactive material is received; and

(b) Ensure that the procedures established pursuant to paragraph (a) are followed and that consideration is given to any special instructions for the type of package being opened.

6. A licensee transferring a source of radiation in a special form in a motor vehicle owned or operated by the licensee to and from a work site is not required to comply with the requirements of subsection 2, but shall ensure that the source of radiation is still properly lodged in its shield.

7. For the purposes of this section, the State Board of Health hereby adopts by reference 10 C.F.R. § 71.4, as that section existed on January 1, 1993. A copy of the volume containing that section may be purchased by mail from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 979050, St. Louis, Missouri 63197-9000, or by toll-free telephone at (866) 512-1800, for the price of $21.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.359 Disposal of waste: General requirements. (NRS 459.201**)**

1. A licensee shall dispose of licensed radioactive material only:

(a) By transfer to an authorized recipient as provided in NAC 459.180 to 459.313, inclusive, and 459.8231 to 459.950, inclusive;

(b) By decay in storage;

(c) By release in effluents within the limits specified in NAC 459.335; or

(d) As authorized pursuant to NAC 459.3595 to 459.3615, inclusive.

2. A person must be licensed by the Division to receive waste containing licensed radioactive material from other persons for:

(a) Treatment before disposal;

(b) Treatment or disposal by incineration;

(c) Decay in storage;

(d) Disposal at a land disposal facility licensed pursuant to NAC 459.806 to 459.8225, inclusive; or

(e) Storage until it is transferred to a storage or disposal facility authorized to receive the waste.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.3595 Disposal of waste: Application for approval of proposed procedures. (NRS 459.201**)** A licensee or applicant for a license may apply to the Division for approval of proposed procedures, not otherwise authorized pursuant to NAC 459.010 to 459.950, inclusive, to dispose of licensed radioactive material generated in the operations of the licensee. Each application must include:

1. A description of the waste containing the licensed radioactive material to be disposed of, including, without limitation, the physical and chemical properties that have an impact on evaluating the risk of the proposed procedures, and the proposed manner and conditions of disposing of the waste;

2. An analysis and evaluation of pertinent information related to the impact of the proposed procedures on the environment;

3. The nature and location of other potentially affected facilities; and

4. Analyses and procedures to ensure that doses are maintained as low as are reasonably achievable and within the limits specified in NAC 459.325, 459.331, 459.333 and 459.335.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.3605 Disposal of waste: Release into sanitary sewerage. (NRS 459.201**)**

1. Except as otherwise provided in subsection 2, a licensee may discharge licensed radioactive material into sanitary sewerage only if each of the following conditions is satisfied:

(a) The material is readily soluble in water or is readily dispersible biological material in water.

(b) The quantity of all radioactive material that the licensee releases into the sanitary sewerage in 1 month divided by the average monthly volume of water released into the sanitary sewerage by the licensee does not exceed the concentration of radioactive material listed in Table III of Appendix B.

(c) The total quantity of all radioactive material that the licensee releases into the sanitary sewerage in 1 year does not exceed 5 curies of hydrogen-3, 1 curie of carbon-14 and 1 curie of all other radioactive materials combined.

(d) If more than one radionuclide is released:

(1) The licensee determines the fraction of the limits in Table III of Appendix B represented by discharges into sanitary sewerage by dividing the actual monthly average concentration of each radionuclide released by the licensee into the sanitary sewerage by the concentration of that radionuclide listed in Table III of Appendix B; and

(2) The sum of the fractions for each radionuclide required by subparagraph (1) does not exceed unity.

2. Excreta from persons undergoing medical diagnosis or therapy with radioactive material is not subject to the limitations contained in subsection 1.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R084-98, 1-26-99)

NAC 459.361 Disposal of waste: Treatment or disposal by incineration. (NRS 459.201**)** A licensee may treat or dispose of licensed radioactive material by incineration only in the amounts and forms:

1. Specified in NAC 459.3615; or
2. Approved by the Division pursuant to NAC 459.3595.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.3615 Disposal of waste: Specific wastes. (NRS 459.201**)**

1. Except as otherwise provided in subsection 2, a licensee may dispose of the following licensed radioactive material as if it were not radioactive:

(a) Not more than 0.05 microcurie of hydrogen-3 or carbon-14 per gram of medium used for liquid scintillation counting; and

(b) Not more than 0.05 microcurie of hydrogen-3 or carbon-14 per gram of animal tissue, averaged over the weight of the entire animal.

2. A licensee shall not dispose of tissue under paragraph (b) of subsection 1 in a manner that would permit its use either as food for humans or as feed for animals.

3. The licensee shall maintain records of the disposal of radioactive material described in this section until the Division terminates his license.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.362 Quantities of radioactive materials for signs, labels and signals; disposal of waste. (NRS 459.201**)** The following quantities must be used for the purposes of subsection 1 of NAC 459.1955:

Radioactive Material	Microcuries
Americium-241	0.01
Antimony-122	100
Antimony-124	10
Antimony-125	10
Arsenic-73	100
Arsenic-74	10
Arsenic-76	10
Arsenic-77	100
Barium-131	10
Barium-133	10
Barium-140	10
Bismuth-210	1
Bromine-82	10
Cadmium-109	10
Cadmium-115m	10

Cadmium-115	100
Calcium-45	10
Calcium-47	10
Carbon-14	100
Cerium-141	100
Cerium-143	100
Cerium-144	1
Cesium-131	1,000
Cesium-134m	100
Cesium-134	1
Cesium-135	10
Cesium-136	10
Cesium-137	10
Chlorine-36	10
Chlorine-38	10
Chromium-51	1,000
Cobalt-58m	10
Cobalt-58	10
Cobalt-60	1
Copper-64	100
Dysprosium-165	10
Dysprosium-166	100
Erbium-169	100
Erbium-171	100
Europium-152 (9.2 h)	100
Europium-152 (13 yr)	1
Europium-154	1
Europium-155	10
Fluorine-18	1,000
Gadolinium-153	10
Gadolinium-159	100
Gallium-72	10
Germanium-71	100
Gold-198	100
Gold-199	100
Hafnium-181	10
Holmium-166	100
Hydrogen-3	1,000
Indium-113m	100
Indium-114m	10
Indium-115m	100
Indium-115	10
Iodine-125	1
Iodine-126	1
Iodine-129	0.1
Iodine-131	1
Iodine-132	10
Iodine-133	1
Iodine-134	10
Iodine-135	10
Iridium-192	10
Iridium-194	100
Iron-55	100
Iron-59	10
Krypton-85	100
Krypton-87	10
Lanthanum-140	10
Lutetium-177	100

Manganese-52	10
Manganese-54	10
Manganese-56	10
Mercury-197m	100
Mercury-197	100
Mercury-203	10
Molybdenum-99	100
Neodymium-147	100
Neodymium-149	100
Nickel-59	100
Nickel-63	10
Nickel-65	100
Niobium-93m	10
Niobium-95	10
Niobium-97	10
Osmium-185	10
Osmium-191m	100
Osmium-191	100
Osmium-193	100
Palladium-103	100
Palladium-109	100
Phosphorus-32	10
Platinum-191	100
Platinum-193m	100
Platinum-193	100
Platinum-197m	100
Platinum-197	100
Plutonium-239	0.01
Polonium-210	0.1
Potassium-42	10
Praseodymium-142	100
Praseodymium-143	100
Promethium-147	10
Promethium-149	10
Radium-226	0.01
Rhenium-186	100
Rhenium-188	100
Rhodium-103m	100
Rhodium-105	100
Rubidium-86	10
Rubidium-87	10
Ruthenium-97	100
Ruthenium-103	10
Ruthenium-105	10
Ruthenium-106	1
Samarium-151	10
Samarium-153	100
Scandium-46	10
Scandium-47	100
Scandium-48	10
Selenium-75	10
Silicon-31	100
Silver-105	10
Silver-110m	1
Silver-111	100
Sodium-24	10
Strontium-85	10
Strontium-89	1

Strontium-90	0.1
Strontium-91	10
Strontium-92	10
Sulphur-35	100
Tantalum-182	10
Technetium-96	10
Technetium-97m	100
Technetium-97	100
Technetium-99m	100
Technetium-99	10
Tellurium-125m	10
Tellurium-127m	10
Tellurium-127	100
Tellurium-129m	10
Tellurium-129	100
Tellurium-131m	10
Tellurium-132	10
Terbium-160	10
Thallium-200	100
Thallium-201	100
Thallium-202	100
Thallium-204	10
Thorium (natural) [1]	100
Thulium-170	10
Thulium-171	10
Tin-113	10
Tin-125	10
Tungsten-181	10
Tungsten-185	10
Tungsten-187	100
Uranium (natural) [2]	100
Uranium-233	0.01
Uranium-234	0.01
Uranium-235	0.01
Vanadium-48	10
Xenon-131m	1,000
Xenon-133	100
Xenon-135	100
Ytterbium-175	100
Yttrium-90	10
Yttrium-91	10
Yttrium-92	100
Yttrium-93	100
Zinc-65	10
Zinc-69m	100
Zinc-69	1,000
Zirconium-93	10
Zirconium-95	10
Zirconium-97	10
Any alpha-emitting radionuclide not listed above or mixtures of alpha emitters of unknown composition	0.01
Any radionuclide other than alpha-emitting radionuclides, not listed above or mixtures of beta emitters of unknown composition	0.1

[1] Based on alpha disintegration rate of Th 232, Th 230, and their daughter products.

[2] Based on alpha disintegration rate of U 238, U 234, and U 235.

[Bd. of Health, Radiation Control Reg. Art. 4, Appendix B, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.3625 General requirements for preparation and retention of records. (NRS 459.030**,** 459.201**)**

1. Except as otherwise provided in subsection 5, each licensee and registrant shall use the units curie, rad, rem and roentgen, including multiples and subdivisions thereof, to prepare the records required by NAC 459.010 to 459.950, inclusive, and shall clearly indicate the units of all quantities entered on those records.

2. The licensee or registrant shall make a clear distinction among the quantities entered on the records required by NAC 459.010 to 459.950, inclusive, including, without limitation:

(a) Committed effective dose equivalent;

(b) Deep-dose equivalent;

(c) Lens dose equivalent;

(d) Shallow-dose equivalent; and

(e) Total effective dose equivalent.

3. The licensee may record, in parentheses following the unit measurements required pursuant to subsection 1, the equivalent quantities expressed as unit measurements pursuant to the International System of Units (SI).

4. A discontinuance or curtailment of the activities of a licensee or registrant does not relieve that licensee or registrant of the responsibility for retaining all records required by NAC 459.010 to 459.950, inclusive. A licensee or registrant may request the Division to retain such records. An acceptance of the records by the Division relieves the licensee or registrant of subsequent responsibility only in respect to their retention as required by this section.

5. Each licensee or registrant shall use to prepare shipment manifests required pursuant to NAC 459.8231:

(a) The International System of Units (SI); or

(b) The International System of Units (SI) and the units set forth in subsection 1.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R084-98, 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R149-07, 1-30-2008)

NAC 459.363 Authorized forms of records for purposes of legibility; safeguards. (NRS 459.201**)**

1. Each record required by NAC 459.010 to 459.950, inclusive, must be legible throughout the specified period of retention. The record must be:

(a) The original;

(b) A reproduced copy or a microform, if the copy or microform is authenticated by authorized personnel and, if microform is used, the microform is capable of producing a clear copy throughout the specified period of retention; or

(c) Stored in electronic media with the capability for producing legible, accurate and complete records during the specified period of retention.

2. A licensee or registrant shall maintain adequate safeguards to prevent tampering with and the loss of records.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.3635 Records of program for protection against radiation. (NRS 459.201**)**

1. Each licensee and registrant shall maintain records of its program for protection against radiation required pursuant to NAC 459.321, including:

(a) The provisions of the program; and

(b) The results of audits and other reviews of the content and implementation of the program.

2. The licensee or registrant shall retain the records required by paragraph (a) of subsection 1 until the Division terminates each license or registration requiring the record. The licensee or registrant shall retain each record required by paragraph (b) of subsection 1 for at least 3 years after the record is made.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.3645 Records of surveys and calibrations. (NRS 459.201**)**

1. Each licensee and registrant shall maintain records showing the results of surveys and calibrations required pursuant to NAC 459.337 and 459.3585. The licensee or registrant shall retain each such record for at least 3 years after the record is made.

2. A licensee or registrant shall retain each of the following records until the Division authorizes their disposal:

(a) Records of the results of surveys used to determine the dose from external sources of radiation and, in the absence of or in combination with individual monitoring data, in the assessment of individual dose equivalents;

(b) Records of the results of measurements and calculations used to determine individual intakes of radioactive material and used in the assessment of internal doses;

(c) Records showing the results of sampling air and surveys and bioassays required pursuant to subparagraphs (1) and (2) of paragraph (c) of subsection 1 of NAC 459.349; and

(d) Records of the results of measurements and calculations used to evaluate the release of radioactive effluents into

the environment.
(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.365 Records of prior occupational doses. (NRS 459.201)

1. For each person who is likely to receive, in 1 year, an occupational dose requiring monitoring pursuant to NAC 459.339, the licensee or registrant shall:

(a) Determine the occupational dose received by that person during the current year; and

(b) Attempt to obtain the records of the lifetime cumulative occupational dose received by that person.

2. Before permitting a person to participate in a planned special exposure, the licensee or registrant shall determine:

(a) The internal and external doses received by that person from all previous planned special exposures;

(b) All doses in excess of the limits, including, without limitation, doses received during accidents and emergencies, received during the lifetime of the person; and

(c) All lifetime cumulative occupational doses.

3. To comply with the requirements of subsection 1, a licensee or registrant may:

(a) Accept, as a record of the occupational dose that the person received during the current year, a signed written statement from the person, or from his most recent employer for work involving exposure to radiation, that discloses the nature and the amount of any occupational dose that the person received during the current year.

(b) Accept, as the record of the lifetime cumulative dose received by a person, a current form regarding history of cumulative occupational exposure, signed by the person and countersigned by:

(1) An appropriate official of the most recent employer of the person for work involving exposure to radiation; or

(2) The current employer of the person, if the person is not employed by the licensee or registrant.

(c) Obtain reports regarding the dose equivalent of a person from his most recent employer for work involving exposure to radiation, or the current employer of the person if he is not employed by the licensee or registrant, by telephone, telegram, facsimile, electronic media or letter. The licensee or registrant shall request a written verification of the data if the authenticity of the transmitted report cannot be established.

4. A licensee or registrant shall record the history of exposure of each person, as required by subsection 1, on a form regarding history of cumulative occupational exposure, and shall include all the information required by that form. The form must show each period in which the person received occupational exposure to radiation or radioactive material and must be signed by that person. For each period for which the licensee or registrant obtains a report, the licensee or registrant shall use the dose shown in the report in preparing the form regarding history of cumulative occupational exposure. For any period in which the licensee or registrant does not obtain a report, the licensee or registrant shall place a notation on the form regarding history of cumulative occupational exposure indicating the periods for which data is not available.

5. Licensees and registrants are not required to reevaluate the separate dose equivalents received from sources of radiation outside the body and committed dose equivalents or intakes of radionuclides received from radioactive material taken into the body that are assessed before January 18, 1994. Histories of occupational exposure obtained and recorded on the form regarding history of cumulative occupational exposure before January 18, 1994, may be used in the absence of specific information regarding the intake of radionuclides by the person.

6. If the licensee or registrant is unable to obtain a complete record of the current and previously accumulated occupational dose of a person, the licensee or registrant shall:

(a) In establishing administrative controls pursuant to subsection 6 of NAC 459.325 for the current year, assume that the allowable limits for the person are reduced by 1.25 rems for each quarter for which records were unavailable and the person was engaged in activities that could have resulted in occupational exposure; and

(b) Assume that the person is not available for planned special exposures.

7. The licensee or registrant shall retain the records on the form regarding history of cumulative occupational exposure until the Division terminates each license or registration requiring the records. The licensee or registrant shall retain each record used in preparing the form regarding history of cumulative occupational exposure for at least 3 years after that record is made.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R084-98, 1-26-99)

NAC 459.3655 Records of planned special exposures. (NRS 459.201)

1. For each planned special exposure authorized by a licensee or registrant pursuant to NAC 459.329, that licensee or registrant shall maintain records that describe:

(a) The exceptional circumstances requiring the use of a planned special exposure;

(b) The name of the management official who authorized the planned special exposure and a copy of the signed authorization;

(c) What actions were necessary;

(d) Why those actions were necessary;

(e) What precautions were taken to ensure that doses were maintained at a level which was as low as was reasonably achievable;

(f) What individual and collective doses were expected to result; and

(g) The doses actually received in the planned special exposure.

2. The licensee or registrant shall retain the records required pursuant to subsection 1 until the Division authorizes their disposal.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.3665 Records of results from individual monitoring. (NRS 459.030**,** 459.201**)**

1. Each licensee and registrant shall maintain records of doses received by all persons for whom monitoring is required pursuant to NAC 459.339, and records of doses received by persons during planned special exposures, accidents and emergency conditions. These records must include, when applicable:

(a) The deep-dose equivalent to the whole body, lens dose equivalent, shallow-dose equivalent to the skin and shallow-dose equivalent to the extremities;

(b) The estimated intake of radionuclides;

(c) The committed effective dose equivalent assigned to the intake of radionuclides;

(d) The specific information used to calculate the committed effective dose equivalent pursuant to NAC 459.3275 and, when required, pursuant to NAC 459.339;

(e) The total effective dose equivalent, when required pursuant to NAC 459.3255; and

(f) The total of the deep-dose equivalent and the committed dose to the organ receiving the highest total dose.

2. The licensee or registrant shall make entries of the records specified in this section at intervals not to exceed 1 year.

3. The licensee or registrant shall maintain the records required pursuant to this section on a record of occupational exposure for a monitoring period, in accordance with the instructions for that form provided by the Division.

4. The licensee or registrant shall maintain the records of doses to an embryo with the records of doses to the woman carrying the embryo who has declared her pregnancy. The records of the declaration of pregnancy, including the estimated date of conception, must also be maintained, but may be maintained separately from the records regarding doses.

5. The licensee or registrant shall retain each form or record required by this section until the Division authorizes its disposal.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.367 Records of dose to individual members of public. (NRS 459.201**)**

1. Each licensee and registrant shall maintain records sufficient to demonstrate compliance with the limits specified in NAC 459.335 for members of the public.

2. The licensee or registrant shall retain the records required by this section until the Division authorizes their disposal.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.3673 Records of disposal of waste. (NRS 459.201**)** Each licensee shall maintain records of the disposal of licensed radioactive materials made pursuant to the provisions of NAC 459.010 to 459.950, inclusive, including any burial authorized before April 27, 1984. The licensee shall retain the records required by this section until the Division terminates each license or registration requiring the records.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.3675 Records of tests on entry control devices for very high radiation areas. (NRS 459.201**)**

1. Each licensee and registrant shall maintain records of tests made pursuant to NAC 459.345 on entry control devices for very high radiation areas. These records must include the date, time and results of each such test of function.

2. The licensee or registrant shall retain each record required by this section for at least 3 years after the record is made.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.368 Notice and reports to persons exposed to radiation or radioactive material. (NRS 459.070**,** 459.201**)**

1. Requirements for notification and reports to persons of exposure to radiation or radioactive material are specified in NAC 459.786.

2. When a licensee or registrant is required by NAC 459.371 to report to the Division any exposure of a person to radiation or radioactive material, the licensee or registrant shall also notify the person who was exposed. The notice must be transmitted at a time not later than the transmittal to the Division, and the notice must comply with the provisions of subsection 1 of NAC 459.786.

[Bd. of Health, Radiation Control Reg. §§ 4.5.6 & 4.5.6.1, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.369 Requirements for report of lost, stolen or missing licensed radioactive material or radiation machines. (NRS 459.201**)**

1. Each licensee and registrant shall report to the Division by telephone:

(a) Any lost, stolen or missing licensed radioactive material in an aggregate quantity which is equal to or greater than 1,000 times the quantity specified in Appendix C, if it appears to the licensee that an exposure could result to persons in unrestricted areas. The report must be made immediately after the occurrence becomes known to the licensee.

(b) Any lost, stolen or missing licensed radioactive material in an aggregate quantity which is greater tha times the quantity specified in Appendix C within 30 days after the occurrence becomes known to the licensee. The report is not required if the material is located or otherwise recovered by the licensee or registrant within the specified 30-day period.

(c) A lost, stolen or missing radiation machine. The report must be made immediately after the occurrence becomes known to the registrant.

2. Each licensee and registrant required to make a report pursuant to subsection 1 shall, within 30 days after making the report by telephone, file a written report with the Division setting forth the following information:

(a) A description of the licensed or registered source of radiation that is lost, stolen or missing, including:

(1) For licensed radioactive material, the kind, quantity, and chemical and physical form of the material; and

(2) For a radiation machine, the manufacturer and model and serial number of the machine and the type and maximum energy of radiation emitted from the machine.

(b) A description of the circumstances under which the loss or theft occurred.

(c) A statement of disposition, or probable disposition, of the licensed or registered source of radiation.

(d) Exposures of persons to radiation emitted from the licensed or registered source of radiation, the circumstances under which the exposures occurred and the possible total effective dose equivalent to persons in unrestricted areas.

(e) Actions that have been taken, or will be taken, to recover the source of radiation.

(f) Procedures or measures that have been, or will be, adopted to ensure against a recurrence of the loss or theft of licensed or registered sources of radiation.

3. After filing the report required pursuant to subsection 2, the licensee or registrant shall, within 30 days after he learns of any additional substantive information regarding the loss or theft, file an additional written report with the Division.

4. The licensee or registrant shall prepare any report filed with the Division pursuant to this section so that the names of persons who may have received exposure to radiation are stated in a separate and detachable portion of the report.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.3695 Report of certain incidents. (NRS 459.030**,** 459.070**,** 459.201**)**

1. Each licensee and registrant shall immediately report to the Division each event involving a source of radiation possessed by the licensee or registrant that may have caused, or threatens to cause:

(a) A person to receive:

(1) A total effective dose equivalent of 25 rems (250 millisieverts) or more;

(2) A lens dose equivalent of 75 rems (750 millisieverts) or more; or

(3) A shallow-dose equivalent to the skin or extremities or a total organ dose equivalent of 250 rads (2.5 grays) or more.

(b) The release of radioactive material, inside or outside a restricted area, in a manner in which, had a person been present for 24 hours, the person could have received an intake of radiation that is five times the annual limit on intake for occupational exposure. The provisions of this paragraph do not apply to an area where personnel are not normally stationed during routine operations.

2. Except as otherwise provided in NAC 459.369, each licensee and registrant shall, within 24 hours after discovery, report to the Division each event involving the loss of control of a licensed or registered source of radiation possessed by the licensee or registrant that may have caused, or threatens to cause:

(a) A person to receive, in a period of 24 hours:

(1) A total effective dose equivalent exceeding 5 rems (50 millisieverts);

(2) A lens dose equivalent exceeding 15 rems (150 millisieverts); or

(3) A shallow-dose equivalent to the skin or extremities or a total organ dose equivalent exceeding 50 rems (500 millisieverts).

(b) The release of radioactive material, inside or outside a restricted area, in a manner in which, had a person been present for 24 hours, the person could have received an intake of radiation that is more than the annual limit on intake for occupational exposure. The provisions of this paragraph do not apply to an area where personnel are not normally stationed during routine operations.

3. The licensee or registrant shall prepare each report filed with the Division pursuant to this section so that the names of persons who have received exposure are stated in a separate and detachable portion of the report.

4. Licensees or registrants shall make the reports required by subsections 1 and 2 to the Division by telephone, telegram, mailgram or facsimile.

5. The provisions of this section do not apply to doses that result from planned special exposures, if such doses are within the limits for planned special exposures and are reported pursuant to NAC 459.371.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R084-98, 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.371 Submission of written reports for certain occurrences; contents of reports. (NRS 459.030**,** 459.070**,** 459.201**)**

1. In addition to the notification required by NAC 459.3695, each licensee and registrant shall submit a written report to the Division within 30 days after learning of any of the following occurrences:

(a) Incidents for which notification is required pursuant to NAC 459.3695.
(b) Doses in excess of:
(1) The limits for an occupational dose for an adult specified in NAC 459.325;
(2) The limits for an occupational dose for a minor specified in NAC 459.331;
(3) The limits for an embryo of a woman who has declared her pregnancy specified in NAC 459.333;
(4) The limits for a member of the public specified in NAC 459.335;
(5) Any applicable limits set forth in the license or registration; or
(6) The constraints on air emissions of radioactive material, excluding radon 222 and its decay products, specified in subsection 2 of NAC 459.321.
(c) Levels of radiation or concentrations of radioactive material in:
(1) A restricted area in excess of any applicable limits set forth in the license or registration; or
(2) An unrestricted area in excess of 10 times the applicable limits set forth in NAC 459.010 to 459.950, inclusive, or in the license or registration.

(d) For licensees subject to the provisions of the generally applicable environmental standards for radiation of the United States Environmental Protection Agency set forth in 40 C.F.R. Part 190, levels of radiation or releases of radioactive material in excess of those standards, or of conditions set forth in the license related to those standards.

2. Each report required pursuant to subsection 1 must describe the extent of exposure of persons to radiation and radioactive material, including, as appropriate:
(a) Estimates of the dose of each person;
(b) The levels of radiation and concentrations of radioactive material involved;
(c) The cause of the elevated exposures, dose rates or concentrations; and
(d) Corrective steps taken or planned to ensure against a recurrence, including, without limitation, the schedule for achieving conformance with applicable limits, constraints on air emissions of radioactive material, excluding radon 222 and its decay products, specified in subsection 2 of NAC 459.321, generally applicable environmental standards for radiation of the United States Environmental Protection Agency and associated conditions set forth in the license or registration.

3. Each report filed pursuant to this section must include, for each person exposed, his name, social security number and date of birth. With respect to reports of exposure to an embryo, the information must relate to the woman carrying the embryo. The report must be prepared so that the information required by this subsection is stated in a separate and detachable portion of the report.

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R084-98, 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R149-07, 1-30-2008)

NAC 459.3715 Submission of written reports after planned special exposures. (NRS 459.201**)** Each licensee and registrant shall submit a written report to the Division within 30 days following any planned special exposure conducted in accordance with NAC 459.329 informing the Division that a planned special exposure was conducted, and including the date the planned special exposure occurred and the information required by NAC 459.3655.

(Added to NAC by Bd. of Health, eff. 1-18-94)

NAC 459.373 Additional reporting requirements. (NRS 459.201**)** In addition to complying with any other reporting requirements specified in NAC 459.010 to 459.950, inclusive, a licensee shall comply with the following reporting requirements:

1. Each licensee shall notify the Division as soon as possible, but not later than 4 hours, after the discovery of an event that prevents immediate protective actions to be taken that are necessary to avoid exposure to radiation or radioactive materials that could exceed the limits specified in NAC 459.010 to 459.950, inclusive.

2. Each licensee shall notify the Division within 24 hours after the discovery of any of the following events involving licensed radioactive material:
(a) An unplanned event causing radioactive contamination that:
(1) Requires access to the contaminated area by workers or members of the public to be restricted for more than 24 hours by imposing additional radiological controls or by prohibiting entry into the area, if such a restriction is imposed for any reason other than to allow isotopes with a half-life of less than 24 hours to decay in storage before decontamination; and
(2) Involves a quantity of radioactive material which is greater than five times the lowest annual limit on intake specified in Appendix B for that material.
(b) An event in which equipment is disabled or fails to function as designed if:
(1) The equipment is required pursuant to NAC 459.010 to 459.950, inclusive, or as a condition of a license, to prevent releases of or exposure to radioactive materials exceeding the limits specified inNAC 459.010 to 459.950, inclusive, or to mitigate the consequences of an accident;
(2) The equipment is required to be available and operable when it is disabled or fails to function; and
(3) Other equipment is not available and operable to perform the required safety function.
(c) An event that requires unplanned medical treatment at a medical facility for a person who has spreadable radioactive contamination on his clothing or body.

(d) An unplanned fire or explosion damaging any licensed radioactive material or any device, container or equipment containing licensed radioactive material if:

(1) The quantity of radioactive material involved is greater than five times the lowest annual limit on intake specified in Appendix B for that radioactive material; and

(2) The damage affects the integrity of the licensed radioactive material or its container.

3. Reports made by a licensee pursuant to this section must be made as follows:

(a) A licensee shall make the reports required by subsections 1 and 2 by telephone. To the extent that the information is available at the time of notification by telephone, the information provided in these reports must include, without limitation:

(1) The name and telephone number of the caller;

(2) A description of the event, including, without limitation, the date and time of the event;

(3) The exact location of the event;

(4) The isotopes, quantities and chemical and physical form of the licensed radioactive material involved; and

(5) Any data regarding the exposure of persons to radiation because of the event.

(b) Except as otherwise provided in paragraph (c), each licensee who makes a report by telephone shall submit a written report to the Division within 30 days after the report by telephone is made. The written report must contain:

(1) A description of the event, including, without limitation, the probable cause of the event and the manufacturer and model number of any equipment that failed or malfunctioned;

(2) The exact location of the event;

(3) The isotopes, quantities and chemical and physical form of the licensed radioactive material involved;

(4) The date and time of the event;

(5) Any corrective actions taken or planned regarding the event;

(6) The results of any evaluations or assessments regarding the event; and

(7) The extent of any exposure of persons to radiation or to radioactive materials because of the event, without identifying those persons by name.

(c) A licensee is not required to comply with the provisions of paragraph (b) if a report submitted pursuant to NAC 459.010 to 459.950, inclusive, contains all the information required by paragraph (b).

(Added to NAC by Bd. of Health, eff. 1-18-94; A by R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.374 Notice of intent to vacate premises. (NRS 459.201**)** Each specific licensee must, 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 Division in writing of intent to vacate. When deemed necessary by the Division, the licensee shall decontaminate the premises in the manner specified by the Division.

[Bd. of Health, Radiation Control Reg. § 4.5.5, eff. 2-28-80]

Radioactive Materials in the Healing Arts

NAC 459.3801 Restricted area: Release for unrestricted use. (NRS 459.201**)** A restricted area in which a licensee has used or stored radioactive material must not be released for unrestricted use until the Division has given its approval in writing.

(Added to NAC by Bd. of Health, eff. 11-1-95)

NAC 459.3805 Restricted area: Persons authorized to enter. (NRS 459.201**)** Only those persons who perform work in a restricted area are authorized to enter such areas. A licensee shall not allow any other person to enter a restricted area.

(Added to NAC by Bd. of Health, eff. 11-1-95)

X rays in the Healing Arts

NAC 459.400 Definitions. As used in NAC 459.400 to 459.624, inclusive, unless the context otherwise requires, the words and terms defined in NAC 459.402 to 459.546, inclusive, have the meanings ascribed to them in those sections.

(Supplied in codification)

NAC 459.402 "Accessible surface" defined. (NRS 459.201**)** "Accessible surface" means the external surface of the enclosure or housing provided by the manufacturer.

[Bd. of Health, Radiation Control Reg. § 6.2.1, eff. 2-28-80]

NAC 459.404 "Added filtration" defined. (NRS 459.201**)** "Added filtration" means any filtration added to the inherent filtration.

[Bd. of Health, Radiation Control Reg. § 6.2.2, eff. 2-28-80]—(NAC A 4-27-84)

NAC 459.406 "Aluminum equivalent" defined. (NRS 459.201**)** "Aluminum equivalent" means the thickness of aluminum (type 1100 alloy) affording the same attenuation, under specified conditions, as the material in question. The

nominal chemical composition of type 1100 aluminum alloy is 99 percent minimum aluminum, 0.12 percent [redacted]er.
[Bd. of Health, Radiation Control Reg. § 6.2.3, eff. 2-28-80]

NAC 459.408 "Attenuation block" defined. (NRS 459.201**)** "Attenuation block" means a block or stack having the dimensions 20 cm by 20 cm by 3.8 cm, of type 1100 aluminum alloy or other materials having equivalent attenuation.
[Bd. of Health, Radiation Control Reg. § 6.2.4, eff. 2-28-80]

NAC 459.410 "Automatic exposure control" defined. (NRS 459.201**)** "Automatic exposure control" means a device which automatically controls one or more technique factors in order to obtain at a preselected location a required quantity of radiation.
[Bd. of Health, Radiation Control Reg. § 6.2.5, eff. 2-28-80]

NAC 459.412 "Beam axis" defined. (NRS 459.201**)** "Beam axis" means a line from the source through the centers of the X-ray fields.
[Bd. of Health, Radiation Control Reg. § 6.2.6, eff. 2-28-80]

NAC 459.414 "Beam-limiting device" defined. (NRS 459.201**)** "Beam-limiting device" means a device which provides a means to restrict the dimensions of the X-ray field.
[Bd. of Health, Radiation Control Reg. § 6.2.7, eff. 2-28-80]

NAC 459.416 "Changeable filters" defined. (NRS 459.201**)** "Changeable filters" means any filter, exclusive of inherent filtration, which can be removed from the useful beam through any electronic, mechanical or physical process.
[Bd. of Health, Radiation Control Reg. § 6.2.8, eff. 2-28-80]

NAC 459.418 "Coefficient of variation" defined. (NRS 459.201**)** "Coefficient of variation," abbreviated as "C," means the ratio of the standard deviation to the mean value of a population of observations. It is estimated using the following equation:

$$\text{C (Coefficient of Variation)} = \frac{s}{\overline{X}} = \frac{1}{\overline{X}}\left[\sum_{i=1}^{n}\frac{(X_i - X)^2}{n-1}\right]^{\frac{1}{2}}$$

where

s = Estimated standard deviation of the population.

$\overline{X}$ = Mean value of observations in sample.

X_i = $_i$th observation in sample.

n = Number of observations in sample.

[Bd. of Health, Radiation Control Reg. § 6.2.9, eff. 2-28-80]—(NAC A by R084-98, 1-26-99)

NAC 459.420 "Contact therapy system" defined. (NRS 459.201**)** "Contact therapy system" means a system in which an X-ray tube port is put in contact with or within 5 centimeters of the surface being treated.
[Bd. of Health, Radiation Control Reg. § 6.2.10, eff. 2-28-80]

NAC 459.422 "Control panel" defined. (NRS 459.201**)** "Control panel" means that part of the X-ray control where the switches, knobs, pushbuttons and other hardware are mounted which are necessary for manually setting the technique factors.
[Bd. of Health, Radiation Control Reg. § 6.2.11, eff. 2-28-80]

NAC 459.424 "Cooling curve" defined. (NRS 459.201**)** "Cooling curve" means the graphical relationship between heat units stored and cooling time.
[Bd. of Health, Radiation Control Reg. § 6.2.12, eff. 2-28-80]

NAC 459.426 "Dead-man switch" defined. (NRS 459.201**)** "Dead-man switch" means a switch constructed so that a circuit closing contact can be maintained only by continuous pressure on the switch by the operator.
[Bd. of Health, Radiation Control Reg. § 6.2.13, eff. 2-28-80]

NAC 459.428 "Diagnostic source assembly" defined. (NRS 459.201**)** "Diagnostic source assembly" means the tube housing assembly with a beam-limiting device attached.
[Bd. of Health, Radiation Control Reg. § 6.2.14, eff. 2-28-80]

NAC 459.430 "Diagnostic-type protective tube housing" defined. (NRS 459.201**)** "Diagnostic-type protective tube housing" means a tube housing so constructed that the leakage radiation measured at a distance of 1 meter from the source does not exceed 100 mr in 1 hour when the tube is operated at its leakage technique factors.
[Bd. of Health, Radiation Control Reg. § 6.2.15, eff. 2-28-80]

NAC 459.432 "Diagnostic X-ray system" defined. (NRS 459.201**)** "Diagnostic X-ray system" means an X-ray system designed for irradiation of any part of the human body for diagnosis or visualization.
[Bd. of Health, Radiation Control Reg. § 6.2.16, eff. 2-28-80]

NAC 459.434 "Direct scattered radiation" defined. (NRS 459.201**)** "Direct scattered radiation" means scattered radiation which has been deviated in direction only by materials irradiated by the useful beam.
[Bd. of Health, Radiation Control Reg. § 6.2.17, eff. 2-28-80]

NAC 459.436 "Entrance exposure rate" defined. (NRS 459.201**)** "Entrance exposure rate" means the roentgens per unit of time at the point where the center of the useful beam enters the patient.
[Bd. of Health, Radiation Control Reg. § 6.2.18, eff. 2-28-80]

NAC 459.440 "Field emission equipment" defined. (NRS 459.201**)** "Field emission equipment" means equipment which uses an X-ray tube in which electron emission from the cathode is due solely to the action of an electric field.
[Bd. of Health, Radiation Control Reg. § 6.2.20, eff. 2-28-80]

NAC 459.442 "Filter" defined. (NRS 459.201**)** "Filter" means material placed in the useful beam to absorb preferentially selected radiations.
[Bd. of Health, Radiation Control Reg. § 6.2.21, eff. 2-28-80]—(NAC A 4-27-84)

NAC 459.444 "Fluoroscopic imaging assembly" defined. (NRS 459.201**)** "Fluoroscopic imaging assembly" means a component which comprises a reception system in which X-ray photons produce a fluoroscopic image. It includes equipment housings, electrical interlocks, if any, the primary protective barrier and structural material providing linkage between the image receptor and the diagnostic source assembly.
[Bd. of Health, Radiation Control Reg. § 6.2.22, eff. 2-28-80]

NAC 459.446 "General purpose radiographic X-ray system" defined. (NRS 459.201**)** "General purpose radiographic X-ray system" means any radiographic X-ray system which by design is not limited to radiographic examination of specific anatomical regions.
[Bd. of Health, Radiation Control Reg. § 6.2.23, eff. 2-28-80]

NAC 459.448 "Gonadal shield" defined. (NRS 459.201**)** "Gonadal shield" means a protective barrier for the testes or ovaries.
[Bd. of Health, Radiation Control Reg. § 6.2.24, eff. 2-28-80]

NAC 459.450 "Half-value layer" defined. (NRS 459.201**)** "Half-value layer," abbreviated as "HVL," means the thickness of specified material which attenuates the beam of radiation to an extent that the exposure rate is reduced to one-half of its original value. In this definition the contribution of all scattered radiation, other than any which may be present initially in the beam concerned, is considered excluded.
[Bd. of Health, Radiation Control Reg. § 6.2.25, eff. 2-28-80]—(NAC A 4-27-84)

NAC 459.452 "Image intensifier" defined. (NRS 459.201**)** "Image intensifier" means a device, including housing, which instantaneously converts an X-ray pattern into a corresponding light image of higher energy density.
[Bd. of Health, Radiation Control Reg. § 6.2.26, eff. 2-28-80]

NAC 459.454 "Image receptor" defined. (NRS 459.201**)** "Image receptor" means any device, such as a fluorescent screen or radiographic film, which transforms incident X-ray photons either into a visible image or into another form which can be made into a visible image by further transformations.
[Bd. of Health, Radiation Control Reg. § 6.2.27, eff. 2-28-80]

NAC 459.456 "Inherent filtration" defined. (NRS 459.201**)** "Inherent filtration" means the filtration permanently in the useful beam; it includes the window of the X-ray tube and any permanent tube or source enclosure.
[Bd. of Health, Radiation Control Reg. § 6.2.28, eff. 2-28-80]

NAC 459.458 "Kilowatt second" defined. (NRS 459.201**)** "Kilowatt second," abbreviated as "kWs," is equal to the

product of peak kilovolts, amperes and seconds or (1000) (kV) (mA) (sec).
[Bd. of Health, Radiation Control Reg. § 6.2.29, eff. 2-28-80]

NAC 459.460 "Lead equivalent" defined. (NRS 459.201**)** "Lead equivalent" means the thickness of lead affording the same attenuation, under specified conditions, as the material in question.
[Bd. of Health, Radiation Control Reg. § 6.2.30, eff. 2-28-80]

NAC 459.462 "Leakage radiation" defined. (NRS 459.201**)** "Leakage radiation" means radiation emanating from the diagnostic or therapeutic source assembly except for:
1. The useful beam; and
2. Radiation produced when the exposure switch or timer is not activated.
[Bd. of Health, Radiation Control Reg. §§ 6.2.31-6.2.31.2, eff. 2-28-80]

NAC 459.464 "Leakage technique factors" defined. (NRS 459.201**)** "Leakage technique factors" means the technique factors associated with the tube housing assembly which are used in measuring leakage radiation. They are defined as follows:
1. For capacitor energy storage equipment, the maximum rated number of exposures in an hour for operation at the maximum rated peak tube potential with the quantity of charge per exposure being 10 millicoulombs (mAs) or the minimum obtainable from the unit, whichever is larger.
2. For field emission equipment rated for pulsed operation, the maximum rated number of X-ray pulses in an hour for operation at the maximum rated peak tube potential.
3. For all other equipment, the maximum rated continuous tube current for the maximum rated peak tube potential.
[Bd. of Health, Radiation Control Reg. §§ 6.2.32-6.2.32.3, eff. 2-28-80]

NAC 459.466 "Light field" defined. (NRS 459.201**)** "Light field" means that area of the intersection of the light beam from the beam-limiting device and one of the set of planes parallel to and including the plane of the image receptor, whose perimeter is the locus of points at which the illumination is one-fourth of the maximum in the intersection.
[Bd. of Health, Radiation Control Reg. § 6.2.33, eff. 2-28-80]

NAC 459.468 "Maximum line current" defined. (NRS 459.201**)** "Maximum line current" means the root mean square (rms) current in the supply line of an X-ray machine operating at its maximum rating.
[Bd. of Health, Radiation Control Reg. § 6.2.34, eff. 2-28-80]

NAC 459.470 "Mobile equipment" defined. (NRS 459.201**)** "Mobile equipment" means X-ray equipment mounted on a permanent base with wheels or castors for movement while completely assembled.
[Bd. of Health, Radiation Control Reg. § 6.2.35, eff. 2-28-80]

NAC 459.472 "Peak tube potential" defined. (NRS 459.201**)** "Peak tube potential" means the maximum value of the potential difference across the X-ray tube during an exposure.
[Bd. of Health, Radiation Control Reg. § 6.2.36, eff. 2-28-80]

NAC 459.474 "Phototimer" defined. (NRS 459.201**)** "Phototimer" means a method for controlling radiation exposure to image receptors by the amount of radiation which reaches a radiation monitoring device or devices. The radiation monitoring device or devices are part of an electronic circuit which controls the duration of time the tube is activated.
[Bd. of Health, Radiation Control Reg. § 6.2.37, eff. 2-28-80]

NAC 459.476 "Portable equipment" defined. (NRS 459.201**)** "Portable equipment" means X-ray equipment designed to be hand carried.
[Bd. of Health, Radiation Control Reg. § 6.2.38, eff. 2-28-80]

NAC 459.478 "Position indicating device" defined. (NRS 459.201**)** "Position indicating device" means a device on dental X-ray equipment used to indicate the beam position and to establish a definite source-surface or skin distance. It may or may not incorporate or serve as a beam-limiting device.
[Bd. of Health, Radiation Control Reg. § 6.2.39, eff. 2-28-80]

NAC 459.480 "Primary protective barrier" defined. (NRS 459.201**)** "Primary protective barrier" means the material, excluding filters, placed in the useful beam, for protection purposes, to reduce the radiation exposure.
[Bd. of Health, Radiation Control Reg. § 6.2.41.1, eff. 2-28-80]

NAC 459.482 "Protective apron" defined. (NRS 459.201**)** "Protective apron" means an apron made of radiation absorbing materials, used to reduce radiation exposure.

[Bd. of Health, Radiation Control Reg. § 6.2.40, eff. 2-28-80]

NAC 459.484 "Protective barrier" defined. (NRS 459.201**)** "Protective barrier" means a barrier of radiation absorbing material or materials used to reduce radiation exposure.
[Bd. of Health, Radiation Control Reg. § 6.2.41, eff. 2-28-80]

NAC 459.486 "Protective glove" defined. (NRS 459.201**)** "Protective glove" means a glove made of radiation absorbing materials used to reduce radiation exposure.
[Bd. of Health, Radiation Control Reg. § 6.2.42, eff. 2-28-80]

NAC 459.488 "Qualified expert" defined. (NRS 459.201**)** "Qualified expert" means a person who has demonstrated to the satisfaction of the Division that he possesses the knowledge and training to measure ionizing radiation, to evaluate safety techniques and to advise regarding radiation protection needs.
[Bd. of Health, Radiation Control Reg. § 6.2.43, eff. 2-28-80]

NAC 459.490 "Radiograph" defined. (NRS 459.201**)** "Radiograph" means an image receptor on which the image is created directly or indirectly by an X-ray pattern and results in a permanent record.
[Bd. of Health, Radiation Control Reg. § 6.2.44, eff. 2-28-80]

NAC 459.492 "Radiographic imaging system" defined. (NRS 459.201**)** "Radiographic imaging system" means any system in which a permanent or semipermanent image is recorded on an image receptor by the action of ionizing radiation.
[Bd. of Health, Radiation Control Reg. § 6.2.45, eff. 2-28-80]

NAC 459.494 "Rating" defined. (NRS 459.201**)** "Rating" means the operating limits specified by the component manufacturer.
[Bd. of Health, Radiation Control Reg. § 6.2.46, eff. 2-28-80]

NAC 459.496 "Recording" defined. (NRS 459.201**)** "Recording" means producing a permanent form of an image resulting from X-ray photons, for example, a film or videotape.
[Bd. of Health, Radiation Control Reg. § 6.2.47, eff. 2-28-80]

NAC 459.500 "Response time" defined. (NRS 459.201**)** "Response time" means the time required for an instrument system to reach 90 percent of its final reading when the radiation-sensitive volume of the instrument system is exposed to a step change in radiation flux from zero sufficient to provide a steady state midscale reading.
[Bd. of Health, Radiation Control Reg. § 6.2.49, eff. 2-28-80]

NAC 459.502 "Scattered radiation" defined. (NRS 459.201**)** "Scattered radiation" means radiation that, during passage through matter, has been deviated in direction.
[Bd. of Health, Radiation Control Reg. § 6.2.50, eff. 2-28-80]

NAC 459.504 "Secondary protective barrier" defined. (NRS 459.201**)** "Secondary protective barrier" means a barrier sufficient to attenuate the stray radiation to the required degree.
[Bd. of Health, Radiation Control Reg. § 6.2.41.2, eff. 2-28-80]

NAC 459.506 "Source" defined. (NRS 459.201**)** "Source" means the focal spot of the X-ray tube.
[Bd. of Health, Radiation Control Reg. § 6.2.51, eff. 2-28-80]

NAC 459.508 "Source-image receptor distance" defined. (NRS 459.201**)** "Source-image receptor distance" means the distance from the source to the center of the input surface of the image receptor.
[Bd. of Health, Radiation Control Reg. § 6.2.52, eff. 2-28-80]

NAC 459.510 "Spot film" defined. (NRS 459.201**)** "Spot film" means a radiograph which is made during a fluoroscopic examination to permanently record conditions which exist during that fluoroscopic procedure.
[Bd. of Health, Radiation Control Reg. § 6.2.53, eff. 2-28-80]

NAC 459.512 "Stationary equipment" defined. (NRS 459.201**)** "Stationary equipment" means X-ray equipment which is installed in a fixed location.
[Bd. of Health, Radiation Control Reg. § 6.2.54, eff. 2-28-80]

NAC 459.514 "Stray radiation" defined. (NRS 459.201**)** "Stray radiation" means the sum of leakage and scattered

radiation.
[Bd. of Health, Radiation Control Reg. § 6.2.55, eff. 2-28-80]

NAC 459.516 "Technique factors" defined. (NRS 459.201**)** "Technique factors" means the conditions of operation. They are specified as follows:
1. For capacitor energy storage equipment, peak tube potential in kV and quantity of charge in mAs.
2. For field emission equipment rated for pulsed operation, peak tube potential in kV and number of X-ray pulses.
3. For all other equipment, peak tube potential in kV and either tube current in mA and exposure time in seconds, or the product of tube current and exposure time in mAs.
[Bd. of Health, Radiation Control Reg. §§ 6.2.56-6.2.56.3, eff. 2-28-80]

NAC 459.518 "Therapeutic-type protective tube housing" defined. (NRS 459.201**)** "Therapeutic-type protective tube housing" means the tube housing with tube installed and it includes high voltage or filament transformers, or both, and other appropriate elements when they are contained within that housing.
[Bd. of Health, Radiation Control Reg. § 6.2.57, eff. 2-28-80]

NAC 459.520 "Transportable equipment" defined. (NRS 459.201**)** "Transportable equipment" means X-ray equipment installed in a vehicle or trailer.
[Bd. of Health, Radiation Control Reg. § 6.2.58, eff. 2-28-80]

NAC 459.522 "Tube" defined. (NRS 459.201**)** "Tube" means an X-ray tube, unless otherwise specified.
[Bd. of Health, Radiation Control Reg. § 6.2.59, eff. 2-28-80]

NAC 459.524 "Tube housing assembly" defined. (NRS 459.201**)** "Tube housing assembly" means the tube housing with tube installed. It includes high-voltage or filament transformers, or both, and other appropriate elements when they are contained within the tube housing.
[Bd. of Health, Radiation Control Reg. § 6.2.60, eff. 2-28-80]

NAC 459.526 "Tube rating chart" defined. (NRS 459.201**)** "Tube rating chart" means the set of curves which specify the rated limits of operation of the tube in terms of the technique factors.
[Bd. of Health, Radiation Control Reg. § 6.2.61, eff. 2-28-80]

NAC 459.528 "Useful beam" defined. (NRS 459.201**)** "Useful beam" means the radiation which passes through the tube housing port and the aperture of the beam-limiting device when the exposure switch or timer is activated.
[Bd. of Health, Radiation Control Reg. § 6.2.62, eff. 2-28-80]

NAC 459.530 "Variable aperture beam-limiting device" defined. (NRS 459.201**)** "Variable aperture beam-limiting device" means a beam-limiting device which has capacity for stepless adjustment of the X-ray field size at a given source-image receptor distance.
[Bd. of Health, Radiation Control Reg. § 6.2.63, eff. 2-28-80]

NAC 459.532 "Visible area" defined. (NRS 459.201**)** "Visible area" means that portion of the input surface of the image receptor over which incident X-ray photons produce a visible image.
[Bd. of Health, Radiation Control Reg. § 6.2.64, eff. 2-28-80]

NAC 459.534 "X-ray control" defined. (NRS 459.201**)** "X-ray control" means a device which controls input power to the X-ray high-voltage generator or the X-ray tube. It includes equipment which controls the technique factors of an X-ray exposure.
[Bd. of Health, Radiation Control Reg. § 6.2.65, eff. 2-28-80]

NAC 459.536 "X-ray equipment" defined. (NRS 459.201**)** "X-ray equipment" means an X-ray system, subsystem or component. This term includes mobile, portable, stationary and transportable X-ray equipment.
[Bd. of Health, Radiation Control Reg. § 6.2.66, eff. 2-28-80]

NAC 459.538 "X-ray field" defined. (NRS 459.201**)** "X-ray field" means the area of the intersection of the useful beam and any one of the set of planes parallel to and including the plane of the image receptor, whose perimeter is the locus of points at which the exposure rate is one-fourth of the maximum in the intersection.
[Bd. of Health, Radiation Control Reg. § 6.2.67, eff. 2-28-80]

NAC 459.540 "X-ray high-voltage generator" defined. (NRS 459.201**)** "X-ray high-voltage generator" means a device which transforms electrical energy from the potential supplied by the X-ray control to the tube operating potential.

The device may also include means for transforming alternating current to direct current, filament transformer for the X-ray tube or tubes, high-voltage switches, electrical protective devices and other appropriate elements.
[Bd. of Health, Radiation Control Reg. § 6.2.68, eff. 2-28-80]

NAC 459.542 "X-ray system" defined. (NRS 459.201**)** "X-ray system" means an assemblage of components for the controlled production of X rays. It includes minimally an X-ray high-voltage generator, an X-ray control, a tube housing assembly, a beam-limiting device, and the necessary supporting structures. Additional components which function with the system are considered integral parts of the system.
[Bd. of Health, Radiation Control Reg. § 6.2.69, eff. 2-28-80]

NAC 459.544 "X-ray subsystem" defined. (NRS 459.201**)** "X-ray subsystem" means any combination of two or more components of an X-ray system for which there are requirements specified in NAC 459.400 to 459.624, inclusive.
[Bd. of Health, Radiation Control Reg. § 6.2.70, eff. 2-28-80]

NAC 459.546 "X-ray tube" defined. (NRS 459.201**)** "X-ray tube" means any electron tube which is designed for the conversion of electrical energy into X-radiation.
[Bd. of Health, Radiation Control Reg. § 6.2.71, eff. 2-28-80]—(NAC A 4-27-84)

NAC 459.550 Scope. (NRS 459.201**)** NAC 459.400 to 459.624, inclusive, establishes requirements, binding upon registrants, for use of X-ray equipment by prescription from or under the supervision of a person authorized by and licensed in accordance with state statutes to engage in the healing arts or veterinary medicine. Those sections are in addition to other applicable provisions of NAC 459.010 to 459.794, inclusive.
[Bd. of Health, Radiation Control Reg. § 6.1, eff. 2-28-80]—(NAC A 4-27-84)

NAC 459.552 Administrative controls: Direction of operation by registrants. (NRS 459.201**)**
1. The registrant is responsible for the operation of the X-ray machines which he has registered with the Division. He shall ensure that the provisions of NAC 459.400 to 459.624, inclusive, are met in the operation of the X-ray machine or machines.
2. An X-ray system which does not meet the provisions of NAC 459.400 to 459.624, inclusive, must not be operated for diagnostic or therapeutic purposes if the Division prohibits such operation.
3. Persons who will be operating the X-ray system must be adequately instructed in the safe operating procedures and be competent in the safe use of the equipment.
4. In the vicinity of each control panel for an X-ray system a chart must be provided, which specifies for all examinations which are performed by that system a listing of information, including but not limited to the following, for each projection within that examination:
(a) Patient's anatomical size versus technique factors to be utilized;
(b) Type of and size of the film or film-screen combination to be used;
(c) Type of grid to be used, if any, and focal distance;
(d) Source to image receptor distance to be used; and
(e) Type and location of placement of gonadal shielding to be used.
5. Written safety procedures and rules must be provided to each person operating X-ray equipment, including any restrictions of the operating technique required for the safe operation of the particular X-ray system. The operator must be able to demonstrate familiarity with these rules.
[Bd. of Health, Radiation Control Reg. §§ 6.3-6.3.1.1.4, eff. 2-28-80]—(NAC A 4-27-84)

NAC 459.554 Administrative controls: Radiographic exposure. (NRS 459.201**)**
1. Except for patients who cannot be moved out of the room, only the staff and ancillary personnel required for the medical procedure or training may be in the room during the radiographic exposure. Other than the patient being examined:
(a) All persons must be positioned so that no part of the body which is not protected by 0.5 mm lead equivalent will be struck by the useful beam.
(b) Staff and ancillary personnel must be protected from the direct scatter radiation by protective aprons or whole body protective barriers of not less than 0.25 mm lead equivalent.
(c) A patient who cannot be removed from the room must be protected from the direct scatter radiation by a whole body protective barrier of 0.25 mm lead equivalent or be so positioned that the nearest portion of the body is at least 2 meters from both the tube head and the nearest edge of the image receptor.
(d) When a portion of the body of any member of the staff or ancillary personnel is potentially subjected to stray radiation which could result in his receiving 10 percent of the maximum permissible dose, as defined in NAC 459.320 to 459.374, inclusive, additional protective devices must be employed.
2. Gonadal shielding of not less than 0.25 mm lead equivalent must be used for potentially procreative patients during radiographic procedures in which the gonads are in the direct or useful beam, except for cases in which this would interfere with the diagnostic procedure.

3. Persons must not be exposed to the useful beam except for the purposes of the healing arts where each exposure has been authorized by a licensed practitioner of the healing arts. This provision specifically prohibits deliberate exposure for the following purposes:

(a) Exposure of a person for training, demonstration or other purposes unless there are also healing arts requirements and proper prescription has been provided.

(b) Exposure of a person for the purpose of healing arts screening without prior written approval of the Division. Screening means an exposure of a person without a prior examination by a licensed practitioner.

4. When a patient or film must be provided with auxiliary support during a radiation exposure:

(a) Mechanical holding devices must be used when the technique permits. The safety rules, required by NAC 459.552 to 459.558, inclusive, must include individual protections where holding devices cannot be utilized;

(b) Written safety procedures required by subsection 5 of NAC 459.552 must indicate the requirements for selecting a holder and include the procedure the holder must follow;

(c) The human holder must be protected as required by subsection 1;

(d) No person may be used routinely to hold film or patients;

(e) In those cases where the patient must hold the film, except during intraoral examinations, any portion of the body other than the area of clinical interest struck by the useful beam must be protected by not less than 0.5 mm lead equivalent material; and

(f) Such holding is permitted only in very unusual and rare situations.

[Bd. of Health, Radiation Control Reg. §§ 6.3.1.1.5-6.3.1.1.8.6, eff. 2-28-80]—(NAC A 1-18-94; R085-06, 11-13-2006)

NAC 459.556 Administrative controls: Minimum exposure techniques. (NRS 459.201**)** Procedures and auxiliary equipment designed to minimize exposure to the patient and personnel commensurate with obtaining the needed diagnostic information must be utilized, including the following:

1. The speed of film or screen and film combinations must be the fastest speed consistent with the diagnostic objective of the examination;

2. The radiation exposure to the patient must be the minimum exposure required to produce images of good diagnostic quality; and

3. Portable or mobile equipment may be used only for examinations where it is impractical to transfer the patient to a stationary radiographic installation.

[Bd. of Health, Radiation Control Reg. §§ 6.3.1.1.9-6.3.1.1.9.3, eff. 2-28-80]

NAC 459.558 Personnel monitoring. (NRS 459.201**)** All persons who are associated with the operation of an X-ray system are subject to the occupational exposure limits and the requirements for the determination of the doses which are stated in NAC 459.325 and 459.365. When protective clothing or devices are worn on portions of the body and a monitoring device or devices are required, at least one device must be utilized as follows:

1. When an apron is worn, the monitoring device must be worn at the collar outside the apron.

2. The dose to the whole body, based on the maximum dose attributed to any one critical organ, which are the gonads, the blood forming organs, head and trunk or lens of the eye, must be recorded in the reports required by NAC 459.3665. If more than one device is used and a record is made of the data, each dose must be identified with the area where the device was worn on the body.

➥ Exposure of a personnel monitoring device to indicate deceptively a dose delivered to a person is prohibited.

[Bd. of Health, Radiation Control Reg. §§ 6.3.1.1.10-6.3.1.1.-10.2, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.564 Diagnostic X-ray systems. (NRS 459.201**)** In addition to other requirements of NAC 459.400 to 459.624, inclusive, all diagnostic X-ray systems must meet the following requirements:

1. The control panel containing the main power switch must bear the warning statement, legible and accessible to view: “WARNING: This X-ray unit may be dangerous to patient and operator unless safe exposure factors and operating instructions are observed.”

2. On battery-powered generators, visual means must be provided on the control panel to indicate whether the battery is in a state of charge adequate for proper operation.

3. The leakage radiation from the diagnostic source assembly measured at a distance of 1 meter in any direction from the source must not exceed 100 milliroentgens in 1 hour when the X-ray tube is operated at its leakage technique factors. Compliance will be determined by measurements averaged over an area of 100 square centimeters with no linear dimension greater than 20 centimeters.

4. The radiation emitted by a component other than the diagnostic source assembly must not exceed 2 milliroentgens in 1 hour at 5 centimeters from any accessible surface of the component when it is operated in an assembled X-ray system under any conditions for which it was designed. Compliance will be determined by measurements averaged over an area of 100 square centimeters with no linear dimension greater than 20 centimeters.

5. The requisites for quality of the beam are:

(a) The half-value layer of the useful beam for a given X-ray tube potential must not be less than the values shown in Table I. If it is necessary to determine the half-value layer at X-ray tube potential which is not listed in Table I, linear

interpolation or extrapolation may be made.

TABLE I

Design operating range (Kilovolts peak)	Measured potential (Kilovolts peak)	Half-value layer (Milli-meters of aluminum)
Below	30	0.3
	40	0.4
	49	0.5
50 to 70	50	1.2
	60	1.3
	70	1.5
Above 70	71	2.1
	80	2.3
	90	2.5
	100	2.7
	110	3.0
	120	3.2
	130	3.5
	140	3.8
	150	4.1

(b) The half-value layer criteria will have been met if it can be demonstrated that the aluminum equivalent of the total filtration in the primary beam is not less than that shown in Table II.

TABLE II

Filtration Required vs. Operating Voltage

Operating Voltage (kVp)	Total Filtration (inherent plus added) (millimeters aluminum equivalent)
Below 50	0.5 millimeters
50-70	1.5 millimeters
Above 70	2.5 millimeters

(c) Beryllium window tubes must have a minimum of 0.5 mm aluminum equivalent filtration permanently mounted in the useful beam.

(d) For capacitor energy storage equipment, compliance will be determined with the maximum quantity of charge per exposure.

(e) The required minimal aluminum equivalent filtration must include the filtration contributed by all materials which are always present between the focal spot of the tube and the patient, for example, a tabletop when the tube is mounted under the table and inherent filtration of the tube.

6. Where two or more radiographic tubes are controlled by one exposure switch, the tube or tubes which have been selected must be clearly indicated before initiation of the exposure. This indication must be on the X-ray control.

7. The tube housing assembly supports must be adjusted so that the tube housing assembly will remain stable during an exposure unless the tube housing movement is a designed function of the X-ray system.

8. The technique factors to be used during an exposure must be indicated before the exposure begins. If automatic exposure controls are used, the technique factors which are set before the exposure must be indicated. On equipment

having fixed technique factors, this requirement may be met by permanent markings. Indication of techniqu tors must be visible from the operator's position except in the case of spot films made by the fluoroscopist.

[Bd. of Health, Radiation Control Reg. §§ 6.4-6.4.8.2, eff. 2-28-80]—(NAC A 4-27-84)

NAC 459.566 Fluoroscopic X-ray systems: Limitation of useful beam; spot filming. (NRS 459.201**)** All fluoroscopic X-ray systems must meet the following requirements:

1. The fluoroscopic tube must not produce X rays unless the primary protective barrier is in position to intercept the entire useful beam at all times.

2. The entire cross section of the useful beam must be intercepted by the primary protective barrier of the fluoroscopic image assembly at any source-image receptor distance.

3. The X-ray field produced by fluoroscopic equipment without image intensification must not extend beyond the entire visible area of the image receptor. This requirement applies to field size during both fluoroscopic procedures and spot-filming procedures.

4. During fluoroscopic or spot-filming procedures, neither the length nor the width of the X-ray field in the plane of the image receptor may exceed the visible area of the image receptor by more than 3 percent of the source-image receptor distance. The sum of the excess length and the excess width must be no greater than 4 percent of the source-image receptor distance.

5. Compliance will be determined with the beam axis perpendicular to the image receptor. For rectangular X-ray fields used with circular image reception, the error in alignment will be determined along the length and width dimensions of the X-ray field which pass through the center of the visible area of the image receptor.

6. In addition to other requirements of NAC 459.400 to 459.624, inclusive, for new equipment installed after February 28, 1980:

(a) A means must be provided between the source and the patient for adjustment of the X-ray field size in the plane of the film to the size of that portion of the film which has been selected on the spot-film selector. Such an adjustment must be automatically accomplished except when the X-ray field size in the plane of the film is smaller than that of the selected portion of the film.

(b) It must be possible to adjust the X-ray field size in the plane of the film to a size smaller than the selected position of the film. The minimum field size at the greatest source-image receptor distance must be equal to or less than 5 by 5 centimeters.

(c) The center of the X-ray field in the plane of the film must be aligned with the center of the selected portion of the film to within 2 percent of the source-image receptor distance.

[Bd. of Health, Radiation Control Reg. §§ 6.5-6.5.1.3.3.3, eff. 2-28-80]

NAC 459.568 Fluoroscopic X-ray systems: Activation of the tube. (NRS 459.201**)** X-ray production in the fluoroscopic mode must be controlled by a device which requires continuous pressure by the fluoroscopist for the entire time of any exposure. When recording serial fluoroscopic images, the fluoroscopist must be able to terminate the X-ray exposure at any time, but means may be provided to permit completion of any single exposure of the series in process.

[Bd. of Health, Radiation Control Reg. § 6.5.2, eff. 2-28-80]

NAC 459.570 Fluoroscopic X-ray systems: Exposure rate limits. (NRS 459.030, 459.201**)**

1. The exposure measured at the point where the center of the useful beam enters the patient must not exceed 10 roentgens (100 millisieverts) per minute, except during recording of fluoroscopic images or when provided with optional high level control.

2. When provided with optional high level control, the equipment must not be operable at any combination of tube potential and current which will result in an exposure rate, measured at the point where the center of the useful beam enters the patient, in excess of:

(a) Five roentgens (50 millisieverts) per minute if the high level control is not activated; and

(b) Twenty roentgens (200 millisieverts) per minute if the high level control is activated and the unit was manufactured on or after May 19, 1995.

➥ Special means of activation of high level controls, such as additional pressure applied continuously by the operator, will be required to avoid accidental use. A continuous signal audible to the fluoroscopist must indicate activation and use of the high level control.

3. Any new equipment installed after February 28, 1980, which does not incorporate an automatic exposure control, for example, an automatic brightness control or ionization chamber control, must not be operable at any combination of tube potential and current which will result in an exposure rate in excess of 5 roentgens (50 millisieverts) per minute at the point where the center of beam enters the patient except during recording of fluoroscopic images or when provided with an optional high level control.

4. Compliance with this section is determined as follows:

(a) If the source is below the table, exposure rate must be measured 1 centimeter above the tabletop or cradle.

(b) If the source is above the table, the exposure rate must be measured at 30 centimeters above the tabletop with the end of the beam-limiting device or spacer positioned as closely as possible to the point of measurement.

(c) In a C-arm type of fluoroscope, the exposure rate must be measured 30 centimeters from the input surface of the

fluoroscopic imaging assembly.

(d) In a miniature C-arm type of fluoroscope, the exposure rate must be measured with the end of the beam-limiting device or spacer positioned as closely as possible to the point of measurement.

(e) In a lateral type of fluoroscope, the exposure rate must be measured at a point 15 centimeters from the centerline of the tabletop and in the direction of the X-ray source, with the end of the beam-limiting device or spacer positioned as closely as possible to the point of measurement. If the tabletop is movable, it must be positioned as closely as possible to the lateral X-ray source.

5. Periodic measurements of the exposure rate must be made annually or after any maintenance of the system which might affect the exposure rate. If the equipment is provided with optional high level control, measurements of the exposure rates must be made both with and without the high level control activated.

6. Results of these measurements must be made available at a place where any fluoroscopist will have ready access to them while using that fluoroscope. Results of the measurements must include the maximum possible r/minute, as well as the physical factors used to determine all data, the name of the person performing the measurements and the date the measurements were performed.

7. Use of monitoring devices, for example, commercially available film badges, thermoluminescence dosimeters or low energy dosimeters, may be used to perform the test if the measurements are made as in subsection 8.

8. The measurement must be made under the conditions that satisfy the requirements of subsection 4:

(a) The kVp must be the peak kV that the X-ray system is capable of producing;

(b) If determining the maximum dose rate below 5 roentgens (50 millisieverts) per minute, the high level control, if present, must not be activated;

(c) The X-ray system that incorporates automatic exposure control, for example, automatic brightness control, must have sufficient material, for example, lead or lead equivalent, placed in the useful beam to produce the maximum radiation output of the X-ray system; and

(d) The X-ray system that does not incorporate automatic exposure control must utilize the maximum milliamperage of the X-ray system. The material, for example, an attenuation block, must be placed in the useful beam to protect the imaging system.

[Bd. of Health, Radiation Control Reg. §§ 6.5.3-6.5.3.1.5.4.5, eff. 2-28-80]—(NAC A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.572 Fluoroscopic X-ray systems: Barrier-rate limits. (NRS 459.201**)**

1. The exposure rate resulting from transmission through the primary protective barrier with the attenuation block in the useful beam, combined with radiation from the image intensifier, if provided, must not exceed 2 milliroentgens per hour at 10 centimeters from any accessible surface of the fluoroscopic imaging assembly beyond the plane of the image receptor for each roentgen per minute of entrance exposure rate.

2. The exposure rate due to transmission through the primary protective barrier combined with radiation from the image intensifier must be determined by measurements averaged over an area of 100 square centimeters with no linear dimension greater than 20 centimeters.

3. If the source is below the tabletop, the measurement must be made with the input surface of the fluoroscopic imaging assembly positioned 30 centimeters above the tabletop.

4. If the source is above the tabletop and the source-image receptor distance is variable, the measurement must be made with the end of the beam-limiting device or spacer as close to the tabletop as it can be placed, but it must not be closer than 30 centimeters.

5. The attenuation block must be positioned in useful beam 10 centimeters from the point of measurement of entrance exposure rate and between this point and the input surface of the fluoroscopic imaging assembly.

[Bd. of Health, Radiation Control Reg. §§ 6.5.4-6.5.4.2.4, eff. 2-28-80]

NAC 459.574 Fluoroscopic X-ray systems: Indication of potential and current; source-skin distance; exceptions for fluoroscopy imaging system. (NRS 459.030**,** 459.201**)**

1. During fluoroscopy and cinefluorography, X-ray tube potential and current must be continuously indicated.

2. Except as otherwise provided in subsection 3, the source to skin distance must not be less than:

(a) Thirty-eight centimeters on stationary fluoroscopes installed after February 28, 1980;

(b) Thirty-five and five-tenths centimeters on stationary fluoroscopes which are in operation before February 28, 1980;

(c) Thirty centimeters on all mobile fluoroscopes; and

(d) Twenty centimeters for image intensified fluoroscopes used for specific surgical application. The users' operating manual must provide precautionary measures to be followed during the use of this device.

3. A fluoroscopy imaging system, including a small format type and miniature C-arm type, used to perform low power, X-ray image intensified fluoroscopy on extremities must:

(a) Be operated only by a licensed practitioner of the healing arts.

(b) Possess a positive, nonremovable means to ensure a source-skin distance during operation of not less than 9 centimeters, unless a different distance is approved by the Food and Drug Administration.

(c) Be clearly labeled as for use only on extremities.

(d) Bear a certification label that includes:

(1) The statement "This product is in conformity with the performance standards for diagnostic X-ray systems and their major components set forth in 21 C.F.R. § 1020"; and

(2) If the Food and Drug Administration grants a variance from any performance standards for diagnostic X-ray systems and their major components set forth in 21 C.F.R. § 1020, a statement of the variance and the identification number assigned to the variance by the Food and Drug Administration.

(e) Include an operating manual that contains:

(1) Any special instructions that may be necessary because of the unique features of the system, including, without limitation, special instructions concerning exposure rates, safety procedures and precautions; and

(2) Recommended machine settings for representative sample fluoroscopic examinations for which the system is designed, including data on skin and tabletop exposures resulting from these settings.

[Bd. of Health, Radiation Control Reg. §§ 6.5.5-6.5.6.4, eff. 2-28-80]—(NAC A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.576 Fluoroscopic X-ray systems: Fluoroscopic timer; mobile fluoroscopes. (NRS 459.201**)**

1. A means must be provided to preset the cumulative on-time of the fluoroscopic tube. The maximum cumulative time of the timing device must not exceed 5 minutes without resetting.

2. A signal audible to the fluoroscopist must indicate the completion of any preset cumulative on-time. Such a signal must continue to sound while X rays are produced until the timing device is reset. In addition to the other requirements of NAC 459.566 to 459.578, inclusive, mobile fluoroscopes must provide image intensification.

[Bd. of Health, Radiation Control Reg. §§ 6.5.7-6.5.8, eff. 2-28-80]

NAC 459.578 Fluoroscopic X-ray systems: Control of scattered radiation. (NRS 459.201**)**

1. Fluoroscopic table designs when combined with procedures utilized, must be such that no unprotected part of any staff or ancillary person's body will be exposed to unattenuated scattered radiation which originates from under the table. The attenuation required must be not less than 0.25 mm lead equivalent.

2. Equipment configuration, when combined with procedures, must be such that no portion of any staff or ancillary person's body, except the extremities, are exposed to the unattenuated scatter radiation emanating from above the tabletop unless the person:

(a) Is at least 120 cm from the center of the useful beam; or

(b) The radiation has passed through not less than 0.25 mm lead equivalent material, for example, drapes, Bucky-slot cover, sliding or folding panel or self-supporting curtains, in addition to any lead equivalency provided by the protective apron referred to in subsection 1 of NAC 459.554.

3. Upon application to the Division with adequate justification, exceptions to subsection 2 may be made in some special procedures where a sterile field will not permit the use of the normal protective barriers or where the protective barriers would interfere with the procedures.

[Bd. of Health, Radiation Control Reg. §§ 6.5.9-6.5.9.2.3, eff. 2-28-80]

NAC 459.580 Intraoral dental radiographic systems. (NRS 459.201**)**

1. In addition to the provisions of NAC 459.552 to 459.558, inclusive, and 459.564, these requirements apply to X-ray equipment and associated facilities used for dental radiography. The criteria for extraoral dental radiographic systems are covered in NAC 459.616 to 459.624, inclusive.

2. X-ray systems designed for use with an intraoral image receptor must be provided with means to limit source-to-skin distance of not less than:

(a) Eighteen centimeters if operable above 50 kilovolts peak; or

(b) Ten centimeters if not operable above 50 kilovolts peak.

3. Radiographic systems which are designed for use with an intraoral image receptor must be provided with means to limit the X-ray beam so that:

(a) If the minimum source-to-skin distance is 18 centimeters or more, the X-ray field at the minimum source-to-skin distance is containable in a circle having a diameter of no more than 7 centimeters; and

(b) If the minimum source-to-skin distance is less than 18 centimeters, the X-ray field at the minimum source-to-skin distance is containable in a circle having a diameter of no more than 6 centimeters.

4. A means must be provided to terminate the exposure at a preset time interval, a preset product of current and time, a preset number of pulses, or a preset radiation exposure to the image receptor. In addition:

(a) Termination of exposure must cause automatic resetting of the timer to its initial setting or to zero; and

(b) It must not be possible to make an exposure when the timer is set to a zero or off position if either position is provided.

5. When four timer tests taken at identical timer settings equal 0.5 seconds or less, the average time period (T) must be greater than or equal to five times the difference between the maximum period (T max) and the minimum period (T min) in accordance with the formula: T 5 (T max-T min).

6. All timers must be accurate to within ±20 percent of the selected value.

7. A control must be incorporated into each X-ray system so that an exposure can be terminated at any time, except for exposures of one-half second or less. The control switch must be of the dead-man type.

8. Each X-ray control must be located to meet the following criteria:

(a) Each installation must be provided with a protective barrier for the operator or must be so arranged that the operator can stand at least 6 feet from the patient and well away from the useful beam; and

(b) The X-ray control must provide visual indication observable at or from the operator's protected position whenever X rays are produced. In addition, a signal audible to the operator must indicate that the exposure has terminated.

9. The exposure produced must be reproducible to within the following criteria: When all technique factors are held constant, the coefficient of variation must not exceed 0.10. This requirement is met if, when four exposures at identical technique factors are made, the value of the average exposure (E) is greater than or equal to five times the difference between the maximum exposure (E max) and the minimum exposure (E min) in accordance with the formula: E 5 (E max-E min).

10. Patient and film holding devices must be used when the techniques permit.

11. Neither the tube housing nor the position indicating device may be handheld during an exposure.

12. The X-ray system must be arranged and operated in such a manner that the useful beam at the patient's skin does not exceed the dimensions specified in subsection 3.

13. Dental fluoroscopy without image intensification must not be used.

14. Each patient undergoing dental radiography must be draped with a protective apron of not less than0.25 millimeters lead-equivalent to cover the gonadal area.

[Bd. of Health, Radiation Control Reg. §§ 6.7-6.7.6.5, eff. 2-28-80]

NAC 459.582 Therapeutic X-ray systems: Leakage radiation; diaphragms and beam-limiting devices. (NRS 459.201**)**

1. When the tube is operated at its leakage technique factors, the leakage radiation must not exceed the value specified at the distance specified for the classification of that X-ray system.

2. For systems of contact therapy, leakage radiation must not exceed 100 mR/hr at 5 centimeters from the tube housing and must meet the following standards:

(a) In 0-150 kVp systems which are manufactured or installed prior to February 28, 1980, the leakage radiation must not exceed 1 R in 1 hour at 1 meter from the source.

(b) In 0-150 kVp systems which are manufactured on or after February 28, 1980, the leakage radiation must not exceed 100 mR in 1 hour at 1 meter from the source.

(c) In 151 to 999 kVp systems, the leakage radiation must not exceed 1 R in 1 hour at 1 meter from the source except systems that operate in excess of 500 kVp may have a leakage radiation at 1 meter from the source equivalent to the useful beam multiplied by a factor of 0.001.

3. Permanent fixed diaphragms or cones used for collimating the useful beam must provide the same degree of protection as required by the tube housing assembly.

4. Removable beam-limiting devices such as diaphragms or cones must, for the portion of the useful beam to be blocked by these devices, transmit not more than 1 percent of the original X-ray beam at the maximum kilovoltage and maximum treatment filter.

5. Adjustable beam-limiting devices installed after February 28, 1980, must meet the criteria of subsection 4.

6. Adjustable beam-limiting devices installed before February 28, 1980, must, for the portion of the X-ray beam to be blocked by these devices, transmit not more than 5 percent of the original X-ray beam at the maximum kilovoltage and maximum treatment filter.

[Bd. of Health, Radiation Control Reg. §§ 6.8-6.8.1.3.3, eff. 2-28-80]

NAC 459.584 Therapeutic X-ray systems: Filter systems, tube housing. (NRS 459.201**)**

1. The filter system must be designed so that:

(a) Filters cannot be accidentally displaced from the useful beam at any possible tube orientation.

(b) Each filter is marked as to its material of construction and its thickness or wedge angle for wedge filters. The filters must be individually distinguishable.

(c) The operator must be able to determine the presence or absence of each filter and the orientation of each wedge filter in the useful beam when he is at his position at the control panel either by display at the control panel or by direct observation.

(d) The filters and filter insertion slot opening must be so designed that the radiation at 5 cm from the filter insertion slot opening does not exceed 30 roentgens per hour under all operating conditions.

(e) Each machine equipped with a beryllium or other low filtration window must be clearly labeled as such upon the tube head housing and upon the control panel.

2. The tube housing assembly must be immobilized during stationary treatments.

3. The tube housing assembly must be marked so that it is possible to determine the location of the focal spot to within 5 millimeters and the marking must be readily accessible for use during calibration procedures.

4. Contact therapy tube housing assemblies must have a removable shield of 0.5 mm lead equivalency at 100 kVp that must be positioned over the entire useful beam exit port during periods when the beam is not in use.

[Bd. of Health, Radiation Control Reg. §§ 6.8.1.4-6.8.1.7, eff. 2-28-80]

NAC 459.586 Therapeutic X-ray systems: Beam monitor. (NRS 459.201**)** Equipment installed after February 28, 1980, of greater than 150 kVp must be provided with a beam monitor system as follows:

1. It must include a transmission detector which is a full beam detector and which is placed on the patient side of any fixed added filters other than a wedge filter;
2. It must have the detector interlocked to prevent incorrect positioning in the useful beam;
3. It must have a display at the control panel from whose reading in dose monitor units the absorbed dose at a reference point in the treatment volume can be calculated;
4. The control panel display must maintain the reading until intentionally reset to zero;
5. In the event of electrical power failure the reading at the control panel display must be recoverable at a later time;
6. Irradiation may be allowed only after a selection of a number of dose monitor units has been made at the treatment control panel;
7. It must be capable of independently terminating irradiation when a preselected number of dose monitor units has been reached; and
8. The control panel display must have only one scale, no scale multiplying factors, and be designed so that an increasing dose is displayed by increasing numbers and that in the event of an overdosage of radiation the absorbed dose may be accurately determined.

[Bd. of Health, Radiation Control Reg. §§ 6.8.1.8-6.8.1.8.8, eff. 2-28-80]

NAC 459.588 Therapeutic X-ray systems: Timer; control panel. (NRS 459.201**)**

1. A timer must be provided which has a display at the treatment control panel. The timer must have a preset timer selector and an elapsed time indicator.
2. The timer must be a cumulative timer which switches on and off with the radiation and retains its reading after irradiation is interrupted or terminated. It must be necessary to zero the elapsed time indicator and the preset time selector after irradiation is terminated.
3. The timer must terminate irradiation when a preselected time has elapsed.
4. The control panel must have:

(a) An indication of whether electrical power is present and activation of the X-ray tube is possible;
(b) An indication of whether X rays are being produced;
(c) The means for indicating kilovoltage and X-ray tube current;
(d) The means for terminating an exposure at any time;
(e) A locking device which will prevent unauthorized use of the X-ray system; and
(f) For new equipment installed after February 28, 1980, a positive display of specific filter or filters in the beam.

5. When a control panel may energize more than one X-ray tube:

(a) It must be possible to activate only one X-ray tube during any one time interval;
(b) There must be an indication at the control panel identifying which X-ray tube is energized; and
(c) There must be an indication at the X-ray tube housing assembly when that tubehead is energized.

6. There must be means of determining the target to patient distance to within 1 centimeter.
7. Unless it is possible to bring the X-ray output to the prescribed exposure parameters within 5 seconds, the entire useful beam must be attenuated by a shutter having a lead equivalency not less than that of the tube housing. In addition:

(a) After the unit is at the selected operating parameters, the shutter must be controlled electrically by the operator from the control panel; and
(b) An indication of shutter position must appear at the control panel.

[Bd. of Health, Radiation Control Reg. §§ 6.8.1.9-6.8.1.13.2, eff. 2-28-80]

NAC 459.590 Therapeutic X-ray systems: Requirements for design of treatment room. (NRS 459.201**)** In addition to providing shielding adequate to meet the requirements of NAC 459.320 to 459.374, inclusive, the design of the treatment room must meet the following requirements:

1. Treatment rooms to which access is possible through more than one entrance must be provided with warning lights in a readily observable position near the outside of all access doors, preferably at eye level, which will indicate when the useful beam is on.
2. Provision must be made for two-way aural communication with the patient from the control room.
3. Windows, mirror systems or closed-circuit television viewing screens or equivalent systems must be provided to permit continuous observation of the patient during irradiation and must be so located that the operator may see the patient and the control panel from the same position. When the viewing system is by electronic means, for example, television, an alternate viewing system must be available as a backup in case of electronic failure.
4. Facilities which contain an X-ray system which may be operated above 150 kVp must:

(a) Have all necessary shielding, except for any beam interceptor, provided by fixed barriers;
(b) Have the control panel in a protected area which is outside the treatment room or within a protective booth which has a door electrically connected to the control panel so that X-ray production cannot occur unless the door is closed;
(c) Have all entrance doors of the treatment room electrically connected to the control panel so that X-ray production cannot occur unless all doors are closed;
(d) Be arranged so that if the doors referred to in paragraphs (b) and (c) are opened when the therapy tubehead is

activated:

(1) The machine will shut off within 2 seconds; or

(2) The radiation at a distance of 1 meter from the target will be reduced to 10 mR/hr or less within 2 seconds; and

(e) Be so designed that if the radiation output of the tubehead is affected by any door opening, the machine can be restored to full operation only by:

(1) Closing the door; and

(2) Subsequently reinitiating the exposure by manual action at the control panel.

[Bd. of Health, Radiation Control Reg. §§ 6.8.2-6.8.2.4.5.1, eff. 2-28-80]—(NAC A 4-27-84; 1-18-94)

NAC 459.592 Therapeutic X-ray systems: Surveys; calibration; operating procedures. (NRS 459.201**)**

1. All new facilities and existing facilities not previously surveyed must have a radiation protection survey made by, or under the direction of, a qualified expert. This survey must also be done after any change in the facility which might produce a radiation hazard. The expert shall report his findings, in writing, to the person in charge of the facility and a copy of the report must be transmitted by the registrant to the Division within 30 days.

2. The radiation output of each therapeutic X-ray machine must be calibrated by, or under the direction of, a qualified expert who is physically present at the facility during the calibration procedure. The calibration must be repeated after any change in, or replacement of, components of the X-ray generating equipment which could cause a change in X-ray output. Calibration of the therapy beam must be performed with a measuring instrument the calibration of which is directly traceable to national standards of exposure or absorbed dose and which has been calibrated within the preceding year. Records of the calibrations must be provided to and maintained by the registrant. In addition:

(a) Each therapeutic X-ray machine must have the calibrations repeated at time intervals not exceeding 1 year. The calibration must include at least the following determinations:

(1) The accurate determination of the air dose rate or the dose rate in a suitable phantom, as appropriate, for a sufficient number of operating parameters for each effective energy to permit the determination of the dose received by the patient;

(2) Verification that the equipment is operating in accordance with the design specifications concerning the congruence between the radiation field and light localizer, when a localizer is used, and for beam flatness and symmetry at the specified depths;

(3) The effective energy, for example, half-value layer when appropriate, for every combination of kVp and filter used for radiation therapy;

(4) The uniformity of the radiation field and its dependence upon the direction of the useful beam; and

(5) The calibration determinations must be provided in sufficient detail so that the absorbed dose in rads to tissue adjacent to, as well as in the useful beam, may be calculated to within ±5 percent of the intended absorbed dose.

(b) Therapeutic X-ray systems capable of operation at greater than 150 kVp must, in addition to the annual calibration required in paragraph (a) have spot checks performed which meet the following criteria:

(1) A spot check must be made at least monthly or after 50 operating hours, whichever is shorter, and must include carefully selected representative or indicative measurements which will demonstrate the consistency of relevant machine operating characteristics or the lack of such characteristics.

(2) The spot-check methods must be in writing and have been designed by a qualified expert. Spot checks must include verification of continued congruency between the radiation field and localizing device where an optical field illuminator is used.

(3) Spot checks which are erratic or inconsistent with calibration data must be investigated promptly.

(4) For machines in which beam quality may vary significantly, spot checks must include beam quality checks.

(5) Whenever a spot check indicates a significant change, as specified in the qualified expert's spot check design, in the operating characteristics of a machine, the machine must be recalibrated as required in paragraph (a).

(6) A log must be kept of all spot-check measurements.

(c) In the therapeutic application of X-ray equipment constructed with beryllium or other low-filtration windows, the registrant must ensure that the unfiltered radiation reaches only the part intended and that the useful beam port is blocked at all times except when actually being used.

(d) Therapeutic X-ray machines must not be left unattended unless the locking device, required by paragraph (e) of subsection 4 of NAC 459.588, is set to prevent activation of the useful beam.

(e) Except as provided in paragraph (f) of subsection 4 of NAC 459.554, no person other than the patient may be in the treatment room during exposures unless he is protected by a barrier sufficient to meet the requirements of NAC 459.325, and no person other than the patient may be in the treatment room when the kVp exceeds 150 during exposures except in emergency situations.

(f) The tube housing assembly must not be held by anyone during exposures.

(g) When a patient must be held in position for radiation therapy, mechanical restraining devices must be used.

[Bd. of Health, Radiation Control Reg. §§ 6.8.3-6.8.3.2.7, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.594 X-ray and electron therapy installations: General requirements. (NRS 459.201**)** All of the provisions of NAC 459.740 to 459.752, inclusive, except subsections 3 and 4 of NAC 459.750, apply to medical facilities using medical therapy equipment with energies 1 MeV and above.

[Bd. of Health, Radiation Control Reg. § 6.9, eff. 2-28-80]

NAC 459.596 X-ray and electron therapy installations: Leakage radiation; beam-limiting devices. (NRS 459.201**)**

1. For existing equipment and new equipment manufactured or installed after February 28, 1980:

(a) The leakage radiation, excluding neutrons, at a distance of 1 meter from the source must not exceed 0.1 percent of the useful beam dose rate at 1 meter from the source for any of its operating conditions.

(b) Within 1 year after February 28, 1980, the registrant must determine or obtain from the manufacturer for each machine the leakage radiation of electrons, X rays or neutrons, existing at the points specified in paragraph (a) of this subsection, for specified operating conditions. Records on radiation leakage must be maintained at the installation.

(c) The Division may by specific order impose upon any user of equipment from which neutron leakage may be a hazard such additional requirements as it deems appropriate or necessary to protect health or minimize danger to life or property.

2. Adjustable or interchangeable beam-limiting devices must be provided.

3. For existing equipment and new equipment manufactured or installed after February 28, 1980:

(a) Adjustable or interchangeable beam-limiting devices must attenuate the radiation incident on the beam-limiting devices so that the dose equivalent in rems at any distance from the source does not exceed 2 percent of the maximum dose equivalent in the useful beam measured at an equal distance from the radiation source.

(b) If the beam-limiting device does not meet the specifications in paragraph (a) of this subsection, the Division may accept auxiliary equipment or methods for accomplishing attenuation.

4. Dose equivalent measurements may be averaged over an area up to but not exceeding 100 cm^2 at a distance of 1 meter from the target. In case of overlapping beam-limiting devices, the leakage through each set must be measured independently.

[Bd. of Health, Radiation Control Reg. §§ 6.9.1-6.9.1.2.2, eff. 2-28-80]

NAC 459.598 X-ray and electron therapy installations: Filters; beam monitors. (NRS 459.201**)**

1. In equipment which uses a system of wedge filters, interchangeable field flattening filters or beam scattering filters:

(a) Irradiation must not be possible until a selection of filter has been made at the treatment control panel;

(b) An interlock system must be provided to prevent irradiation if the filter is not in the correct position; and

(c) A display must be provided at the treatment control panel showing the filter, filters or zero filter in use.

2. Existing equipment and new equipment manufactured or installed after February 28, 1980, must be provided with at least one radiation detector in the radiation head. This detector must be incorporated into a primary system. Each detector:

(a) Must be capable of independently monitoring and controlling the useful beam; and

(b) Must form part of a dose monitoring system from whose readings in dose monitor units the absorbed dose at a reference point in the treatment volume can be calculated.

3. Each dose monitoring system must have a legible display at the treatment control panel which must:

(a) Maintain a reading until intentionally reset;

(b) In the event of power failure, have the capability of retrieving the information displayed at the time of failure; and

(c) Be designed so that increasing doses are displayed by increasing numbers and in any over-dosage of radiation the absorbed dose may be accurately determined.

[Bd. of Health, Radiation Control Reg. §§ 6.9.1.3-6.9.1.4.3.3, eff. 2-28-80]

NAC 459.600 X-ray and electron therapy installations: Dose monitors. (NRS 459.201**)**

1. Irradiation must not be possible until a selection of a number of dose monitor units has been made at the treatment control panel.

2. After useful beam termination, it must be necessary to reset the preselected dose monitor units before treatment can be reinitiated.

3. The preselected number of dose monitor units must be displayed at the treatment control panel until reset for the next irradiation.

4. Each of the monitoring systems must be capable of independently terminating irradiation. Provisions must be made to test the correct operation of each system.

5. Each primary system must terminate irradiation when the preselected number of dose monitor units has been reached and each secondary system must be used as a backup.

[Bd. of Health, Radiation Control Reg. §§ 6.9.1.5-6.9.1.6.2, eff. 2-28-80]

NAC 459.602 X-ray and electron therapy installations: Switches; timers. (NRS 459.201**)**

1. It must be possible to terminate irradiation and equipment movements or to go from an interruption condition to termination conditions at any time from the treatment control panel.

2. It must be possible to interrupt irradiation and equipment movements at any time from the treatment control panel. Following an interruption it must be possible to restart irradiation by operator action without any reselection of operating conditions.

3. A timer must be provided which has a display at the treatment control panel. The timer must have a reset time selector and an elapsed time indicator.

4. The timer must be a cumulative timer which switches on and off with the radiation and retains its reading after irradiation is interrupted or terminated. It must be necessary to zero and reset the elapsed time indicator and the preset time selector after irradiation is terminated before irradiation will again be possible.

5. To guard against failure of the dose monitoring systems, the timer must terminate irradiation when a preselected time has elapsed.

[Bd. of Health, Radiation Control Reg. §§ 6.9.1.7-6.9.1.9.3, eff. 2-28-80]

NAC 459.604 X-ray and electron therapy installations: Selections of radiation type, energy, and stationary or moving beam. (NRS 459.201**)**

1. In equipment capable of both X-ray therapy and electron therapy:

(a) Irradiation must not be possible until a selection of radiation types, either X rays or electrons, has been made at the treatment control panel; and

(b) The radiation type selected must be displayed at the treatment control panel before and during irradiation.

2. In equipment capable of generating radiation beams of different energies:

(a) Irradiation must not be possible until a selection of energy has been made at the treatment control panel; and

(b) The energy and type of irradiation selected, either X rays or electrons, must be displayed at the treatment control panel before and during irradiation.

3. In equipment capable of both stationary-beam therapy and moving-beam therapy:

(a) Irradiation must not be possible until a selection of stationary-beam therapy or moving-beam therapy has been made at the treatment control panel;

(b) Moving-beam therapy must be controlled so that the required dose monitor units per degree of rotation is obtained; and

(c) The mode of operation must be displayed at the treatment control panel.

[Bd. of Health, Radiation Control Reg. §§ 6.9.1.10-6.9.1.12.3, eff. 2-28-80]

NAC 459.606 X-ray and electron therapy installations: Focal spot; beam orientation; system checks. (NRS 459.201**)**

1. The registrant must determine or obtain from the manufacturer the location with reference to an accessible point on the radiation head of:

(a) The X-ray target and the virtual source of X rays;

(b) The electron window or the scattering foil, or both; and

(c) All possible orientations of the useful beam.

2. Facilities must be provided so that all radiation safety interlocks can be checked. When preselection of any of the operating conditions requires action in the treatment room and at the treatment control panel, selection at one location must not give a display at the other location until the requisite selected operations in both locations have been completed.

[Bd. of Health, Radiation Control Reg. §§ 6.9.1.13-6.9.1.14, eff. 2-28-80]

NAC 459.608 X-ray and electron therapy installations: Shielding requirements. (NRS 459.201**)** Shielding must be adequate to meet the requirements of NAC 459.320 to 459.374, inclusive. In addition, each of the following design requirements apply:

1. Except for entrance doors, all the required barriers must be fixed barriers.

2. The control panel must be located outside the treatment room or within a protective booth equipped with an interlocked door which is electrically connected to the control panel so that the door must be closed during radiation production.

3. Windows, mirror systems, closed-circuit television viewing screens or other equivalent viewing systems must be provided to permit continuous observation of the patient during irradiation and must be located so that the operator may see the patient and the control panel from the same position. When the viewing system is by electronic means, for example, television, an alternate viewing system must be provided for use in any failure of the primary system.

4. Provisions must be made for two-way aural communication with the patient from the control station.

5. Treatment rooms to which access is possible through more than one entrance must be provided with warning lights in a readily observable position near the outside of all access doors which will indicate when the useful beam is on.

6. Interlocks must be provided so that all entrance doors must be closed before treatment can be initiated or continued. If the radiation beam is interrupted by any door opening, it must be possible to restore the machine to operation only by closing the door and subsequently reinitiating exposure by manual action at the control panel.

[Bd. of Health, Radiation Control Reg. §§ 6.9.2-6.9.2.6, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.610 X-ray and electron therapy installations: Surveys; operating procedure; calibration. (NRS 459.201**)**

1. All new facilities and existing facilities not previously surveyed must have a survey of radiation protection made by, or under the direction of, a qualified expert. This survey must also be done after any change in the facility or

equipment which might cause a significant increase in radiation hazard.

2. The expert must report his findings in writing to the person in charge of the facility, and a copy of the report must be transmitted by the registrant to the Division.

3. The survey and report must indicate all instances where, in the opinion of the qualified expert, the installation is in violation of any applicable regulation for protection against radiation and must cite the sections violated.

4. No person other than the patient may be in the treatment room during treatment. When a patient must be held in position for radiation therapy, mechanical supporting or restraining devices must be used.

5. The output of each therapeutic X-ray machine must be calibrated by a qualified expert, before the machine is first used for medical purposes. Calibrations must be repeated at least once every 12 months and after any change which might significantly increase radiation hazards. Records of calibrations must be provided to and maintained by the registrant. The calibration must include at least the following determinations:

(a) Verification that the equipment is operating in compliance with the design specifications concerning the light localizer, the side light and backpointer alignment with the isocenter, when applicable, variation in the axis of rotation for the table, gantry and jaw system and beam flatness and symmetry at the specified depths.

(b) The exposure rate or dose rate for the range and field sizes used and for each effective energy and for each treatment distance used for radiation therapy.

(c) The effective energy, for example, half-value layer when appropriate, for every combination of kVp and filter used for radiation therapy.

(d) The congruence between the radiation field and the field indicated by the localizing device when localizing devices are used for radiation therapy.

(e) The uniformity of the radiation field and its dependence upon the direction of the useful beam.

(f) The calibration determinations must be provided in sufficient detail so that the absorbed dose in rads to tissue adjacent to, as well as in the useful beam, may be calculated to within ±5 percent of the intended absorbed dose.

[Bd. of Health, Radiation Control Reg. §§ 6.9.3-6.9.3.3.6, eff. 2-28-80]

NAC 459.612 X-ray and electron therapy installations: Spot checks. (NRS 459.201**)**

1. A spot check must be made daily with use and include carefully selected representative or indicative measurements which will demonstrate the consistency of relevant machine operating characteristics or lack of those characteristics.

2. The spot-check methods must be in writing and have been designed by a qualified expert.

3. Spot checks which are erratic or inconsistent with calibration data must be investigated promptly.

4. For machines in which beam quality may vary significantly, spot checks must include quality checks.

5. Whenever a spot check indicates a significant change, as specified in the qualified expert's spot-check design, in the operating characteristics of a machine, the machine must be recalibrated as required in subsection 5 of NAC 459.610.

6. Where a machine has built-in devices which provide a self-check of any parameter during irradiation, that parameter may be spot checked weekly instead of daily.

7. A log must be kept of all spot-check measurements.

[Bd. of Health, Radiation Control Reg. §§ 6.9.3.4-6.9.3.4.7, eff. 2-28-80]

NAC 459.614 Veterinary medicine radiographic installations. (NRS 459.201**)**

1. The protective tube housing must be of the diagnostic type.

2. Diaphragms or cones must be provided for collimating the useful beam to the area of clinical interest and must provide the same degree of protection as is required of the housing.

3. The total filtration permanently in the useful beam must not be less than 0.5 millimeters aluminum equivalent for machines operating up to 50 kVp, 1.5 millimeters aluminum equivalent for machines operating between 50-70 kVp, and 2.5 millimeters aluminum equivalent for machines operating above 70 kVp.

4. A device must be provided to terminate the exposure after a preset time or exposure.

5. A dead-man type of exposure switch must be provided together with an electrical cord of sufficient length so that the operator can stand out of the useful beam and at least 6 feet from the animal during all X-ray exposures.

6. All wall, ceiling and floor areas must be equivalent to or provided with applicable protective barriers as required in NAC 459.325, 459.331 and 459.335.

7. The operator shall stand well away from the useful beam and the animal during radiographic exposures.

8. No person other than the operator may be in the X-ray room while exposures are being made unless the person's assistance is required.

9. When an animal must be held in position during radiography, mechanical supporting or restraining devices should be used. If the animal must be held by a person, he must be protected with appropriate shielding devices, such as protective gloves and apron, and he must be positioned so that no part of his body will be struck by the useful beam. The exposure of any person used for this purpose must be monitored and permanently recorded.

[Bd. of Health, Radiation Control Reg. §§ 6.10-6.10.3.3, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.616 Other radiographic systems: Beam limitation. (NRS 459.201**)** The useful beam must be limited to the area of clinical interest.

[Bd. of Health, Radiation Control Reg. §§ 6.6 & 6.6.1, eff. 2-28-80]

NAC 459.618 General purpose X-ray systems: Stationary and mobile. (NRS 459.201)

1. A means must be provided for stepless adjustment of the size of the X-ray field.

2. A means must be provided for visually defining the perimeter of the X-ray field. The total misalignment of the edges of the visually defined field with the respective edges of the X-ray field along either the length or width of the visually defined field must not exceed 2 percent of the distance from the source to the center of the visually defined field when the surface upon which it appears is perpendicular to the axis of the X-ray beam.

3. The Division may grant an exemption from subsections 1 and 2 for an uncertified X-ray system if the registrant makes a written application for the exemption and in his application demonstrates that:

(a) It is impractical to comply with subsections 1 and 2; and

(b) The purpose of NAC 459.400 to 459.624, inclusive, will be met by other means.

4. All stationary general purpose X-ray systems must meet the following additional requirements:

(a) The beam-limiting device must numerically indicate the field size in the plane of the image receptor to which it is adjusted;

(b) Indication of field size dimensions and source-image receptor distances must be specified in inches or centimeters, or both, and must be such that aperture adjustments result in X-ray field dimensions in the plane of the image receptor which correspond to those of the image receptor to within 2 percent of the source-image receptor distance when the beam axis is perpendicular to the plane of the image receptor; and

(c) A means must be provided to indicate when the axis of the X-ray beam is perpendicular to the plane of the image receptor, to align the center X-ray field with respect to the center of the image receptor to within 2 percent of the source-image receptor distance, and to indicate the source-image receptor distance to within 2 percent.

5. Radiographic equipment designed for only one image receptor size at a fixed source-image receptor distance must be provided with means to limit the field at the plane of the image receptor to dimensions no greater than those of the image receptor, and to align the center of the X-ray field with the center of the image receptor to within 2 percent of the source-image receptor distance.

[Bd. of Health, Radiation Control Reg. §§ 6.6.1.1-6.6.1.3, eff. 2-28-80]—(NAC A 4-27-84)

NAC 459.620 Other radiographic systems: Special purpose systems. (NRS 459.201) For special purpose X-ray systems:

1. A means must be provided to limit the X-ray field in the plane of the image receptor so that the field does not exceed each dimension of the image receptor by more than 2 percent of the source-image receptor distance when the axis of the X-ray beam is perpendicular to the plane of the image receptor.

2. A means must be provided to align the center of the X-ray field with the center of the image receptor to within 2 percent of the source-image receptor distance.

3. Subsections 1 and 2 may be met with a system that meets the requirements for a general purpose X-ray system as specified in NAC 459.618, or, when alignment means are also provided, may be met with either:

(a) An assortment of removable, fixed-aperture, beam-limiting devices sufficient to meet the requirement for each combination of image receptor size and source-image receptor distance for which the unit is designed with each such device having clear and permanent markings to indicate the image receptor size and source-image receptor distance for which it is designed; or

(b) A beam-limiting device having multiple fixed apertures sufficient to meet the requirement for each combination of image receptor size and source-image receptor distance for which the unit is designed. Permanent, clearly legible markings must indicate the image receptor size and source-image receptor distance for which each aperture is designed and indicate which aperture is in position for use.

[Bd. of Health, Radiation Control Reg. §§ 6.6.1.4-6.6.1.4.3.2, eff. 2-28-80]

NAC 459.622 Devices to control exposures. (NRS 459.201)

1. A means must be provided to terminate the exposure at a preset time interval, preset product of current and time, a preset number of pulses or a preset radiation exposure to the image receptor. In addition:

(a) Termination of exposure must cause automatic resetting of the timer to its initial setting or to zero; and

(b) It must not be possible to make an exposure when the timer is set to a zero or off position if either position is provided.

2. A control must be incorporated into each X-ray system so an exposure can be terminated at any time except for:

(a) Exposure of one-half second or less; or

(b) During serial radiography when means must be provided to permit completion of any single exposure of the series in process.

3. Each X-ray control must be located so that it meets the following criteria:

(a) For stationary X-ray systems, and mobile and portable X-ray systems used as stationary X-ray systems, the control must be permanently mounted in a protected area. The operator shall remain in the protected area during the entire exposure.

(b) For mobile and portable X-ray systems, the exposure switch cord must be at least 6 feet long.

(c) The X-ray control must provide visual indication observable at or from the operator's protected position whenever

X rays are produced. In addition, a signal audible to the operator must indicate that the exposure has termina

4. When an automatic exposure control is provided:

(a) Indication must be made on the control panel when this mode of operation is selected;

(b) When the X-ray tube potential is equal to or greater than 50 kVp, the minimum exposure time for field emission equipment rated for pulsed operation must be equal to or less than a time interval equivalent to two pulses;

(c) The minimum exposure time for all equipment other than that specified in paragraph (b) of this subsection must be equal to or less than one-sixtieth of a second or a time interval required to deliver 5 mAs, whichever is greater;

(d) Either the product of peak X-ray tube potential, current, and exposure time must be limited to not more than 60 kWs per exposure or the product of X-ray tube current and exposure time must be limited to not more than 600 mAs per exposure except when the X-ray tube potential is less than 50 kVp, in which case the product of X-ray tube current and exposure time must be limited to not more than 2000 mAs per exposure; and

(e) A visible signal must indicate when an exposure has been terminated at the limits described in paragraph (d), and manual resetting must be required before further automatically timed exposures can be made.

5. With a timer setting of 0.5 seconds or less, the average exposure period (T) must be greater than or equal to five times the maximum exposure period (T max) minus the minimum exposure period (T min) when four timer tests are performed, for example, T 5 (T max-T min).

6. All timers must be accurate to within ±20 percent of the selected value.

[Bd. of Health, Radiation Control Reg. §§ 6.6.2-6.6.2.2.5, eff. 2-28-80]

NAC 459.624 Other radiographic systems: Source to skin distance; exposure reproducibility; standby radiation. (NRS 459.201**)**

1. All mobile or portable radiographic systems must be provided with a means to limit the source to skin distance to not less than 30 centimeters.

2. The exposure produced must be reproducible to the following criteria: When all technique factors are held constant, the coefficient of variation must not exceed 0.10. This requirement is met if, when four exposures at identical technique factors are made, the value of the average exposure (E) is greater than or equal to five times the maximum exposure (E max) minus the minimum exposure (E min) in accordance with the formula: E 5 (E max-E min).

3. Radiation emitted from the X-ray tube when the exposure switch or timer is not activated must not exceed a rate of 2 milliroentgens per hour at 5 centimeters from any accessible surface of the diagnostic source assembly, with the beam-limiting device fully open.

[Bd. of Health, Radiation Control Reg. §§ 6.6.3-6.6.5, eff. 2-28-80]

Radiation Safety Requirements for Analytical X-ray Equipment

NAC 459.640 Definitions. As used in NAC 459.640 to 459.664, inclusive, unless the context otherwise requires, the words and terms defined in NAC 459.642 to 459.654, inclusive, have the meanings ascribed to them in those sections.

(Supplied in codification)

NAC 459.642 "Analytical X-ray equipment" defined. (NRS 459.201**)** "Analytical X-ray equipment" means equipment used for X-ray diffraction or fluorescence analysis.

[Bd. of Health, Radiation Control Reg. § 8.2.1, eff. 2-28-80]

NAC 459.644 "Analytical X-ray system" defined. (NRS 459.201**)** "Analytical X-ray system" means a group of local and remote components utilizing X rays to determine the elemental composition or to examine the microstructure of materials.

[Bd. of Health, Radiation Control Reg. § 8.2.2, eff. 2-28-80]

NAC 459.646 "Fail-safe characteristics" defined. (NRS 459.201**)** "Fail-safe characteristics" means design features which cause beam port shutters to close or which otherwise prevent emergence of the primary beam upon the failure of a safety or warning device.

[Bd. of Health, Radiation Control Reg. § 8.2.3, eff. 2-28-80]

NAC 459.648 "Local components" defined. (NRS 459.201**)**

1. "Local components" means part of an analytical X-ray system and includes areas exposed to X rays, such as radiation source housings, port and shutter assemblies, collimators, sample holders, cameras, goniometers, detectors and shielding.

2. The term does not include power supplies, transformers, amplifiers, readout devices and control panels.

[Bd. of Health, Radiation Control Reg. § 8.2.4, eff. 2-28-80]

NAC 459.650 "Normal operating procedures" defined. (NRS 459.030**,** 459.201**)** "Normal operating procedures" means operating procedures necessary to accomplish the X-ray procedure being performed, including, without limitation, positioning of the equipment and the object being examined, alignment of the equipment, routine maintenance of the

equipment and the procedures for recording data relating to radiation safety.

[Bd. of Health, Radiation Control Reg. § 8.2.5, eff. 2-28-80]—(NAC A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.652 "Open-beam configuration" defined. (NRS 459.201**)** "Open-beam configuration" means an analytical X-ray system in which a person could accidentally place some part of his body in the primary beam path during a normal operation.

[Bd. of Health, Radiation Control Reg. § 8.2.6, eff. 2-28-80]

NAC 459.654 "Primary beam" defined. (NRS 459.201**)** "Primary beam" means ionizing radiation which passes through an aperture of the source housing by a direct path from the X-ray tube or a radioactive source located in the radiation source housing.

[Bd. of Health, Radiation Control Reg. § 8.2.7, eff. 2-28-80]

NAC 459.656 Scope. (NRS 459.030, 459.201**)** The provisions of NAC 459.640 to 459.664, inclusive, establish requirements, binding upon registrants, for use of analytical X-ray equipment. These requirements are in addition to, and not in substitution for, other applicable requirements of NAC 459.010 to 459.794, inclusive.

[Bd. of Health, Radiation Control Reg. § 8.1, eff. 2-28-80]—(NAC A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.658 Equipment requirements. (NRS 459.201**)**

1. A safety device which prevents the entry of any portion of a person's body into the primary X-ray beam path or which causes the beam to be shut off upon entry into its path must be provided on all open-beam configurations. A registrant or licensee may apply to the Division for an exemption from the requirements of a safety device. Such an application must include:

(a) A description of the various safety devices that have been evaluated;

(b) The reason each of these devices cannot be used; and

(c) A description of the alternative methods that will be employed to minimize the possibility of an accidental exposure, including procedures to ensure that operators and others in the area will be informed of the absence of safety devices.

2. Open-beam configuration must be provided with a readily discernible indication of:

(a) X-ray tube status whether on or off, located near the radiation source housing if the primary beam is controlled in this matter; or

(b) Shutter status whether open or closed, located near each port on the radiation source housing if the primary beam is controlled in this manner.

3. Warning devices must be so labeled that their purpose is easily identified. On equipment installed after February 28, 1980, warning devices must have fail-safe characteristics.

4. Unused ports on radiation source housings must be secured in the closed position in a manner which will prevent casual openings.

5. All analytical X-ray equipment must be labeled with a readily discernible sign bearing the radiation caution symbol and the words:

(a) "CAUTION - HIGH INTENSITY X-RAY BEAM," or words having a similar intent, on the X-ray source housing; and

(b) "CAUTION RADIATION - THIS EQUIPMENT PRODUCES RADIATION WHEN ENERGIZED," or words having a similar intent, near any switch that energizes an X-ray tube if the radiation source is an X-ray tube; or

(c) "CAUTION - RADIOACTIVE MATERIAL," or words having a similar intent, on the source housing if the radiation source is a radionuclide.

6. On open-beam configurations installed after February 28, 1980, each port on the radiation source housing must be equipped with a shutter that cannot be opened unless a collimator or a coupling has been connected to the port.

7. An easily visible warning light labeled with the words "X RAY ON," or words having a similar intent, must be located:

(a) Near any switch that energizes an X-ray tube and be illuminated only when the tube is energized; or

(b) In the case of a radioactive source, near any switch that opens a housing shutter and be illuminated only when the shutter is open.

8. On equipment installed after February 28, 1980, warning lights must have fail-safe characteristics.

9. Each X-ray tube housing must be constructed so that with all shutters closed the leakage radiation measured at a distance of 5 cm from its surface is not capable of producing a dose in excess of 2.5 mrem in 1 hour at any specified tube rating. If radioactive sources are used, corresponding dose limits must not exceed 2 mrem per hour.

10. Each X-ray generator must be supplied with a protective cabinet which limits leakage radiation measured at a distance of 5 cm from its surface so that it is not capable of producing a dose in excess of 0.25 mrem in 1 hour.

[Bd. of Health, Radiation Control Reg. §§ 8.3-8.3.8, eff. 2-28-80]

NAC 459.660 Area requirements. (NRS 459.201)

1. The local components of an analytical X-ray system must be so located and arranged to include sufficient shielding or access control so that no radiation levels exist in any area surrounding the local component group which could result in a dose to a person present therein in excess of the dose limits given in NAC 459.335. For systems utilizing X-ray tubes, these levels must be met at any specified tube rating.

2. Radiation surveys, as required by NAC 459.337, of all analytical X-ray systems sufficient to show compliance with subsection 1 must be performed:

(a) Upon installation of the equipment and at least every 12 months thereafter;

(b) Following any change in the initial arrangement, number or type of local components in the system;

(c) Following any maintenance requiring the disassembly or removal of a local component in the system;

(d) During the performance of maintenance and alignment procedures if the procedures require the presence of a primary X-ray beam when any local component in the system is disassembled or removed;

(e) Any time a visual inspection of the local components in the system reveals an abnormal condition; and

(f) Whenever personnel monitoring devices show a significant increase over the previous monitoring period or when the readings are approaching the radiation dose limits specified in NAC 459.320 to 459.374, inclusive.

3. Radiation survey measurements are not required if a registrant or licensee can demonstrate compliance with subsection 1 to the satisfaction of the Division in some other manner.

4. Each area or room containing analytical X-ray equipment must be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words “CAUTION - X-RAY EQUIPMENT,” or words having a similar intent.

[Bd. of Health, Radiation Control Reg. §§ 8.4-8.4.3, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.662 Operating requirements. (NRS 459.201)

1. Normal operating procedures must be written and made available to all workers on analytical X-ray equipment. No person may operate analytical X-ray equipment in any manner other than that specified in the procedures unless he has obtained written approval of the person responsible for radiation safety.

2. No person may bypass a safety device unless he has obtained the approval of the person responsible for radiation safety. Such an approval must be for a specified period. When a safety device has been bypassed, a readily discernible sign bearing the words “SAFETY DEVICE NOT WORKING,” or words having a similar meaning, must be placed on the radiation source housing and the control panel.

[Bd. of Health, Radiation Control Reg. §§ 8.5-8.5.2, eff. 2-28-80]

NAC 459.664 Personnel requirements. (NRS 459.201)

1. No person may operate or maintain analytical X-ray equipment unless he has received instruction in and demonstrated competence with regard to:

(a) Identification of radiation hazards associated with the use of the equipment;

(b) Significance of the various radiation warning and safety devices incorporated into the equipment, or the reasons they have not been installed on certain pieces of equipment and the extra precautions required in such cases;

(c) Proper operating procedures for the equipment;

(d) Symptoms of an acute localized exposure; and

(e) Proper procedures for reporting an actual or suspected exposure.

2. Each licensee or registrant shall maintain, for inspection by the Division, records of training which demonstrate that the requirements of subsection 1 have been met.

3. Finger or wrist dosimetric devices must be provided to and used by:

(a) Workers on analytical X-ray equipment having an open-beam configuration and not equipped with a safety device; and

(b) Personnel maintaining analytical X-ray equipment if the maintenance procedures require the presence of a primary X-ray beam when any local component in the analytical X-ray system is disassembled or removed.

4. Reported dose values may not be used for the purpose of determining compliance with NAC 459.325 unless evaluated by a qualified expert.

[Bd. of Health, Radiation Control Reg. §§ 8.6-8.6.2.2, eff. 2-28-80]—(NAC A 1-18-94)

Radiation Safety Requirements for X-ray Industrial Radiography

NAC 459.680 Definitions. (NRS 459.030, 459.201) As used in NAC 459.680 to 459.733, inclusive, unless the context otherwise requires, the words and terms defined in NAC 459.684 to 459.7037, inclusive, have the meanings ascribed to them in those sections.

(Supplied in codification; A by Bd. of Health, 4-27-84; 1-21-94; A by Dep’t of Human Resources by R137-01, 5-30-2003)

NAC 459.684 “Cabinet X-ray system” defined. (NRS 459.030, 459.201) “Cabinet X-ray system” means an X-ray system with the X-ray tube installed in a cabinet that, independent of existing architectural structures except for the floor on which it may be placed, is intended to contain at least that portion of the material that is being irradiated, provide

radiation attenuation and exclude personnel from its interior during generation of X radiation. Included all X-ray systems designed primarily for the inspection of carry-on baggage at airline, railroad and bus terminals and in similar facilities. An X-ray tube used within a shielded part of a building, or X-ray equipment which may temporarily or occasionally incorporate portable shielding, is not considered a cabinet X-ray system.

[Bd. of Health, Radiation Control Reg. § 5.3.1.1.1, eff. 2-28-80]—(NAC A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.6843 "Control panel" defined. (NRS 459.030**)** "Control panel" has the meaning ascribed to in NAC 459.422.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

NAC 459.6847 "Direct reading pocket dosimeter" defined. (NRS 459.030**)** "Direct reading pocket dosimeter" means an ion-chamber pocket dosimeter or an electronic personal dosimeter.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

NAC 459.7015 "Storage area" defined. (NRS 459.030, 459.201**)** "Storage area" means any location, facility or vehicle used to store or secure an X-ray system when it is not in use.

(Added to NAC by Bd. of Health, eff. 1-21-94; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.703 "Temporary job site" defined. (NRS 459.030, 459.201**)** "Temporary job site" means any place where sources of X-ray radiation are present and X-ray industrial radiography is performed.

(Added to NAC by Bd. of Health, eff. 1-21-94; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.7033 "X-ray industrial radiography" defined. (NRS 459.030**)** "X-ray industrial radiography" means the examination of the macroscopic structure of materials by nondestructive methods utilizing X-ray sources of radiation.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

NAC 459.7037 "X-ray system" defined. (NRS 459.030**)** "X-ray system" has the meaning ascribed to it in NAC 459.542.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

NAC 459.704 Purpose; applicability. (NRS 459.030, 459.201**)**

1. The provisions of NAC 459.680 to 459.733, inclusive, establish radiation safety requirements for persons engaged in X-ray industrial radiography. These requirements are in addition to and not in substitution for other applicable requirements of NAC 459.010 to 459.950, inclusive.

2. The provisions of NAC 459.680 to 459.733, inclusive, apply to all registrants who engage in X-ray industrial radiography.

[Bd. of Health, Radiation Control Reg. §§ 5.1 & 5.2, eff. 2-28-80]—(NAC A by R084-98, 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R149-07, 1-30-2008)

NAC 459.705 X-ray systems: Training requirements for operators. (NRS 459.030**)**

1. A person who operates an X-ray system for X-ray industrial radiography must:

(a) Be trained in the:

(1) Normal operating procedures for each X-ray system he operates; and

(2) Emergency procedures related to radiation safety for each facility at which he operates; and

(b) Receive the information, instruction or advice set forth in subsection 1 of NAC 459.784.

2. A registrant engaged in X-ray industrial radiography shall make a record of all such training and maintain such records for not less than 3 years after the termination of the employee.

3. As used in this section, "normal operating procedures" has the meaning ascribed to it in NAC 459.650.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

NAC 459.707 X-ray systems: Warning devices. (NRS 459.030**)** An X-ray system used in X-ray industrial radiography must:

1. Have an indication light that indicates when the X-ray system is operating. The light must be clearly visible from any area with access to the X-ray system.

2. If it is a cabinet X-ray system, comply with NAC 459.737.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

NAC 459.708 X-ray systems: Locking systems. (NRS 459.030, 459.201**)**

1. An X-ray system that is located in an unrestricted area must be provided with a lock on the control panel of the system which is designed to prevent unauthorized use of the system or accidental production of radiation.

2. If an X-ray system, other than a cabinet X-ray system, is placed in a storage area, the X-ray system must be locked with the key removed.

[Bd. of Health, Radiation Control Reg. §§ 5.4.2 & 5.4.2.2, eff. 2-28-80]—(NAC A 4-27-84; 1-21-94; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.710 X-ray systems: Securing systems. (NRS 459.030**,** 459.201**)** An X-ray system must be physically secured to prevent tampering or removal by unauthorized personnel.

[Bd. of Health, Radiation Control Reg. § 5.4.3, eff. 2-28-80]—(NAC A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.712 Equipment control: Radiation survey instruments. (NRS 459.030**,** 459.201**)**

1. The registrant shall maintain sufficient calibrated and operable radiation survey instruments at each location where radioactive producing equipment is used to make the radiation surveys as required by NAC 459.337 and 459.737. Instrumentation required by this section must have a range such that 2 millirems (0.02 millisievert) per hour through 1 rem (0.01 sievert) per hour can be measured.

2. Each radiation survey instrument must be calibrated:

(a) Against appropriate energy at intervals not exceeding 6 months and, except for battery changes, after each servicing of the instrument;

(b) So that accuracy within plus or minus 20 percent can be demonstrated at each point checked; and

(c) At two or more widely separated points, other than zero, on each scale, as follows:

(1) For linear scale instruments, at two points located approximately one-third and two-thirds of full scale on each scale;

(2) For logarithmic scale instruments, at the mid-range of each decade and at two points of at least one decade; and

(3) For digital instruments, at 3 points between 2 millirems (0.02 millisievert) per hour and 1 rem (0.01 sievert) per hour.

3. Records of these calibrations must be maintained for at least 3 years after the calibration date for inspection by the Division.

[Bd. of Health, Radiation Control Reg. §§ 5.4.4-5.4.4.3, eff. 2-28-80]—(NAC A 1-18-94; 1-21-94; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.716 Equipment control: Inspection and maintenance. (NRS 459.030, 459.201**)**

1. The registrant shall perform visual and operability checks of the indication lights and warning lights of an X-ray system before use each day the X-ray system is used to ensure that the X-ray system is in good working order. If this check reveals damage to or other problems with the X-ray system or any component thereof, the licensee or registrant shall make a record of the problem.

2. Each licensee shall conduct a program of at least semiannual inspection and routine maintenance of X-ray systems and the components thereof, including, without limitation, interlocks, indication lights, exposure switches, warning lights and cables.

3. Records of inspection and maintenance, and records of defects or problems created pursuant to subsection 1, must be kept for inspection by the Division for not less than 3 years.

4. If any check or inspection conducted pursuant to this section reveals damage to or other problems with an X-ray system or any component thereof, the X-ray system must be removed from service until repairs have been made.

[Bd. of Health, Radiation Control Reg. §§ 5.4.8-5.4.8.2, eff. 2-28-80]—(NAC A 4-27-84; A by Dep'tof Human Resources by R137-01, 5-30-2003)

NAC 459.719 Precautionary procedures: Posting of signs. (NRS 459.030**)** A registrant that engages in X-ray industrial radiology shall post with signs, in the manner set forth in subsection 2 of NAC 459.3555, any pathway leading to a high radiation area and any barrier, including a temporary barrier, that is intended to prevent unauthorized access to a high radiation area.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

NAC 459.7234 Requirements for radiation safety officer. (NRS 459.030**,** 459.201**)**

1. A registrant that engages in the practice of X-ray industrial radiography shall appoint a radiation safety officer for the radiographic operation.

2. A radiation safety officer shall:

(a) Ensure that the daily operation of X-ray industrial radiography is conducted in accordance with the provisions of this chapter.

(b) Establish and oversee operating and emergency procedures and procedures to ensure that the level of radiation is as low as is reasonably achievable. The radiation safety officer shall review these procedures at least once each year to ensure that the procedures conform to the requirements set forth in this chapter.

(c) Approve and oversee all phases of the training program for radiographic personnel to ensure that they receive training in appropriate and effective protection practices.

(d) Ensure that the required surveys are performed and documented in accordance with applicable regulations and that corrective measures are taken if the levels of radiation exceed the levels established in this chapter.

(e) Ensure that monitoring devices are calibrated and used properly by personnel who are performing X-ray industrial radiography and the results of exposures to radiation are properly recorded and notices of those exposures are submitted on a timely basis.

(f) Ensure that the radiographic operations are conducted safely and institute corrective actions if necessary, including terminating the operations in an emergency or if unsafe conditions exist.

(Added to NAC by Bd. of Health, eff. 1-21-94; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.724 Safety requirements for operators of X-ray systems. (NRS 459.030**,** 459.201**)**

1. A registrant shall not permit any person to operate an X-ray system to conduct X-ray industrial radiography unless, at all times during radiographic operations, the person wears a film badge or a thermoluminescence dosimeter and, if the X-ray industrial radiography takes place at a temporary job site or in a room or building that does not meet the requirements of NAC 459.335, a direct reading pocket dosimeter.

2. Direct reading pocket dosimeters must have a range from zero to 200 millirems (2 millisieverts) and be recharged at the start of each shift. Each film badge or thermoluminescence dosimeter must be assigned to and worn by only one person. A film badge must not be replaced less often than once a month. A thermoluminescence dosimeter must not be replaced less often than once every 3 months.

3. Direct reading pocket dosimeters must be read and exposures recorded daily. A person's film badge or thermoluminescence dosimeter must be immediately processed if his pocket dosimeter is discharged beyond its range. Reports received from the film badge or thermoluminescence dosimeter processor and records of the pocket dosimeter readings must be maintained for inspection by the Division for not less than 3 years after the records are made.

4. Each direct reading pocket dosimeter must be checked at periods not to exceed 1 year for response to radiation. To be acceptable, a dosimeter must read within plus or minus 20 percent of the true radiation exposure.

5. If the ion-chamber pocket dosimeter of a person is found to be off scale, or if the electronic personal dosimeter of a person reads greater than 200 millirems (2 millisieverts), and the possibility of radiation exposure cannot be ruled out as the cause:

(a) The film badge or thermoluminescence dosimeter of that person must be sent for processing within 24 hours; and

(b) The person shall not resume work with sources of radiation until a determination of his radiation exposure has been made.

6. For the purposes of this section, a person performing maintenance on an X-ray system shall be deemed to be operating the system if the X-ray beam is on at any time during the performance of the maintenance.

[Bd. of Health, Radiation Control Reg. §§ 5.5-5.5.3.2, eff. 2-28-80]—(NAC A 4-27-84; 1-18-94; 1-21-94, eff. 4-22-94; 1-21-94, eff. 5-22-94; R084-98, 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.733 Safety requirements at temporary job sites, rooms or buildings. (NRS 459.030**,** 459.201**)** A licensee or registrant who is responsible for providing X-ray industrial radiography at a temporary job site or in a room or building that does not meet the requirements of NAC 459.335 shall ensure that the temporary job site, room or building is under constant surveillance and immediate action is taken by the person conducting the surveillance to prevent unauthorized entry into an area with high radiation.

(Added to NAC by Bd. of Health, eff. 1-21-94; A by Dep't of Human Resources by R137-01, 5-30-2003)

Radiation Safety Requirements for Use of Sealed Source for Industrial Radiography

NAC 459.737 Adoption by reference of certain provisions of Code of Federal Regulations; revision of certain terms. (NRS 459.030**,** 459.201**)**

1. In addition to any applicable requirement of NAC 459.010 to 459.794, inclusive, a person licensed by the Division to use a sealed source to engage in industrial radiography shall comply with all applicable requirements of, and may rely on all applicable exclusions or exemptions included in, the provisions of Part 34 of Title 10 of the Code of Federal Regulations, as adopted by reference in this section.

2. Part 34 of Title 10 of the Code of Federal Regulations, as those provisions existed on January 1, 2001, is hereby adopted by reference, subject to the following:

(a) Except as otherwise provided in this section, any reference to "Commission's regulations," "federal regulations" or "NRC regulations" shall be deemed a reference to "NAC 459.010 to 459.950, inclusive";

(b) Except in 10 C.F.R. § 34.20 and as otherwise provided in this section, any reference to the "Commission" or "NRC" shall be deemed a reference to the "Division";

(c) Except as otherwise provided in this section, any reference to "NRC or an Agreement State," "Commission or an Agreement State" or "Commission or by an Agreement State" shall be deemed a reference to "Division, Nuclear Regulatory Commission or an agreement state";

(d) Except as otherwise provided in this section, any reference to "NRC license" shall be deemed a reference to "license issued by the Division pursuant to NAC 459.010 to 459.950, inclusive";

(e) Any reference to "10 CFR part 19" or "10 CFR 19" shall be deemed a reference to "NAC 459.780 to 459.794,

inclusive";

(f) Any reference to "10 CFR part 20" or "10 CFR 20" shall be deemed a reference to "NAC 459.320 to 459.374, inclusive";

(g) Any reference to "10 CFR 20.1601(a)(1)" or "§ 20.1601(a)(1)" shall be deemed a reference to "paragraph (a) of subsection 1 of NAC 459.341";

(h) Any reference to "10 CFR 20.1902" or "§ 20.1902" shall be deemed a reference to "NAC 459.3555";

(i) Any reference to "10 CFR 20.1903" or "§ 20.1903" shall be deemed a reference to "NAC 459.3565";

(j) Any reference to "10 CFR 20.2203" or "§ 20.2203" shall be deemed a reference to "NAC 459.371";

(k) The full text of a sentence that contains any reference to "10 CFR part 21" or "10 CFR 21" shall be deemed omitted;

(l) The full text of a sentence that contains any reference to "10 CFR 30.7," "§ 30.7," "10 CFR 30.9," "§ 30.9," "10 CFR 30.10" or "§ 30.10" shall be deemed omitted;

(m) Any reference to "10 CFR 30.33" or "§ 30.33" shall be deemed a reference to "NAC 459.238";

(n) Any reference to "10 CFR 30.50" or "§ 30.50" shall be deemed a reference to "NAC 459.373";

(o) Any reference to "10 CFR part 34" or "10 CFR 34" shall be deemed a reference to "this section";

(p) Any reference to "10 CFR 34.111" shall be deemed a reference to "NAC 459.120";

(q) Any reference to "10 CFR 150.20" or "§ 150.20" shall be deemed a reference to "NAC 459.210";

(r) In 10 C.F.R. § 34.3, any reference to "offshore platform radiography" shall be deemed a reference to "platform radiography";

(s) In 10 C.F.R. § 34.27(d), any reference to:

(1) "Commission regulations" shall be deemed a reference to "NAC 459.307"; and

(2) "Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001" or "Administrator of the appropriate Nuclear Regulatory Commission's Regional Office listed in appendix D of 10 CFR part 20 of this chapter 'Standards for Protection Against Radiation' " shall be deemed a reference to "Division pursuant to NAC 459.307";

(t) In 10 C.F.R. § 34.43(a)(2), any reference to "Commission" shall be deemed a reference to "Division, Nuclear Regulatory Commission or an agreement state";

(u) In 10 C.F.R. § 34.89, any reference to "Agreement State" shall be deemed a reference to "Nuclear Regulatory Commission or an agreement state";

(v) In 10 C.F.R. § 34.101(a), any reference to "U.S. Nuclear Regulatory Commission, Division of Industrial and Medical Nuclear Safety, Washington, D.C. 20555-0001, with a copy to the Director, Office for Analysis and Evaluation of Operation Data, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001," shall be deemed a reference to "Division";

(w) In 10 C.F.R. § 34.101(c), any reference to "appropriate NRC regional office listed in § 30.6(a)(2) of this chapter" shall be deemed a reference to "Division"; and

(x) In Appendix A to Part 34 of Title 10 of the Code of Federal Regulations:

(1) The reference in item 12 of section I to "Commission and other independent certifying organizations and/or Agreement States" shall be deemed a reference to "Division, Nuclear Regulatory Commission, other independent certifying organizations and agreement states";

(2) The reference in item 1 of section II to "Agreement State regulations" shall be deemed a reference to "regulations of the Nuclear Regulatory Commission or an agreement state"; and

(3) The reference in item 2 of section II to "an Agreement State or a NRC licensee" shall be deemed a reference to "a person that holds a license issued pursuant to NAC 459.010 to 459.950, inclusive, by the Nuclear Regulatory Commission or an agreement state."

3. The following sections of Part 34 of Title 10 of the Code of Federal Regulations, as those provisions existed on January 1, 2001, are not adopted by reference:

(a) Section 34.1;

(b) Section 34.5;

(c) Section 34.8;

(d) Section 34.11;

(e) Section 34.45(a)(9);

(f) Section 34.121; and

(g) Section 34.123.

4. A copy of a publication that contains Part 34 of Title 10 of the Code of Federal Regulations may be obtained by mail from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 979050, St. Louis, Missouri 63197-9000, or by toll-free telephone at (866) 512-1800, at the price of $55.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003; A by Bd. of Health by R149-07, 1-30-2008)

NAC 459.738 Compliance with certain provisions of Code of Federal Regulations regarding program for inspecting and maintaining transport containers. (NRS 459.030**)** A program for inspecting and maintaining transport containers that complies with the provisions of 10 CFR § 34.31(b), as those provisions existed on January 1, 2001, shall be

deemed to comply with the applicable provisions of Part 71 of Title 10 of the Code of Federal Regulations, as those provisions existed on January 1, 2001.

(Added to NAC by Dep't of Human Resources by R137-01, eff. 5-30-2003)

Radiation Safety Requirements for Particle Accelerators

NAC 459.740 Purpose; additional requirements. (NRS 459.030, 459.201)

1. The provisions of NAC 459.740 to 459.752, inclusive, establish procedures for the registration and the use of particle accelerators.

2. In addition to the requirements of NAC 459.740 to 459.752, inclusive, all registrants are subject to the requirements of NAC 459.010 to 459.166, inclusive, 459.320 to 459.374, inclusive, and 459.780 to 459.794, inclusive. Registrants engaged in X-ray industrial radiographic operations are subject to the requirements of NAC 459.680 to 459.733, inclusive, and registrants engaged in the healing arts are subject to the requirements of NAC 459.400 to 459.624, inclusive. Registrants engaged in the production of radioactive material are subject to the requirements of NAC 459.180 to 459.313, inclusive.

[Bd. of Health, Radiation Control Reg. §§ 9.1-9.1.2, eff. 2-28-80]—(NAC A 1-18-94; R084-98, 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003; A by Bd. of Health by R149-07, 1-30-2008)

NAC 459.742 Requirements for registration. (NRS 459.201)

1. No person may receive, possess, use, transfer, own or acquire a particle accelerator except as authorized in a registration issued pursuant to NAC 459.010 to 459.950, inclusive, or as otherwise provided for in those sections. The general procedures for registration of particle accelerator facilities are included in NAC 459.150 to 459.166, inclusive.

2. In addition to the requirements of NAC 459.150 to 459.166, inclusive, a registration application for use of a particle accelerator may be approved only if the Division determines that:

(a) The applicant is qualified by reason of training and experience to use the accelerator in question for the purpose requested in accordance with NAC 459.320 to 459.374, inclusive, 459.740 to 459.752, inclusive, and 459.780 to 459.794, inclusive, in such a manner as to minimize danger to public health and safety or property;

(b) The applicant's proposed or existing equipment, facilities, operating and emergency procedures are adequate to protect health and minimize danger to public health and safety or property;

(c) The issuance of the registration will not be inimical to the health and safety of the public and the applicant satisfies any applicable special requirement in subsection 3;

(d) The applicant has appointed a safety officer in radiation;

(e) The applicant or the applicant's staff has substantial experience in the use of particle accelerators and training sufficient for application to its intended uses;

(f) The applicant has established a safety committee in radiation to approve, in advance, proposals for uses of the particle accelerator, whenever deemed necessary by the Division; and

(g) The applicant has an adequate training program for operators of the particle accelerator.

3. In addition to the requirements in NAC 459.150 to 459.166, inclusive, a registration for use of a particle accelerator in the healing arts will be issued only if the following requirements are met:

(a) The applicant has appointed a medical committee of at least three members to evaluate all proposals for research, diagnostic and therapeutic use of the particle accelerator whenever deemed necessary by the Division. Membership of the committee should include physicians expert in internal medicine, hematology, therapeutic radiology and a person experienced in depth dose calculations and protection against radiation.

(b) The persons designated on the application as the users have substantial training and experience in deep therapy techniques or in the use of particle accelerators to treat humans.

(c) Any person designated on the application as the user is a physician.

[Bd. of Health, Radiation Control Reg. §§ 9.2-9.2.3.3, eff. 2-28-80]—(NAC A 1-18-94; R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.744 Safety requirements: Generally; operation. (NRS 459.201)

1. NAC 459.740 to 459.752, inclusive, establish radiation safety requirements for the use of particle accelerators. These provisions are in addition to, and not in substitution for, other applicable provisions of NAC 459.010 to 459.794, inclusive.

2. The registrant is responsible for ensuring that all requirements of NAC 459.740 to 459.752, inclusive, are met.

3. No registrant may permit any person to act as an operator of a particle accelerator until the person:

(a) Has been instructed in radiation safety and has demonstrated an understanding of it;

(b) Has received a copy of, and instruction in the requirements of, NAC 459.740 to 459.752, inclusive, and the applicable provisions of NAC 459.320 to 459.374, inclusive, and 459.780 to 459.794, inclusive, pertinent registration conditions and the registrant's operating and emergency procedures and has demonstrated an understanding of that material; and

(c) Has demonstrated competence to use the particle accelerator, related equipment and survey instruments which will be employed in his assignment.

4. Members of the safety committee in radiation and the safety officer in radiation must have the authority to terminate the operations at a particle accelerator facility if such action is deemed necessary to protect health and minimize danger to public health and safety or property.

[Bd. of Health, Radiation Control Reg. §§ 9.3-9.3.2.2, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.746 Safety requirements: Expert assistance; shielding; controls; interlock systems. (NRS 459.201)

1. A qualified expert, specifically accepted by the Division, must be consulted in the design of a particle accelerator installation and called upon to perform a radiation survey when the accelerator is first capable of producing radiation.

2. Each installation of a particle accelerator must be provided with such primary and secondary barriers as are necessary for compliance with NAC 459.325 and 459.335.

3. Instrumentation, readouts and controls on the particle accelerator control console must be clearly identified and easily discernible.

4. All entrances into a target room or other area of high radiation must be provided with interlocks that shut down the machine when any entrance is penetrated.

5. After an interlock system has been tripped, it must be possible to resume operation of the accelerator only by manually resetting controls first at the position where the interlock has been tripped and last at the main control console.

6. Each safety interlock must be on a circuit which allows its operation independently of all other safety interlocks.

7. All safety interlocks must be fail safe, that is, designed so that any defect or component failure in the interlock system prevents operation of the accelerator.

8. A scram button or other emergency power cutoff switch must be located and easily identifiable in all designated areas of high radiation. Such a cutoff switch must include a manual reset so that the accelerator cannot be restarted from the accelerator control console without resetting the cutoff switch.

[Bd. of Health, Radiation Control Reg. §§ 9.3.3-9.3.4.6, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.748 Safety requirements: Warning devices; operating procedures. (NRS 459.201)

1. All locations designated as areas of high radiation and all entrances to those locations must be equipped with easily observable flashing or rotating warning lights that operate when, but only when, radiation is being produced.

2. Except in facilities designed for human exposure, each area of high radiation must have an audible warning device which is activated for 15 seconds before the creation of high radiation within the area. The warning devices must be clearly audible in all high radiation areas and all radiation areas.

3. Entrances and pathways leading to high radiation areas must be identified in accordance with NAC 459.355.

4. Particle accelerators, when not in operation, must be secured to prevent unauthorized use.

5. The safety interlock system must not be used to turn off the accelerator beam except in an emergency.

6. All safety and warning devices, including interlocks, must be checked for proper operability at intervals of not more than 3 months. Results of the checks must be maintained at the accelerator facility for inspection by the Division.

7. Diagrams of the electrical circuit of the accelerator and associated interlock systems must be kept current and maintained for inspection by the Division and must be available to the operator at each accelerator facility.

8. If it is necessary to bypass a safety interlock or interlocks intentionally, the bypass must be:

(a) Authorized by the radiation safety committee or radiation safety officer;

(b) Recorded in a permanent log and a notice posted at the accelerator control console; and

(c) Terminated as soon as possible.

9. A copy of the current operating and the emergency procedures must be maintained at the accelerator control panel.

[Bd. of Health, Radiation Control Reg. §§ 9.3.5-9.3.6.6, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.750 Safety requirements: Monitoring. (NRS 459.201)

1. There must be available at each particle accelerator facility appropriate portable monitoring equipment which is operable and calibrated for the appropriate radiations being produced at the facility. This equipment must be tested for proper operation daily and calibrated at intervals of not more than 1 year and after each servicing and repair.

2. A radiation protection survey must be performed and documented by a qualified expert specifically approved by the Division when changes have been made in shielding, operation, equipment or occupancy of adjacent areas.

3. Radiation levels in all high radiation areas must be continuously monitored. The monitoring devices must be electrically independent of the accelerator control and interlock systems and capable of providing a remote and local readout with visual or audible alarms, or both, at the control panel, at the entrance to high radiation areas and at other appropriate locations so that persons entering or present become aware of the existence of the hazard.

4. All area monitors must be calibrated at intervals of not more than 1 year and after each servicing and repair.

5. Whenever applicable, periodic surveys must be made to determine the amount of airborne particulate radioactivity present in areas of airborne hazards.

6. Whenever applicable, periodic smear surveys must be made to determine the degree of contamination in target and other pertinent areas.

7. All area surveys must be made in accordance with the written procedures established by a qualified expert or the radiation safety officer of the particle accelerator facility.

8. Records of all radiation protection surveys, calibration results, instrumentation tests and smear results must be kept

current and on file at each accelerator facility.
[Bd. of Health, Radiation Control Reg. §§ 9.3.7-9.3.7.8, eff. 2-28-80]

NAC 459.752 Safety requirements: Ventilation systems. (NRS 459.201)
1. A means must be provided to ensure that personnel entering any area where airborne radioactivity may be produced will not be exposed to airborne radioactive material in excess of the limits specified in Table I of Appendix B.
2. A registrant, as required by NAC 459.3355, shall not vent, release or otherwise discharge airborne radioactive material to an unrestricted area in excess of the limits specified in Table II of appendix B, except as authorized pursuant to NAC 459.3355. For the purposes of NAC 459.740 to 459.752, inclusive, concentrations may be averaged over a period not greater than 1 year. Every reasonable effort must be made to maintain releases of radioactive material to uncontrolled areas as far below these limits as is reasonably achievable.
[Bd. of Health, Radiation Control Reg. §§ 9.3.8-9.3.8.2, eff. 2-28-80]—(NAC A 1-18-94)

Radiation Safety Requirements for Well Logging

NAC 459.756 Definitions. (NRS 459.201) As used in NAC 459.756 to 459.7745, inclusive, unless the context otherwise requires, the words and terms defined in NAC 459.757 to 459.763, inclusive, have the meanings ascribed to them in those sections.
(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.757 "Field station" defined. (NRS 459.201) "Field station" means a facility where radioactive material may be stored or used and from which equipment is dispatched to temporary jobsites.
(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.7575 "Fresh water aquifer" defined. (NRS 459.201) "Fresh water aquifer" means a geologic formation that is capable of yielding fresh water to a well or spring.
(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.758 "Injection tool" defined. (NRS 459.201) "Injection tool" means a device used for controlled subsurface injection of radioactive tracer material.
(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.7585 "Irretrievable well logging source" defined. (NRS 459.201) "Irretrievable well logging source" means any sealed source containing radioactive material that is pulled off or not connected to the wireline that suspends the source in the well and for which all reasonable effort at recovery has been expended.
(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.759 "Logging assistant" defined. (NRS 459.201) "Logging assistant" means any person who, under the personal supervision of a logging supervisor, handles sealed sources or tracers that are not in logging tools or shipping containers or who performs surveys required by NAC 459.7725.
(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.7595 "Logging supervisor" defined. (NRS 459.201) "Logging supervisor" means any person who uses radioactive material or provides personal supervision in the use of radioactive material at a temporary job site and who is responsible to the licensee for assuring compliance with the requirements of the Division's regulations and the conditions of the license.
(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.7598 "Logging tool" defined. (NRS 459.201) "Logging tool" means a device used below the surface to perform well logging.
(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.7605 "Personal supervision" defined. (NRS 459.201) "Personal supervision" means guidance and instruction by a logging supervisor who:
1. Is physically present at a temporary job site;
2. Is in personal contact with logging assistants; and
3. Can give immediate assistance.
(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.761 "Radioactive marker" defined. (NRS 459.201) "Radioactive marker" means material used for depth determination or direction orientation. The term includes radioactive collar markers and radioactive iron nails.
(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.7615 "Safety review" defined. (NRS 459.201) "Safety review" means a periodic review provided by the licensee for its employees on radiation safety as it relates to well logging. The review may include, as appropriate:

1. The results of internal inspections;
2. New procedures or equipment;
3. Accidents or errors that have been observed; and
4. Safety questions of employees.

(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.7621 "Source holder" defined. (NRS 459.201) "Source holder" means a housing or assembly into which a sealed source is placed to facilitate the handling and use of the source in well logging.

(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.7625 "Subsurface tracer study" defined. (NRS 459.201) "Subsurface tracer study" means the release of unsealed radioactive material or a substance labeled with radioactive material in a single well for the purpose of tracing the movement or position of the material or substance in the well or adjacent formation.

(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.763 "Surface casing" defined. (NRS 459.201) "Surface casing" means a pipe or tube used as a lining in a well to isolate fresh water aquifers from the well.

(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.7635 Purpose and applicability. (NRS 459.201) The provisions of NAC 459.756 to 459.7745, inclusive:

1. Establish radiation safety requirements for persons using sources of radiation for well logging which are in addition to and not in substitution for other applicable requirements of NAC 459.010 to 459.950, inclusive;
2. Apply to all licensees or registrants who use sources of radiation for well logging; and
3. Apply to both radiation machines and radioactive materials unless the context otherwise requires.

(Added to NAC by Bd. of Health, eff. 9-6-88; A by R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.7641 Approval of operation required; submission of information to Division. (NRS 459.201)

1. A person shall not perform a well logging operation without prior approval of the Division.
2. A person who wishes to perform a well logging operation shall submit to the Division a description of the operation which contains:

(a) A designation of the township, range and section in which the well is located;
(b) The distance in feet from the well to two different section lines;
(c) The name or number assigned to the well;
(d) The depth of the well and the surface casing in feet;
(e) The location and distance of any freshwater aquifers within 3 miles of the well which is to be logged and a determination of whether the well penetrates an aquifer; and
(f) The location and identification of any wells within 3 miles of the well which is to be logged that are producing water for human or animal consumption or irrigation and the depths of those wells and the depths of their surface casings.

(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.7645 Agreement with owner or operator of well. (NRS 459.201)

1. A licensee shall not perform well logging with a sealed source before entering into a written agreement with the owner or operator of the well who is employing him.
2. The written agreement required by subsection 1 must identify the person who will assure that:

(a) If a sealed source becomes lodged in the well, a reasonable effort will be made to recover it;
(b) A person will not attempt to recover a sealed source in a manner which, in the licensee's opinion, could result in its rupture;
(c) The radiation monitoring required in NAC 459.773 will be performed;
(d) If the environment or any personnel are contaminated with radioactive material, they will be decontaminated;
(e) If any equipment is contaminated with radioactive material it will be decontaminated before it is released from the job site or released for unrestricted use at the job site; and
(f) If a sealed source is classified as irretrievable after reasonable efforts at recovery have been expended, the following requirements will be carried out within 30 days:
(1) Each irretrievable well logging source must be immobilized and sealed in place with a cement plug;
(2) A mechanical device to prevent inadvertent intrusion on the irretrievable well logging source must be set at some point in the well above the cement plug, unless the cement plug and source are not accessible to any subsequent drilling operations; and
(3) A permanent identification plaque, constructed of long lasting material such as stainless steel, brass, bronze or monel, must be mounted at the surface of the well. The size of the plaque must be at least 7 inches square and 1/8-inch

thick and contain:

(I) The word "CAUTION";

(II) The radiation caution symbol, but the color requirement in NAC 459.355 need not be met;

(III) The date on which the irretrievable source was abandoned;

(IV) The name of the well owner or well operator, as appropriate;

(V) The name of the well and the well identification number or other designation;

(VI) An identification of the sealed source by radionuclide and quantity;

(VII) The depth of the sealed source and depth to the top of the plug; and

(VIII) An appropriate warning such as "DO NOT RE-ENTER THIS WELL."

3. A licensee shall retain a copy of the written agreement required by subsection 1 for 3 years after the completion of the well logging operation.

(Added to NAC by Bd. of Health, eff. 9-6-88; A 1-18-94)

NAC 459.765 Labeling of components and containers; transportation of radioactive material. (NRS 459.201**)**

1. A licensee may not use a source, a source holder or a logging tool that contains radioactive material unless the smallest component that is transported as a separate piece of equipment with radioactive material inside bears a durable, legible and clearly visible marking or label. The marking or label must contain the radiation caution symbol specified in NAC 459.355 without the conventional color requirements, and the wording "CAUTION (or DANGER) RADIOACTIVE MATERIAL."

2. A licensee may not use a container to store radioactive material unless the container has securely attached to it a durable, legible and clearly visible label. The label must contain the radiation caution symbol specified in NAC 459.355 and the wording "CAUTION. (or DANGER.) RADIOACTIVE MATERIAL. NOTIFY CIVIL AUTHORITIES (or NAME OF COMPANY) IF FOUND."

3. A licensee may not transport radioactive material unless the material is packaged, labeled, marked and accompanied with appropriate shipping papers in accordance with regulations of the United States Department of Transportation.

(Added to NAC by Bd. of Health, eff. 9-6-88; A 1-18-94)

NAC 459.7655 Storage of radioactive material; securing packages for transportation. (NRS 459.201**)** A licensee shall:

1. Store each source containing radioactive material in a storage container or transportation package. The container or package must be locked and physically secured to prevent tampering or removal of radioactive material from storage by unauthorized persons.

2. Store radioactive material in a manner which will minimize danger from explosion or fire.

3. Lock and physically secure a transport package containing radioactive material in the transporting vehicle to prevent accidental loss, tampering or unauthorized removal of the radioactive material from the vehicle.

(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.7661 Availability and calibration of instruments to survey and detect radiation. (NRS 459.201**)** A licensee shall:

1. Keep a calibrated and operable radiation survey instrument capable of detecting beta and gamma radiation at each field station and temporary job site to make the radiation surveys required by NAC 459.337 and 459.7725. The radiation survey instrument must be capable of measuring as little as 0.1 milliroentgen per hour and as much as 50 milliroentgens per hour.

2. Have available additional calibrated and operable radiation detection instruments sensitive enough to detect the low radiation and contamination levels that could be encountered if a sealed source ruptured.

3. Have each radiation survey instrument required under subsection 1 calibrated:

(a) At intervals not to exceed 6 months; and

(b) In accordance with subsection 2 of NAC 459.712.

(Added to NAC by Bd. of Health, eff. 9-6-88; A 1-18-94)

NAC 459.7665 Inspection and maintenance of equipment; restrictions on handling sealed sources. (NRS 459.201**)**

1. Each licensee shall visually inspect source holders, logging tools and source handling tools for defects before each use to ensure that the equipment is in good working condition and that the required labeling is present.

2. If defects in equipment are found during the inspection required by subsection 1, the equipment must be removed from service until repaired and a record must be made listing:

(a) The date of inspection;

(b) The name of the licensee who performed the inspection;

(c) The equipment involved;

(d) The defects found; and

(e) The repairs made.

3. The records required by subsection 2 must be retained by the licensee for 3 years after the defect is found.

4. Each licensee must have a program for semiannual visual inspection and routine maintenance of s[redacted]e holders, logging tools, injection tools, source handling tools, storage containers, transport containers and uranium sinker bars to ensure that the required labeling is legible and that no physical damage is visible.

5. If defects are found during the inspection required by subsection 4, the defective equipment must be removed from service until repaired and a record must be made listing:

(a) The date of inspection;

(b) The equipment involved;

(c) The inspection and maintenance operations performed;

(d) The defects found; and

(e) The repairs made.

6. The records required by subsection 5 must be retained by the licensee for 3 years after the defect is found.

7. A licensee shall not remove a sealed source from a source holder or logging tool or perform maintenance on a sealed source or source holder unless a written procedure developed for that purpose has been approved by the Division.

8. If a sealed source is stuck in a source holder a licensee shall not perform any operation to remedy the situation, such as drilling, cutting or chiseling on the source holder, unless the licensee is specifically approved by the Division to perform such an operation.

9. No person shall open, repair or modify any sealed source unless specifically approved by the Division to perform such an operation.

(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.767 Testing sealed sources for leakage. (NRS 459.201**)** A licensee shall test, as provided in NAC 459.307, each sealed source for leakage of radioactive material, at intervals not to exceed 6 months.

(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.7675 Semiannual inventories of radioactive material. (NRS 459.201**)**

1. Each licensee shall conduct a semiannual physical inventory to account for all radioactive material received and possessed under his license. The licensee must retain records of the physical inventory for 3 years after the date of the inventory for inspection by the Division.

2. The physical inventory required by subsection 1 must indicate:

(a) The quantity and kind of radioactive material;

(b) The location of the radioactive material;

(c) The date of the inventory; and

(d) The name of the person conducting the inventory.

3. Physical inventory records may be combined with the records of leak tests required by NAC 459.767.

(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.7681 Records of sources of radiation used. (NRS 459.201**)**

1. Each licensee or registrant shall maintain records of each use of a source of radiation in well logging, which must include:

(a) The make, model and number of sources of radiation used and a serial number or a description of each source of radiation;

(b) The name of the logging supervisor who is responsible for the safe use of sources of radiation;

(c) The names of logging assistants present; and

(d) The location and date of use of the sources of radiation.

2. A licensee or registrant shall make available for inspection by the Division the records required by subsection 1 and must retain the records for 3 years after the date of the recorded use of a source of radiation in a well logging operation.

(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.7685 Criteria for design and performance of sealed sources. (NRS 459.201**)**

1. Except as otherwise provided in subsection 2, a licensee shall not use a sealed source in well logging unless the sealed source:

(a) Is doubly encapsulated;

(b) Contains radioactive material whose chemical and physical forms are as insoluble and nondispersible as practical; and

(c) Has been tested as a prototype and found to maintain its integrity after:

(1) A temperature test in which the prototype is subjected to -40 degrees C for 20 minutes and is subjected to 600 degrees C for 1 hour and then is subjected to a thermal shock test in which the prototype is subjected to a temperature drop from 600 degrees C to 20 degrees C within 15 seconds;

(2) An impact test in which a 5 kg steel hammer measuring 2.5 cm in diameter is dropped from a height of 1 m onto the prototype;

(3) A vibration test in which the prototype is subjected to a vibration ranging from 25 Hz to 500 Hz at 5 g amplitude for 30 minutes;

(4) A puncture test in which a 1 gram hammer attached to pin measuring 0.3 cm in diameter is dropped from a height of 1 m onto the prototype; and

(5) A pressure test in which the prototype is subjected to an external pressure of 24,600 pounds per square inch absolute.

2. The requirements of subsection 1 do not apply to sealed sources that contain radioactive material in gaseous form.

(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.769 Use of sealed source in well without surface casing. (NRS 459.201**)** A licensee may use a sealed source to log a well that does not have a surface casing if:

1. The well does not penetrate a fresh water aquifer; and

2. The licensee follows a procedure which has been approved by the Division for reducing the probability of the source becoming lodged in the well.

(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.7695 Use of radioactive markers and uranium sinker bars. (NRS 459.201**)**

1. A licensee shall not use radioactive markers in wells if the individual markers contain quantities of radioactive material which exceed the quantities specified in NAC 459.188.

2. The use of radioactive markers is subject to the requirements of NAC 459.7675.

3. A licensee shall not use a uranium sinker bar in well logging if the bar is not legibly impressed with the words "CAUTION - RADIOACTIVE-DEPLETED URANIUM" and "NOTIFY CIVIL AUTHORITIES (or COMPANY NAME) IF FOUND."

(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.7701 Logging supervisors and assistants: Qualifications; safety reviews; records. (NRS 459.201**)**

1. A licensee shall not permit a person to act as a logging supervisor until that person:

(a) Has completed training in the subjects set forth in NAC 459.7705.

(b) Has received copies of, and instruction in:

(1) The regulations contained in NAC 459.010 to 459.950, inclusive;

(2) The division license under which the logging supervisor will perform well logging; and

(3) The licensee's operating and emergency procedures required by NAC 459.7715.

(c) Has completed on-the-job training and demonstrated his competence, in a field evaluation, in the use of:

(1) Radioactive materials;

(2) Remote handling tools; and

(3) Radiation survey instruments.

(d) Has demonstrated his understanding of the requirements of paragraphs (a) and (b) of subsection 1 by successfully completing a written test.

2. A licensee shall not permit a person to act as a logging assistant until that person:

(a) Has received instruction in the regulations contained in NAC 459.010 to 459.950, inclusive;

(b) Has received copies of, and instruction in the licensee's operating and emergency procedures required by NAC 459.7715;

(c) Has demonstrated his understanding of the materials listed in paragraphs (a) and (b) by successfully completing a written or oral test; and

(d) Has received instruction appropriate for his job responsibilities in the use of:

(1) Radioactive materials;

(2) Remote handling tools; and

(3) Radiation survey instruments.

3. A licensee shall provide a safety review for logging supervisors and logging assistants at least once during each calendar year.

4. A licensee shall maintain a record of the training and safety review provided each logging supervisor and logging assistant. The records of training must include copies of written tests and dates of oral tests. The records of training must be retained for 3 years after the termination of employment of the supervisor or assistant. Records of the annual safety reviews must list the topics discussed and be retained for 3 years.

(Added to NAC by Bd. of Health, eff. 9-6-88; A by R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.7705 Logging supervisors: Training. (NRS 459.201**)** A licensee shall include the following subjects in the training required by NAC 459.7701:

1. Fundamentals of radiation safety, including:

(a) Characteristics of radiation;

(b) Units of radiation dosage and quantity of radioactivity;

(c) Hazards of exposure to radiation;

(d) Levels of radiation from radioactive material;

(e) Methods of controlling radiation dosage (time, distance and shielding); and

(f) Radiation safety practices, including prevention of contamination and methods of decontamination.
2. Radiation detection instruments, including:
(a) Use, operation, calibration and limitations of radiation survey instruments;
(b) Survey techniques; and
(c) Use of personnel monitoring equipment.
3. Equipment, including:
(a) Operation of equipment, including source handling equipment and remote handling tools;
(b) Storage, control and disposal of licensed material; and
(c) Maintenance of equipment.
4. The requirements of pertinent division regulations.
5. Case histories of accidents in well logging.
(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.771 Logging supervisors: Presence at temporary job sites; surveillance of operations. (NRS 459.201**)**
1. A logging supervisor shall be physically present at a temporary job site when radioactive materials are being handled or are not stored and locked in a vehicle or storage place. The logging supervisor may leave the temporary job site in order to obtain assistance if a source becomes lodged in a well.
2. Except when radiation sources are below ground or in shipping or storage containers, a logging supervisor or other person designated by the logging supervisor shall, during well logging, maintain direct surveillance of the operation to prevent unauthorized entry into a restricted area, as defined in NAC 459.090.
(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.7715 Operating and emergency procedures. (NRS 459.201**)** Each licensee shall develop and follow written operating and emergency procedures that cover:
1. The handling and use of radioactive materials including, if appropriate, the use of sealed sources in wells without surface casing;
2. The use of remote handling tools for handling sealed sources and radioactive tracer material, except low activity calibration sources;
3. Methods and occasions for conducting radiation surveys, including surveys for detecting contamination, as required by NAC 459.7725;
4. Minimizing exposure of personnel to radiation including exposure from inhalation and ingestion of tracer radioactive materials;
5. Methods and occasions for locking and securing stored radioactive materials;
6. Equipment and procedures for monitoring personnel;
7. The transportation of radioactive materials to field stations or temporary jobsites, including:
(a) The packaging of radioactive materials for transport in vehicles;
(b) Placing placards on vehicles when needed; and
(c) Physically securing radioactive materials in transport vehicles during transportation to prevent accidental loss, tampering or unauthorized removal;
8. Picking up, receiving and opening packages containing radioactive materials, in accordance with NAC 459.3585;
9. The use of tracers;
10. Decontamination of the environment, equipment and personnel;
11. Maintenance of records generated by logging personnel at temporary jobsites;
12. The inspection and maintenance of:
(a) Sealed sources;
(b) Source holders;
(c) Logging tools;
(d) Injection tools;
(e) Source handling tools;
(f) Storage containers;
(g) Transport containers; and
(h) Uranium sinker bars,
➥ as required by NAC 459.7665;
13. Actions to be taken if a sealed source is lodged in a well;
14. Notifying proper persons in the event of an accident; and
15. Actions to be taken if a sealed source is ruptured, including:
(a) Actions to prevent the spread of contamination and minimize inhalation and ingestion of radioactive materials; and
(b) Actions to determine the boundaries of radioactive contamination with suitable radiation survey instruments described in NAC 459.7661.
(Added to NAC by Bd. of Health, eff. 9-6-88; A 1-18-94)

NAC 459.7721 Monitoring personnel. (NRS 459.030**,** 459.201**)**

1. A licensee shall not permit a person to act as a logging supervisor or a logging assistant unless that pe wears, at all times during the handling of radioactive materials, either a film badge or a thermoluminescence dosimeter. Each film badge or thermoluminescence dosimeter must be assigned to, and worn by, only one person. Film badges must be replaced at least once every month, and thermoluminescence dosimeters must be replaced at least once every 3 months. After replacement, each film badge or thermoluminescence dosimeter must be promptly processed.

2. A licensee shall provide bioassay services to persons using radioactive materials in subsurface tracer studies if required by his license.

3. A licensee shall retain records of film badge, thermoluminescence dosimeter and bioassay results for inspection until the Division authorizes disposition of the records.

(Added to NAC by Bd. of Health, eff. 9-6-88; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.7725 Surveys of radiation: Requirements; records. (NRS 459.201**)**

1. A licensee shall make radiation surveys of each area where radioactive materials are used and stored.

2. Before transporting radioactive materials, a licensee shall make a radiation survey of the position occupied by each person in the vehicle and of the exterior of each vehicle used to transport the materials.

3. If a sealed source assembly is removed from a logging tool before departure from a temporary job site, the licensee shall confirm that the logging tool is free of contamination by energizing the logging tool detector or by using a survey meter.

4. If a licensee has reason to believe that, as a result of any operation involving a sealed source, the encapsulation of the sealed source could have been damaged by the operation, the licensee shall conduct a radiation survey, including a contamination survey, during and after the operation.

5. A licensee shall make a radiation survey at a temporary job site before and after each subsurface tracer study to confirm the absence of contamination.

6. The results of surveys required by subsections 1 to 5, inclusive, must be recorded and must include:

(a) The date of the survey;

(b) The name of the person making the survey;

(c) The identification of the survey instrument used; and

(d) The location of the survey.

7. A licensee shall retain the records of surveys required by subsection 6, for inspection by the Division, for 3 years after they are made.

(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.773 Control of radioactive contamination. (NRS 459.201**)**

1. If a licensee detects evidence that a sealed source has ruptured or radioactive materials have caused contamination, the licensee shall immediately initiate the emergency procedures required by NAC 459.7715.

2. If contamination results from the use of radioactive material in well logging, a licensee shall decontaminate all work areas, equipment and unrestricted areas.

3. During efforts to recover a sealed source lodged in a well, a licensee shall continuously monitor, with an appropriate radiation detection instrument or logging tool with a radiation detector, the circulating fluids from the well, if any, to check for contamination resulting from damage to the sealed source.

(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.7735 Prohibited acts. (NRS 459.201**)**

1. A licensee shall not use sealed sources in a well that penetrates a fresh water aquifer if the well does not have a surface casing, or if the well has a surface casing that does not isolate the fresh water aquifer from the well.

2. A licensee shall not use sealed sources in any well that is producing water for human or animal consumption, or for irrigation purposes.

3. A licensee shall not release any tracer radioactive materials in a well unless a written authorization has been obtained from the Division for each specific operation.

4. A registrant shall not activate a radiation machine used in a well logging operation so that it emits radiation, unless the radiation machine is in the well and at least 10 feet below the surface of the ground.

(Added to NAC by Bd. of Health, eff. 9-6-88)

NAC 459.7741 Notifying Radiological Health Section of certain events; procedure when sealed source is not retrievable. (NRS 459.201**)**

1. A licensee shall immediately notify the Radiological Health Section of the Division by telephone and subsequently, within 30 days, by confirmatory letter if the licensee knows, or has reason to believe, that a sealed source has been ruptured. The letter must:

(a) Designate the well or other location;

(b) Describe the magnitude and extent of the escape of radioactive materials;

(c) Assess the consequences of the rupture; and

(d) Explain efforts planned or being taken to mitigate the consequences of the rupture.

2. A licensee or registrant shall notify the Radiological Health Section by telephone of:
(a) The theft or loss of a source of radiation;
(b) Overexposures to radiation;
(c) Excessive levels and concentrations of radiation; and
(d) Accidents, as required by NAC 459.369, 459.3695 and 459.371;
3. When a sealed source becomes lodged in a well and it becomes apparent that efforts to recover the sealed source will not be successful, a licensee shall:
(a) Notify the radiological health section by telephone of the circumstances that resulted in the inability to retrieve the source and obtain approval to carry out abandonment procedures;
(b) Advise the well owner or operator of the abandonment procedures set forth in NAC 459.7645;
(c) Ensure that abandonment procedures are completed within 30 days after the sealed source has been classified irretrievable or request an extension of time from the Division to permit completion of the abandonment procedures; and
(d) Make a report in writing to the Division within 30 days after a sealed source has been classified irretrievable. The licensee must send a copy of the report to each state or federal agency that issued permits or otherwise approved of the well drilling operation. The report must contain the following information:
(1) The date of occurrence;
(2) A description of the irretrievable well logging source involved, including the radionuclide and its quantity and chemical and physical form;
(3) The surface location and identification of the well;
(4) The results of efforts to immobilize and seal the source in place;
(5) A brief description of the attempted recovery effort;
(6) The depth of the source;
(7) The depth of the top of the cement plug;
(8) The depth of the well;
(9) Any other information required by the Division, such as a warning statement contained on the permanent identification plaque; and
(10) The names of the state and federal agencies receiving a copy of the report.
(Added to NAC by Bd. of Health, eff. 9-6-88; A 1-18-94)

NAC 459.7745 Maintenance of documents and records. (NRS 459.201**)**
1. Each licensee and registrant shall maintain the following documents and records at the field station:
(a) The regulations contained in NAC 459.010 to 459.950, inclusive;
(b) The license or registration authorizing the use of a source of radiation;
(c) The records of calibration of radiation survey instruments;
(d) Operating and emergency procedures;
(e) The records of leak tests;
(f) Physical inventory records;
(g) Utilization records;
(h) Records of inspection and maintenance;
(i) Training records; and
(j) Survey records.
2. Each licensee and registrant shall maintain the following documents and records at a temporary job site while well logging operations are being conducted:
(a) Operating and emergency procedures;
(b) Evidence of the latest calibration of the radiation survey instruments in use at the site;
(c) The latest survey records required by NAC 459.7725;
(d) The shipping papers for transportation of radioactive material;
(e) The latest leak test record;
(f) A copy of the license or registration authorizing the use of a source of radiation; and
(g) Identification documents for each person who enters the restricted area at the site which indicates his classification as logging supervisor, logging assistant or other category, and states that he is an employee of the licensee or registrant.
(Added to NAC by Bd. of Health, eff. 9-6-88; A by R084-98, 1-26-99; R149-07, 1-30-2008)

Notices; Instructions and Reports to Employees; Inspections

NAC 459.780 Purpose; applicability. (NRS 459.201**)** NAC 459.780 to 459.794, inclusive:
1. Establish requirements for notices, instructions and reports by licensees or registrants to persons engaged in work under a license or registration and options available to those persons in connection with the Division's inspections of licensees or registrants to ascertain compliance with the provisions of chapter 459 of NRS and regulations, orders and licenses issued thereunder regarding radiological working conditions.
2. Apply to all persons who receive, possess, use or transfer sources of radiation licensed by or registered with the Division pursuant to NAC 459.150 to 459.313, inclusive.

[Bd. of Health, Radiation Control Reg. § 10.1, eff. 2-28-80]—(NAC A by R149-07, 1-30-2008)

NAC 459.782 Notices to employees. (NRS 459.201)

1. Each licensee or registrant shall post current copies of the following documents:

(a) The provisions of NAC 459.320 to 459.374, inclusive, and 459.780 to 459.794, inclusive;

(b) The license, certificate of registration, conditions or documents incorporated into the license by reference and amendments thereto;

(c) The operating procedures applicable to work under the license or registration; and

(d) Any notice of a violation involving radiological working conditions, any proposed imposition of a civil penalty or an order issued pursuant to NAC 459.010 to 459.142, inclusive, and any response from the licensee or registrant.

2. If posting of a document specified in paragraphs (a) to (c), inclusive, of subsection 1 is not practicable, the licensee or registrant shall post a notice which describes the document and states where it may be examined.

3. Form NRC-1, "Notice to Employees," must be posted by each licensee or registrant.

4. Any notices, forms or other documents posted must appear in a sufficient number of places to permit persons engaged in work under the license or registration to observe them on the way to or from any particular work location to which the document applies. The documents must be conspicuous and must be replaced if defaced or altered.

5. Documents to be posted pursuant to paragraph (d) of subsection 1 must be posted within 5 working days after receipt of the documents from the Division. The licensee's or registrant's response, if any, must be posted within 5 working days after dispatch from the licensee or registrant. These documents must remain posted for a minimum of 5 working days or until action correcting the violation has been completed, whichever is later.

[Bd. of Health, Radiation Control Reg. §§ 10.2-10.2.5, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.784 Instructions to employees. (NRS 459.201)

1. All persons who in the course of employment are likely to receive in 1 year an occupational dose of more than 100 millirems must:

(a) Be informed of the storage, transfer or use of radioactive material or of radiation;

(b) Be instructed in the problems of health protection associated with exposure to such radioactive material or radiation;

(c) Be instructed in precautions or procedures to minimize exposure and in the purposes and functions of the protective devices which are provided;

(d) Be instructed in and required to comply with the provisions of NAC 459.010 to 459.794, inclusive, and licenses which pertain to the protection of personnel from any exposures to radiation or radioactive materials;

(e) Be informed of their responsibility to report promptly to the licensee or registrant any condition which may cause or lead to a violation of NAC 459.010 to 459.794, inclusive, or licenses or any unnecessary exposure to radiation or radioactive material;

(f) Be instructed in the appropriate response to warnings made in the event of any unusual occurrence or malfunction that may involve exposure to radiation or radioactive material; and

(g) Be advised of the existence of exposure reports to radiation which workers may request pursuant to NAC 459.786.

2. In determining which persons are subject to the requirements of this section, licensees shall consider:

(a) The assigned activities of the person during normal and abnormal situations involving exposure to radiation or radioactive material that can reasonably be expected to occur during the life of the licensed facility; and

(b) The potential problems relating to the protection against radiation and radioactive material present in the licensed facility.

[Bd. of Health, Radiation Control Reg. §§ 10.3-10.3.8, eff. 2-28-80]—(NAC A by R084-98, 1-26-99)

NAC 459.786 Reporting of certain information. (NRS 459.070, 459.201)

1. Data concerning a person's exposure to radiation and the results of any measurements, analyses and calculations of radioactive material deposited or retained in the body of a person must be reported to him, as specified in this section. The information reported must include data and results obtained pursuant to NAC 459.010 to 459.794, inclusive, orders or conditions set forth in the license or registration, as shown in records maintained by the licensee or registrant pursuant to those sections. Each notification and report must:

(a) Be in writing;

(b) Include the name of the registrant or licensee, the name of the person and his social security number;

(c) Include the information relating to the person's exposure; and

(d) Contain the following statement:

> This report is furnished to you pursuant to NAC 459.780 to 459.794, inclusive, adopted by the State Board of Health. You should preserve this report for further reference.

2. Each licensee and registrant shall advise each of its workers annually of their exposure to radiation or radioactive material as shown in records maintained by the licensee or registrant pursuant to NAC 459.3665.

3. At the request of a worker formerly engaged in work controlled by the licensee or the registrant, the licensee or

registrant shall furnish to the worker a report of his exposure to radiation or radioactive material. The report must be furnished within 30 days after the time the request is made or within 30 days after his exposure has been determined, whichever is later. The report must cover, within the period specified in the request, each calendar quarter in which the worker's activities involved exposure to radiation from radioactive material licensed by or radiation machines registered with the Division and must include the dates and locations of work under the license or registration in which the worker participated during this period.

4. When a licensee or registrant is required pursuant to NAC 459.3695 to report to the Division any exposure of a person to radiation or radioactive material, the licensee or registrant shall also provide the person with a report on his exposure data. The report to the person must be transmitted to him before transmittal of the report to the Division.

5. At the request of a worker who is terminating employment with a licensee or registrant in work involving exposure to radiation in a calendar quarter or of a worker who, while employed by another person, is terminating an assignment to work involving exposure to radiation in the licensee's or registrant's facility in a calendar quarter, the licensee or registrant shall provide the worker at the time of the termination a written report specifying the dose of radiation which he received from the operations of the licensee or registrant during the calendar quarter or fraction thereof or shall provide him a written estimate of that dose if the results of personnel monitoring have not been finally determined and are not available at that time. An estimated dose must be clearly indicated as such.

[Bd. of Health, Radiation Control Reg. §§ 10.4-10.4.5, eff. 2-28-80]—(NAC A 1-18-94)

NAC 459.788 Inspections: Generally; presence of representatives of licensees, registrants and employees. (NRS 459.201**)**

1. Each licensee or registrant shall permit the Division, at all reasonable times, an opportunity to inspect materials, machines, activities, facilities, premises and records pursuant to NAC 459.010 to 459.794, inclusive.

2. During an inspection, division inspectors may consult privately with workers, as specified in NAC 459.790. The licensee or registrant may accompany the Division's inspectors during other phases of an inspection.

3. If, at the time of an inspection, a person has been authorized by the workers to represent them during the inspection, the licensee or registrant must notify the inspectors of the authorization and give the workers' representative an opportunity to accompany the inspectors during the inspection of physical working conditions.

4. Each workers' representative must be routinely engaged in work under control of the licensee or registrant and must have received instructions as specified in NAC 459.784.

5. Different representatives of licensees or registrants and workers may accompany the inspectors during different phases of an inspection if there is no resulting interference with the conduct of the inspection, but only one workers' representative at a time may accompany the inspectors.

6. With the approval of the licensee or registrant and the workers' representative, a person who is not routinely engaged in work under control of the licensee or registrant, for example, a consultant to the licensee or registrant or to the workers' representative, may be afforded the opportunity to accompany division inspectors during the inspection of physical working conditions.

7. Notwithstanding the other provisions of this section, division inspectors may refuse to permit accompaniment by any person who deliberately interferes with a fair and orderly inspection. With regard to any area containing proprietary information, the workers' representative for that area must be a person previously authorized by the licensee or registrant to enter that area.

[Bd. of Health, Radiation Control Reg. §§ 10.5-10.5.7, eff. 2-28-80]

NAC 459.790 Inspections: Consultation with employees. (NRS 459.201**)**

1. The inspectors of the Division may consult privately with workers on matters related to their protection from occupational radiation and matters related to applicable provisions of NAC 459.010 to 459.794, inclusive, to the extent that the inspectors deem necessary for the conduct of an effective and thorough inspection.

2. During the course of an inspection, any worker may bring privately to the attention of the inspectors, either orally or in writing, any past or present condition which he has reason to believe may have contributed to or caused any violation of chapter 459 of NRS, NAC 459.010 to 459.794, inclusive, or license condition, or any unnecessary exposure of a person to radiation from licensed radioactive material or a registered radiation machine under the licensee's or registrant's control. Any such notice in writing must comply with the requirements of subsection 1 of NAC 459.792.

3. Subsection 2 is not an authorization to disregard instructions in NAC 459.784.

[Bd. of Health, Radiation Control Reg. §§ 10.6-10.6.3, eff. 2-28-80]

NAC 459.792 Inspections: Requests by employees. (NRS 459.201**)**

1. Any worker or representative of workers who believes that a violation of chapter 459 of NRS, NAC 459.010 to 459.794, inclusive, or license conditions exists or has occurred in work under a license or a registration with regard to radiological working conditions in which the worker is engaged, may request an inspection by giving notice of the alleged violation to the Division. Any such notice must be in writing, set forth the specific grounds for the notice, and must be signed by the worker or representative of the workers. A copy must be given to the licensee or registrant by the Division no later than at the time of inspection except that, upon the request of the worker giving the notice, his name and the name of the persons referred to therein must not be disclosed in any copy or on any record published, released or made

available by the Division, except for good cause shown.

2. If, upon receipt of the notice, the Division determines that the complaint meets the requirements in subsection 1, and that there is a reasonable ground to believe that the alleged violation exists or has occurred, the Division shall cause an inspection to be made as soon as practicable, to determine whether the alleged violation exists or has occurred. Inspections pursuant to this section need not be limited to matters referred to in the complaint.

3. No licensee or registrant may discharge or in any manner discriminate against any worker because the worker has filed any complaint, instituted or caused to be instituted any proceeding under NAC 459.010 to 459.794, inclusive, or has testified or is about to testify in any such proceeding or because the worker, on behalf of himself or others, has exercised any option afforded by NAC 459.780 to 459.794, inclusive.

[Bd. of Health, Radiation Control Reg. §§ 10.7-10.7.3, eff. 2-28-80]

NAC 459.794 Inspections: Informal review. (NRS 459.201**)**

1. If the Division determines, with respect to the complaint under NAC 459.792, that an inspection is not warranted because there are no reasonable grounds to believe that a violation exists or has occurred, the Division must notify the complainant in writing of that determination.

2. The complainant may obtain a review of the determination by submitting a written statement of his position with the State Health Officer, who shall provide the licensee or registrant with a copy of the statement by certified mail, excluding, at the request of the complainant, name of the complainant. The licensee or registrant may submit an opposing written statement of position with the State Health Officer, who shall provide the complainant with a copy of the statement by certified mail. Upon request of the complainant, the State Health Officer may hold an informal conference, pursuant to subsection 2 of NAC 459.136, in which the complainant and licensee or registrant, may orally present their views. An informal conference may also be held at the request of the licensee or registrant, but disclosure of the identity of the complainant may be made only following receipt of his written authorization. After considering all written or oral views presented, the State Health Officer shall affirm, modify or reverse the determination of the Division and furnish the complainant and the licensee or registrant a written notification of the decision and the reason therefore.

3. The informal conference cannot be appealed and is the final remedy available to the complainant or the licensee or registrant pursuant to subsection 3 of NAC 459.136.

4. If the Division determines that an inspection is not warranted because the requirements of subsection 1 of NAC 459.792 have not been met, the Division shall notify the complainant in writing of that determination. Such a determination is without prejudice to the filing of a new complaint meeting the requirements of that subsection.

[Bd. of Health, Radiation Control Reg. §§ 10.8-10.8.4, eff. 2-28-80]—(NAC A 10-30-97)

DISPOSAL OF RADIOACTIVE MATERIAL

General Provisions

NAC 459.800 Definitions. (NRS 459.201**)** As used in NAC 459.800 to 459.950, inclusive, unless the context otherwise requires, the words and terms defined in NAC 459.8005 to 459.8055, inclusive, have the meanings ascribed to them in those sections.

(Added to NAC by Bd. of Health, eff. 4-27-84; A 4-24-86; 6-23-86; 2-18-88; R084-98, 1-26-99)

NAC 459.8005 "Active maintenance" defined. (NRS 459.201**)** "Active maintenance" means any significant activity needed during the period of control after closure of the disposal area to ensure reasonable protection against inadvertent intruders and the migration of radionuclides, including activities such as the pumping and treatment of water from a disposal unit or replacement of the cover of a disposal unit. The term does not include continuing custodial activities such as the repair of fencing, repair or replacement of equipment for detecting radiation, revegetation, minor additions to the depth of soil covering a disposal unit and general upkeep such as mowing grass.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.801 "Buffer zone" defined. (NRS 459.201**)** "Buffer zone" means a portion of the disposal area which is controlled by the licensee and lies under the disposal units or between the disposal units and the boundary of the disposal area.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.8015 "Chelating agent" defined. (NRS 459.201**)** "Chelating agent" means amine polycarboxylic acids, hydroxycarboxylic acids and polycarboxylic acids.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.802 "Disposal" defined. (NRS 459.201**)** "Disposal" means the isolation of radioactive wastes from the biospheres inhabited by man and the plants and animals on which he feeds, directly or indirectly, by emplacement in a disposal area on land.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.8025 "Disposal area" defined. (NRS 459.201) "Disposal area" means the land which is used for the disposal of waste, consisting of disposal units and a buffer zone.
(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.803 "Disposal unit" defined. (NRS 459.201) "Disposal unit" means a discrete portion of a disposal area into which waste is placed for disposal. For disposal near the surface, the unit is usually a trench.
(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.8035 "Explosive material" defined. (NRS 459.201) "Explosive material" means any chemical compound, mixture or device which produces a substantial instantaneous release of gas and heat spontaneously or by contact with sparks or flame.
(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.804 "Hydrogeological unit" defined. (NRS 459.201) "Hydrogeological unit" means a unit or zone of soil or rock which by virtue of its porosity or permeability, or lack thereof, has a distinct influence on the storage or movement of groundwater.
(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.8045 "Inadvertent intruder" defined. (NRS 459.201) "Inadvertent intruder" means a person who occupies a disposal area after its closure and engages in normal activities, such as agriculture or the construction of a dwelling, in which he may unknowingly be exposed to radiation from the waste.
(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.805 "Near the surface" defined. (NRS 459.201) "Near the surface" means within the upper 100 feet (approximately 30 meters) of the earth's surface.
(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.8055 "Waste" defined. (NRS 459.201) "Waste" has the meaning ascribed to it in subsection G of Article 2 of the Rocky Mountain Low-level Radioactive Waste Compact in NRS 459.007.
(Added to NAC by Bd. of Health, eff. 4-27-84)

Licenses for Disposal in Soil of Radioactive Wastes

NAC 459.806 Scope. (NRS 459.201) NAC 459.806 to 459.8225, inclusive:
1. Establish the procedures, criteria, terms and conditions upon which the Division will issue licenses for the disposal in soil of radioactive wastes received from other persons.
2. Do not apply to the disposal of licensed material as provided in NAC 459.3355 and 459.359 to 459.3615, inclusive.
(Added to NAC by Bd. of Health, eff. 4-27-84; A 1-18-94)

NAC 459.8065 General requirements for license. (NRS 459.201) A person who desires to apply for a license to locate, design, construct and operate in this State an area for the disposal in soil of wastes that are received from others and contain or are contaminated with radioactive material must:
1. Comply with the requirements for a specific license set forth in NAC 459.236; and
2. Submit to the Division the necessary general, technical, analytical, organizational and financial information.
(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.807 Collection of environmental data. (NRS 459.201) At the time a person applies for a license, he must have conducted a program to collect basic environmental data on the characteristics of the proposed disposal area, including data about the ecology, meteorology, climate, hydrology, geology, geochemistry and seismology of the area. For those characteristics that are subject to seasonal variation, the data must cover at least a 12-month period.
(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.8075 Application for license: General information. (NRS 459.201) An applicant for a license to operate a disposal area must submit to the Division the following general information:
1. The identity of the applicant, including the full name, address, telephone number and a description of the business or occupation of the applicant, and if the applicant is:
(a) A partnership, the name and address of each partner and the principal location where the partnership does business;
(b) A corporation or an unincorporated association, the state where it is incorporated or organized, the principal location where it does business and the names and addresses of its directors and principal officers; and
(c) Acting as an agent or representative for another person in filing the application, all information required under this subsection which applies to the other person.

2. The qualifications of the applicant, including:

(a) The organizational structure of the applicant, together with a description of lines of authority and assignments of responsibilities, whether in the form of administrative directives, contractual provisions or otherwise;

(b) The technical qualifications, training and experience of the applicant and members of the applicant's staff to engage in the proposed activities, as well as the minimum training and experience required of personnel in the organizational structure described in paragraph (a);

(c) A description of the applicant's training program for personnel; and

(d) The plan to maintain an adequate complement of trained personnel to carry out the receipt, handling and disposal of waste in a safe manner.

3. A description of:

(a) The location of the proposed disposal area;

(b) The general character of the proposed activities;

(c) The types and quantities of waste to be received, possessed and disposed of;

(d) Plans for use of the disposal area for any purposes other than for the disposal of radioactive wastes; and

(e) The proposed facilities and equipment for the disposal area.

4. Proposed schedules for construction, the receipt of waste and the first emplacement of waste at the disposal area.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.808 Application for license: Technical information. (NRS 459.201**)** An applicant for a license to operate a disposal area must submit to the Division the following technical information to demonstrate that the applicant is capable of meeting the objectives and technical requirements of disposal:

1. A description of the natural and demographic characteristics of the disposal area, including geologic, geotechnical, hydrologic, meteorologic, climatologic and biotic features of the disposal area and its vicinity.

2. A description of the design of the disposal area and proposed disposal units. For disposal near the surface, the description must include those features of the design related to:

(a) The infiltration of water;

(b) Integrity of covers for disposal units;

(c) Structural stability of backfill, wastes and covers;

(d) Contact of wastes with standing water;

(e) Drainage;

(f) Closure and stabilization;

(g) Elimination, to the extent practicable, of long-term maintenance;

(h) Prevention of inadvertent intrusion;

(i) Exposure of employees to radiation;

(j) Detection of radiation in the disposal area; and

(k) Adequacy of the size of the buffer zone for detection and prevention of the migration of radionuclides.

3. A description of the principal criteria of the design and their relationship to the objectives of disposal.

4. A description of the natural events or phenomena on which the design is based and their relationship to the principal criteria of the design.

5. A description of codes and standards of construction which the applicant has applied to the design and which will apply to construction of the disposal area.

6. A description of the construction and operation of the disposal area. The description must include, at a minimum the:

(a) Methods of construction of disposal units;

(b) Methods for emplacement of waste;

(c) Procedures and areas for the segregation of waste;

(d) Types of barriers against intruders;

(e) Systems for vehicular traffic and drainage on the site;

(f) Program for control of emplacement by surveying;

(g) Methods and areas of waste storage;

(h) Methods to control the access of surface water and groundwater to the wastes; and

(i) Methods to be employed in the handling and disposal of wastes containing chelating agents or other nonradiological substances which may affect compliance with the objectives of disposal.

7. A description of the plan for closure of the disposal area, including those features of the design which are intended to facilitate closure of the disposal area and to eliminate the need for active maintenance.

8. An identification of those known natural resources at the disposal area whose future exploitation may result in inadvertent intrusion into the wastes after the removal of governmental control of the area.

9. A description of the kind, amount, classification and specifications of the radioactive material proposed to be received, possessed and disposed of at the disposal area.

10. A description of the programs for ensuring reliability:

(a) In the determination of natural characteristics of the disposal area;

(b) During the design, construction, operation and closure of the disposal area; and

(c) For the receipt, handling and emplacement of waste, including audits and managerial controls.

11. A description of the program for:

(a) Control and detection of radioactive effluents to ensure compliance with the requirements of NAC 459.8155;

(b) Control and measurement of exposure of employees to radiation to ensure compliance with the requirements of NAC 459.320 to 459.374, inclusive; and

(c) Control of contamination of personnel, vehicles, equipment, buildings and the disposal area. The programs must govern both routine operations and accidents and the descriptions must include applicable procedures, instrumentation, facilities and equipment.

12. A description of the program for detection and measurement of radionuclides migrating from the disposal area to provide data to evaluate potential effects on health and the environment and the plan for taking corrective measures if a migration of radionuclides is discovered.

13. A description of the administrative procedures that the applicant will apply to control activities at the disposal area.

(Added to NAC by Bd. of Health, eff. 4-27-84; A 1-18-94)

NAC 459.8085 Application for license: Analyses. (NRS 459.201**)** An applicant for a license to operate a disposal area must submit to the Division the following analyses to demonstrate that the objectives of disposal will be met:

1. Pathways of migration of radionuclides which are analyzed in demonstrating protection of the general population from releases of radioactivity must include air, soil, groundwater, surface water, vegetative growth and exhumation by burrowing animals. The analyses must clearly identify and differentiate between the roles performed by the natural characteristics of the disposal area and features of design to isolate and segregate the wastes. The analyses must clearly demonstrate that there is a reasonable assurance that the exposures of persons to the release of radioactivity will not exceed the limits set forth in NAC 459.8155.

2. Analyses of the protection of persons who inadvertently intrude must include a demonstration that there is a reasonable assurance that the requirement of segregation of wastes will be met and that adequate barriers to inadvertent intrusion will be provided.

3. Analyses of the protection of persons during operations must include assessments of expected exposures resulting from routine operations and likely accidents during the handling, storage and disposal of waste. The analyses must provide a reasonable assurance that exposure will be controlled to meet the requirements of NAC 459.320 to 459.374, inclusive.

4. Analyses of the long-term stability of the disposal area and the need for active maintenance after closure must be based upon analyses of active natural processes such as erosion, mass wasting, slope failure, settlement of wastes and backfill, infiltration through covers over disposal areas and adjacent soils and the surface drainage of the disposal area. The analyses must provide a reasonable assurance that active maintenance of the disposal area will not be needed following closure.

(Added to NAC by Bd. of Health, eff. 4-27-84; A 1-18-94)

NAC 459.809 Application for license: Information concerning ownership. (NRS 459.201**)** An applicant for a license to operate a disposal area must submit to the Division the following information concerning ownership of the area:

1. If the disposal area is proposed to be located on land already owned by the Federal Government or this State, a certification by the federal or state agency which owns the land that the agency will:

(a) Accept transfer of the license when the provisions of NAC 459.8215 are met; and

(b) Assume responsibility for custodial care upon closure of the disposal area and observation and maintenance after closure.

2. If the disposal area is proposed to be located on land not owned by the Federal Government or this State, the applicant must submit evidence that arrangements have been made for assumption of ownership in fee by a federal or state agency before the Division issues a license.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.8095 Application for license: Financial information. (NRS 459.201**)** An applicant for a license to operate a disposal area must submit to the Division financial information which is sufficient to demonstrate that the finances of the applicant are adequate to carry out the activities for which the license is sought and meet the financial requirements in NAC 459.8115 to 459.813, inclusive.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.810 General requirements of disposal area. (NRS 459.201**)** A disposal area must be so located, designed, operated, closed and controlled after closure as reasonable to ensure that:

1. Any exposures of persons to radiation are within the limits established in this section and NAC 459.815 and 459.8155;

2. A person is protected who inadvertently intrudes into and occupies the disposal area or comes into contact with the waste at any time after active governmental control over the disposal area is removed; and

3. Long-term stability of the disposal area is achieved and the need for active maintenance of the area following

closure is eliminated to the extent practicable, so that only surveillance, detection of radiation and minor custodial care are required.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.8105 Location and minimum characteristics of disposal area. (NRS 459.201**)**

1. The primary objectives in assessing the location of a disposal area are to determine that the characteristics of the proposed area will ensure the isolation of wastes and the attainment of other long-term requirements.

2. A proposed disposal area must have the following minimum characteristics to be approved for disposal near the surface of low-level radioactive waste:

(a) The disposal area must be capable of being characterized, modeled, analyzed and observed.

(b) A site must be selected so that projected growth of the population and other future developments within the region where the disposal area is to be located are not likely to affect the capability of the disposal area to meet the objectives of disposal.

(c) Geographical areas must be avoided which contain valuable natural resources which are known to exist and which, if exploited, would result in the eventual failure of the disposal area to meet the objectives of disposal.

(d) The disposal area must be generally well drained and free of areas of flooding or frequent accumulations of water in ponds. The disposal of wastes will not be allowed in a 100-year floodplain, coastal area with a high risk of flooding or wetland, as those terms are defined in Executive Order No. 11,988, Floodplain Management Guidelines in 43 FR 6030 (1978).

(e) Drainage areas which are upstream from the site must be minimized to decrease the amount of runoff which could erode or inundate disposal units.

(f) Wastes, when buried, must be sufficiently above the water table so that the intrusion of groundwater, perennial or otherwise, into the waste will not occur. The disposal of waste will not be allowed in the zone of fluctuation of the water table.

(g) The hydrogeological unit in which the site is located must not discharge groundwater to the surface within the disposal area.

(h) The disposal of wastes will not be allowed in geographic areas where tectonic processes such as faulting, folding, seismic activity or vulcanism may occur with a frequency and to an extent that significantly affects the capability of the disposal area to meet the objectives of disposal, or may preclude defensible modeling and the prediction of long-term effects.

(i) The disposal of wastes will not be allowed in geographical areas where surface geologic processes such as mass wasting, erosion, slumping, landsliding or weathering occur with a frequency and to an extent that significantly affects the capability of the disposal area to meet the objectives of disposal, or may preclude defensible modeling and prediction of long-term effects.

(j) The disposal area must not be located where nearby facilities or activities could adversely affect the capability of the area to meet the objectives of disposal or significantly interfere with the detection of radionuclides migrating from the disposal area.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.811 Design of disposal area. (NRS 459.201**)** The design of the disposal area must be directed toward the long-term isolation of wastes and avoidance of the need for active maintenance after closure of the area, and must meet the following criteria:

1. The design and operation of the disposal area must be compatible with the plan for closure and stabilization and lead to closure which reasonably ensures that the objectives of disposal will be met.

2. The disposal area must be designed to complement and improve, where appropriate, the capability of the disposal area's natural characteristics to ensure that the objectives of disposal will be met.

3. Covers must be designed to:

(a) Minimize the infiltration of water to the extent practicable;

(b) Direct percolating or surface water away from the waste; and

(c) Resist degradation by surface geologic processes and biotic activity.

4. Surface features must direct the drainage of surface water away from disposal units at velocities and gradients that will not cause erosion and result in active maintenance of the units in the future.

5. The disposal area must be designed to minimize, to the extent practicable, the contact of:

(a) Water with waste during storage;

(b) Standing water with waste during disposal; and

(c) Percolating or standing water with waste after disposal.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.8115 Financial requirements: Demonstration of ability to obtain necessary money. (NRS 459.201**)** Each applicant must demonstrate to the satisfaction of the Division that it possesses or has a reasonable likelihood of obtaining the necessary money, to cover the estimated costs of conducting all licensed activities over the planned operating life of the disposal area, including costs of construction and disposal.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.812 Financial requirements: Assurances of sufficient money for closure and stabilization. (NRS 459.201)

1. The applicant must provide assurances before the commencement of operations that sufficient money will be available to carry out closure and stabilization of the disposal area, including the decontamination or dismantling of structures in the disposal area, so that after transfer of control over the disposal area to its governmental owner, the need for active maintenance is eliminated to the extent practicable and only minor custodial care, surveillance and detection of radiation are required. These assurances must be based on cost estimates approved by the Division for carrying out the plan for closure and stabilization. The applicant's estimates of cost must take into account the total costs that would be incurred if an independent contractor were hired to perform the work of closure and stabilization.

2. In order to avoid duplication and unnecessary expense, the Division will accept sureties or undertakings that have been consolidated with other undertakings established to meet the requirements of other federal, state or local governmental agencies for decontamination closure and stabilization. The Division will accept these consolidated undertakings only if:

(a) They are considered adequate to satisfy the requirements of this section; and

(b) The portion of the undertaking which covers the closure of the disposal area is clearly identified and committed for use in accomplishing those activities.

3. The licensee must annually submit his sureties or other arrangements to the Division for its review to ensure that sufficient money is available for completion of the plan for closure, assuming that the work will be performed by an independent contractor.

4. The amount of the undertaking must be changed in accordance with the predicted cost of final closure and stabilization. Factors affecting the estimated costs of closure and stabilization include monetary inflation, increases in the amount of disturbed land, changes in engineering plans, any closure and stabilization that has already been accomplished and any other conditions affecting costs. The undertaking must also be sufficient at all times to cover the costs of closure of the disposal units that are expected to be used before the next renewal of the license for the disposal area.

5. The term of any undertaking must be unlimited unless the applicant or licensee can demonstrate that another arrangement, such as the one described in NAC 459.8125, will provide an equivalent level of assurance.

6. Financial arrangements which are generally acceptable to the Division include surety bonds, cash deposits, certificates of deposit, deposits of government securities, escrow accounts, irrevocable letters or lines of credit, trust funds or any combination of them. Other types of arrangements may be approved by the Division. Self-insurance or any other arrangement which essentially constitutes pledging the assets of the licensee will not satisfy the requirement for an applicant that is not a governmental agency, because it provides no additional assurance other than that which already exists through licensing.

7. Liability of a surety or upon another undertaking must remain in effect until the program for closure and stabilization has been completed and approved by the Division and the license has been transferred to the governmental agency which owns the disposal area.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.8125 Financial requirements: Alternative form of assurance. (NRS 459.201)

1. An alternative form of assurance may be provided by an undertaking which covers a specific period, for example, 5 years, but which is automatically renewed unless the party who issues the surety notifies the Division, the beneficiary (the owner of the disposal area) and the principal (the licensee), not less than 90 days before the date for renewal, of its intention not to renew. If the undertaking is not renewed the licensee must submit another surety undertaking within 30 days after notification of this intent. If the licensee fails to provide such a replacement which is acceptable to the Division, the owner of the disposal area may demand payment from the original surety or upon the original undertaking. Proof of forfeiture must not be required to collect this payment, so that, if the licensee does not provide an acceptable replacement within the required time, the amount of the undertaking must be automatically collected prior to its expiration.

2. The conditions described in subsection 1 must be clearly stated in any undertaking whose term is limited and must be agreed to by all parties.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.813 Financial requirements: Contract with governmental agency which owns disposal area. (NRS 459.201)

1. Before the Division issues a license, the applicant must provide for review and approval by the Division of a copy of a periodically modifiable contract between the applicant and the governmental agency which owns the disposal area that ensures sufficient money will be available to cover the costs of inspecting the disposal area, detecting radiation and any required maintenance during the period of governmental control after closure. The Division will review the contract periodically to ensure that changes in the value of money or in technology and operations in the disposal area are reflected in the costs to be covered.

2. Modifications to the contract described in subsection 1 must be agreed to by the Division.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.8135 Variances. (NRS 459.201**)** The Division may, upon application by an interested person or upon its own initiative, grant a variance from any of the requirements of NAC 459.806 to 459.8225, inclusive, which it finds:

1. Is not contrary to law;
2. Will not endanger life or property; and
3. Is in the public interest.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.814 Licenses: Necessary findings. (NRS 459.201**)** The Division will issue a license to receive, possess and dispose of waste containing or contaminated with radioactive material upon finding that:

1. The issuance of the license will not constitute an unreasonable risk to the health and safety of the public;
2. The applicant is qualified by reason of training and experience to carry out the disposal of waste in a manner that protects health and minimizes danger to life and property;
3. The applicant's proposed disposal area, its design and operations, including equipment, facilities and procedures, and the plans for closure and care and control after closure are adequate to protect the public health and safety in that they provide reasonable assurance that:

(a) The standards for protection from radiation as provided in NAC 459.320 to 459.374, inclusive, will be met;
(b) The general population will be protected from releases of radioactivity as provided in NAC 459.8155;
(c) Any inadvertent intruder into the area will be protected as provided in subsection 2 of NAC 459.810; and
(d) The long-term stability of the buried waste and the disposal area will be achieved and will eliminate to the extent practicable the need for active maintenance of the disposal area after closure;

4. The applicant's demonstration provides a reasonable assurance that the applicable technical requirements for disposal will be met;
5. The applicant's proposal for governmental control after closure provides a reasonable assurance that care will be furnished for the length of time necessary to carry out the requirements of subsection 3 and meets the requirements provided in NAC 459.822; and
6. The financial assurances meet the requirements provided in NAC 459.813.

(Added to NAC by Bd. of Health, eff. 4-27-84; A 1-18-94)

NAC 459.8145 Licenses: Conditions. (NRS 459.201**)**

1. The Division shall attach the following conditions to each license to operate a disposal area which it issues:

(a) No license or any right thereunder may be transferred, assigned or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of the license to any person unless the Division finds, after obtaining full information, that the transfer is in accordance with the provisions of NAC 459.198 and gives its consent in writing in the form of an amendment to the license.
(b) The licensee shall submit written statements under oath upon request of the Division at any time before termination of the license to enable the Division to determine whether or not the license should be modified, suspended or revoked.
(c) The license will be transferred to the state agency which owns the land only after the plan for closure approved by the Division is fully carried out, including observation and maintenance after closure.
(d) The licensee and its license are subject to the provisions of chapter 459 of NRS and all rules, regulations and orders of the Division and any subsequent amendments to them, adopted or issued in accordance with the terms of chapter 459 of NRS.
(e) The licensee shall confine its possession and use of radioactive materials to the locations and purposes authorized in its license.
(f) The licensee shall not dispose of radioactive waste until the Division has inspected the disposal area and has found it to be in conformance with the description, design and construction described in the application for a license.

2. The Division may add to any license at the time of its issuance or thereafter, by appropriate regulation or order, additional requirements and conditions with respect to the licensee's receipt, possession and disposal of source material, special nuclear material, by-product material or other radioactive material as it deems appropriate or necessary, in order to:

(a) Protect health or to minimize danger to life or property; or
(b) Require reports and the keeping of records and provide for inspections of activities under the license that may be necessary or appropriate to effectuate the purposes of chapter 459 of NRS and the Division's regulations.

3. The authority to dispose of wastes expires on the date stated in the license except as provided in subsection 1 of NAC 459.820.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.815 Conduct of operations: Standards for protection from radiation. (NRS 459.201**)** The licensee must conduct operations at the disposal area in compliance with the standards for protection from radiation set forth in NAC 459.320 to 459.374, inclusive, except for releases of radioactivity in effluents from the disposal area which are governed by the provisions of NAC 459.8155. The licensee must make reasonable efforts to keep exposures to radiation as low as is

reasonably achievable.
(Added to NAC by Bd. of Health, eff. 4-27-84; A 1-18-94)

NAC 459.8155 Limitations on annual release of radioactive material to general environment. (NRS 459.201)

1. Concentrations of radioactive material which may be released to the general environment in groundwater, surface water, air, soil, plants or animals must not result in an annual dose exceeding an equivalent of 25 millirems to the whole body, 75 millirems to the thyroid and 25 millirems to any other organ of any person.

2. The licensee must make reasonable efforts to keep releases of radioactivity in effluents to the general environment as low as is reasonably achievable.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.816 Segregation and disposal of waste. (NRS 459.201)

1. The licensee shall:

(a) Segregate wastes designated as Class A pursuant to NAC 459.8265 to 459.8305, inclusive, from other wastes by placing them in disposal units which are sufficiently separated from disposal units for the other classes of waste so that any interaction between Class A wastes and other wastes will not result in a failure to meet the objectives of disposal. This type of segregation is not necessary for Class A wastes if they meet the requirements for stability in NAC 459.8305.

(b) Dispose of wastes designated as Class C:

(1) So that the top of the waste is at least 16 feet below the top surface of the cover; or

(2) With barriers against intruders that are designed to protect against an inadvertent intrusion for at least 500 years.

(c) Dispose of all wastes in accordance with the requirements of subsections 2 to 8, inclusive.

2. Wastes must be emplaced in a manner that:

(a) Maintains the integrity of packages during emplacement;

(b) Minimizes the spaces between packages; and

(c) Permits the remaining spaces between packages to be filled.

3. Spaces between packages of waste must be filled with earth or other materials to reduce future subsidence within the fill.

4. Waste must be placed and covered in a manner that limits the rate of radiation at the surface of the cover to levels that, at a minimum, will permit the licensee to comply with all the provisions of NAC 459.335 at the time the license is transferred pursuant to NAC 459.8215.

5. The boundaries and location of each disposal unit must be accurately located and mapped by means of a survey. Disposal units near the surface must be marked in such a way that the boundaries of each unit can be easily identified. Three permanent control points, consisting of survey markers whose location can be found from control stations of surveys of the United States Geological Survey or National Geodetic Survey, must be established on the site to facilitate surveys. The control stations must provide horizontal and vertical controls.

6. A buffer zone must be maintained between any buried waste and the boundary of the disposal area and beneath the disposed waste. The buffer zone must be of adequate dimensions to enable the licensee or other custodian of the disposal area to carry out the provisions of subsection 3 of NAC 459.817 and take mitigative measures if needed.

7. The licensee shall carry out the measures for closure and stabilization set forth in the approved plan for closure of the site after each disposal unit is filled and covered.

8. Current operations of disposal must not adversely affect completed measures for closure and stabilization.

9. Only wastes containing or contaminated with radioactive materials may be disposed of at the disposal area.

(Added to NAC by Bd. of Health, eff. 4-27-84; A 1-18-94)

NAC 459.8165 Records of shipments. (NRS 459.201)

1. After receipt and acceptance of a shipment of radioactive waste, the licensee shall record:

(a) The date of receipt and the condition of the packages of waste as received at the disposal facility;

(b) Any discrepancies between the materials listed on the manifest and those received;

(c) Any evidence of leaking or damaged packages or radiation, or levels of contamination in excess of the limits specified in the regulations of the United States Department of Transportation and the Division;

(d) The traceable shipment manifest number;

(e) A description of any engineered barrier or structural overpack provided for disposal of the waste;

(f) The volume of any pallets, bracing or other shipping or on-site generated materials that are contaminated and are disposed of as contaminated or suspect materials;

(g) The date of disposal of the waste and its location in the disposal area; and

(h) Any other information that may be required by the Division as a condition of the license.

2. The licensee shall retain the records described in subsection 1 until the Division transfers or terminates the license that authorizes the activities described in this section.

3. The licensee shall briefly describe any repackaging performed on the waste included in the shipment and any other information required to be kept by the Division.

4. The licensee shall store, or have stored, the manifest and any other information relating to the receipt and disposal of radioactive waste in a medium that is computer readable, including, without limitation, the information described in:

(a) Paragraphs (a) to (d), inclusive, of subsection 1;
(b) Subsection 3; and
(c) NAC 459.8231, except for:
(1) The telephone numbers of the persons shipping and carrying the waste; and
(2) The certifications of the consignee and the shipper of the waste.

5. As used in this section:

(a) "Engineered barrier" means a man-made structure or device that is used to improve the ability of the disposal facility to meet the requirements set forth in NAC 459.810.

(b) "Medium that is computer readable" means a medium from which information can be transferred into the memory of the computer of the Division.

(c) "Structural overpack" means an enclosure that is used by a single consignor to protect a package of waste, for convenience in the handling of such a package or to consolidate two or more such packages. The term does not include a vehicle used for transportation or a freight container.

(Added to NAC by Bd. of Health, eff. 4-27-84; A by R084-98, 1-26-99)

NAC 459.817 Program of environmental observation. (NRS 459.201**)**

1. During construction and operation of the disposal area, the licensee shall establish and maintain a program of environmental observation to detect radiation. Observations and measurements must be made and recorded to provide data to evaluate potential effects on health and the environment during both the construction and the operation of the disposal area and long-term effects and the need for mitigative measures. The program for detection of radiation must be capable of providing an early warning of releases of radionuclides from the disposal area, before they leave the boundaries of the disposal area.

2. The licensee must have plans for taking corrective measures if the program for detection of radiation detects a migration of radionuclides which indicates that radionuclides may leave the disposal area.

3. After the disposal area is closed, the licensee who is responsible for surveillance of the disposal area shall maintain a program for detection of radiation based on the operating history and the closure and stabilization of the disposal area. The program must be capable of providing an early warning of releases of radionuclides from the disposal area, before they leave the boundaries of the disposal area.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.8175 Authorization of specific alternatives to requirements. (NRS 459.201**)** The Division may, upon request or on its own initiative, authorize specific provisions other than those set forth in NAC 459.807, 459.811, 459.816 and 459.817 for the segregation and disposal of waste and for the design and operation of a disposal area if it finds those specific provisions ensure reasonable compliance with the requirements concerning disposal.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.818 Inspection by Division. (NRS 459.201**)**

1. Each licensee shall permit the Division at all reasonable times to inspect radioactive waste not yet disposed of and the premises, equipment, operations and facilities in which radioactive wastes are received, possessed, handled, treated, stored and disposed of, unless the licensee has a record of satisfactory compliance with the regulations of the United States Department of Transportation, as determined by the Division.

2. Each licensee shall make available to the Division for inspection, upon reasonable notice, records kept by it pursuant to the provisions of NAC 459.3665 and 459.800 to 459.8225, inclusive. An authorized representative of the Division may copy for the Division's use any record required to be kept pursuant to the provisions of NAC 459.010 to 459.950, inclusive.

(Added to NAC by Bd. of Health, eff. 4-27-84; A 6-23-86; 1-18-94; R084-98, 1-26-99; R149-07, 1-30-2008)

NAC 459.8185 Tests by licensee or Division. (NRS 459.201**)** Each licensee shall perform, or permit the Division to perform, any tests the Division deems appropriate or necessary for the administration of NAC 459.800 to 459.8225, inclusive, including tests of:

1. Radioactive wastes and facilities used for the receipt, storage, treatment, handling and disposal of radioactive wastes;

2. Instruments for the detection and measurement of radiation; and

3. Other equipment and devices used in connection with the receipt, possession, handling, treatment, storage and disposal of radioactive waste.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.819 Annual reports. (NRS 459.201**)** Each licensee shall submit to the Division the following annual reports:

1. A report of activities at the disposal area during the preceding year which includes:

(a) A specification of the quantity of each of the principal radionuclides released to unrestricted areas in liquid and in airborne effluents;

(b) The results of the program for detecting radiation;
(c) A summary of the surveys and maintenance of disposal units;
(d) A summary, by class of waste, of activities and quantities of radionuclides disposed of;
(e) Any instance in which observed characteristics of the disposal area or its vicinity were significantly different from those described in the application for a license; and
(f) Any other information the Division may require.

➥ This report must be submitted by the end of the first calendar quarter of each year for the preceding year. If the quantities of radioactive materials which have been released during the reporting period, while disposing of wastes, performing maintenance, measuring the area to detect radiation or during other activities are significantly different from the quantities anticipated in the plans and other documents which were a part of the licensee's application for a license, the report must specifically describe those differences.

2. A copy of its financial report or a certified financial statement in order to update the information for determining financial qualifications.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.8195 Records and reports: Preparation; retention; reproduced copy. (NRS 459.201)

1. Each licensee shall prepare and keep such records and submit such reports in connection with its licensed activities as may be required by the conditions of the license or the regulations or orders of the Division.

2. Each licensee shall keep copies of required records and reports for the period specified in NAC 459.3665 or in the license. If a period of retention is not otherwise specified, these records must be kept and transferred to the persons specified by the Division upon termination of its license unless the Division authorizes their disposition at an earlier date.

3. A record which is required to be kept may be maintained in the form of the original, or a reproduced copy or on microfilm if the reproduced copy or microfilm is capable of producing a copy that is clear and legible at the end of the required period of retention.

4. If different periods of retention are specified for the same type of record in this regulation, a condition of the license or an order of the Division, the longest period specified takes precedence.

(Added to NAC by Bd. of Health, eff. 4-27-84; A 1-18-94)

NAC 459.820 Renewal of license. (NRS 459.201)

1. An application for the renewal of a license must be filed at least 90 days before the date of its expiration and be in accordance with the provisions of NAC 459.8065 and 459.8075 to 459.8095, inclusive.

2. Information contained in applications, reports or other documents previously filed with the Division under the license may be incorporated by reference if the reference is clear and specific.

3. If a licensee has filed a complete application for renewal of a license, the license does not expire until the Division has taken final action on the application for renewal.

4. In determining whether a license will be renewed, the Division will apply the criteria set forth in NAC 459.814.

5. The date of expiration on a license or the denial of an application to renew a license applies only to the licensee's activities above the ground at the disposal area and authority to dispose of waste. Failure to renew a license does not relieve the licensee of responsibility for carrying out the plan for closure of the disposal area including inspection of the area and detection of radiation after closure, and transfer of the license to the governmental agency which owns the disposal area.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.8205 Application to amend license for closure. (NRS 459.201)

1. A licensee who desires to close a disposal area or is directed to do so by the Division shall submit an application to amend the license for closure. An application for closure must be filed at least 90 days before the date proposed for closure.

2. The application for closure must include a final revision and specific details of the plan for closure of the disposal area which was a part of the application for a license. The final revision of the plan for closure must include:
(a) Any additional geologic, hydrologic or other data concerning the disposal area which is pertinent to the long-term containment of wastes emplaced during the operation of the disposal area;
(b) The results of tests or any other analyses relating to back-filling of excavated areas, closure and sealing, migration of waste and interaction with emplaced media, and any other tests or analysis pertinent to the long-term containment of emplaced waste within the disposal area;
(c) Any proposed revision of plans for:
(1) Decontamination or dismantling of facilities above the ground;
(2) Backfilling of excavated areas; or
(3) Stabilization of the disposal area for care after closure; and
(d) Any significant new information regarding the environmental effect of the activities of closure and the long-term performance of the disposal area.

3. Upon review and consideration of an application to amend the license for closure, the Division will amend the license to authorize closure if there is a reasonable assurance that the long-term objectives after closure will be met.

4. Information contained in applications, reports or other documents previously filed with the Division may be incorporated by reference in the application for closure if the reference is clear and specific.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.821 Responsibility of licensee after authorization to close disposal area. (NRS 459.201**)** After receiving authorization from the Division to close the disposal area, the licensee shall continue the program for detection of radiation and inspect and carry out necessary maintenance and repairs at the disposal area until closure of the disposal area is complete and the license is transferred by the Division to the governmental agency which owns the disposal area. Responsibility for the disposal area must remain with the licensee for at least 5 years before the transfer of the license, unless a shorter or longer period for observation and maintenance after closure is established and approved by the Division as a part of the closure plan, based on conditions peculiar to the disposal area.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.8215 Transfer of license to governmental agency after closure. (NRS 459.201**)** Following closure and the period of observation and maintenance after closure, the licensee may apply for an amendment to transfer the license to the governmental agency which owns the disposal area. The license will be transferred when the Division finds that:

1. The closure of the disposal area has been completed in conformance with the licensee's plan for closure as revised and approved by the Division;
2. Reasonable assurance has been provided by the licensee that the requirements for control of radiation have been met;
3. Any money and records necessary for care have been transferred to the owner of the disposal area;
4. The program for detecting radiation after closure is operational and may be carried out by the owner of the disposal area; and
5. The federal or state agency which will assume responsibility for control of the disposal area is prepared to do so and will meet the requirements for control in subsection 5 of NAC 459.814.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.822 Program to control access to area after transfer of control. (NRS 459.201**)** The governmental agency to whom the land is transferred by the licensee shall carry out a program to control physical access to the disposal area following transfer of control of the disposal area. The program of control must also include carrying out a program for detecting radiation at the disposal area, periodic inspections, minor custodial care, other requirements determined by the Division and administration of the money to cover the costs for these activities. The period of control will be determined by the Division, but controls may not be relied upon for more than 100 years after transfer of control of the disposal area to the owner.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.8225 Amendment to terminate license. (NRS 459.201**)**

1. After any period of control by a governmental agency which is necessary to meet the requirements under NAC 459.814, the agency which holds the license may apply for an amendment to terminate the license. The license will be terminated if the Division finds that:

(a) The requirements for control under subsection 5 of NAC 459.814 have been met; and

(b) Any additional requirements resulting from new information developed during the period of control have been met and permanent monuments or markers warning against intrusion have been installed.

2. At the time of termination of the license, the agency must transfer copies of records of the location and the quantity of radioactive wastes contained in the disposal area to the Governor, governing body of the county in which the disposal area is located, governing body of the nearest municipality, their respective planning commissions, if any, and other state, local and federal governmental agencies designated by the Division at the time of termination of the license.

(Added to NAC by Bd. of Health, eff. 4-27-84)

Transportation of Radioactive Waste

NAC 459.8231 Requirements for shipping manifest; exceptions. (NRS 459.030, 459.201**)**

1. A waste generator, waste collector or waste processor who transports or offers for transportation low-level radioactive waste intended for ultimate disposal at a licensed land disposal facility for low-level radioactive waste must, except as otherwise provided in subsection 2, prepare a manifest that includes the information requested on NRC Forms 540, 540A, 541 and 542, as applicable. NRC Forms 540 and 540A must be completed by the waste generator, waste collector or waste processor and must accompany the shipment. Upon agreement between the waste generator, waste collector or waste processor and the consignee, NRC Forms 541, 541A, 542 and 542A may be completed, transmitted and stored in electronic media with the capability of producing legible, accurate and complete records of the forms in the format of a uniform manifest.
2. A licensee is not required to comply with subsection 1 if the licensee ships:

(a) Low-level waste for processing and expects return of the waste before it is disposed of at a licensed land disposal

facility;

(b) Low-level waste that is being returned to the licensee who is the generator; or

(c) Material that is contaminated with radioactivity to a waste processor and the waste becomes the residual waste of the waste processor.

3. A licensee who ships the radioactive waste shall provide the following information on the uniform manifest for each disposal container in the shipment:

(a) The name, address and telephone number of the licensee shipping the waste;

(b) A declaration of whether the licensee is acting as a waste generator, waste collector, waste processor or any combination thereof for the shipment;

(c) The name, address, telephone number and Environmental Protection Agency identification number of the carrier transporting the waste;

(d) The date of the shipment;

(e) The total number of packages and containers;

(f) The total volume and weight of the shipment;

(g) The total radionuclide activity in the shipment;

(h) The identity and activity of each of the radionuclides contained in the shipment, including, without limitation, the activity of any H-3, C-14, Tc-99 and I-129 contained in the shipment;

(i) The total masses of U-233, U-235 and plutonium in the material shipped, including in any special nuclear material;

(j) The total mass of uranium and thorium in the material shipped, including in any source material;

(k) The alphabetic or numeric identification that uniquely identifies each disposal container in the shipment;

(l) A physical description of the disposal container, including, without limitation, the name of the manufacturer and model of any high integrity container;

(m) The volume displaced by the disposal container;

(n) The gross weight of the disposal container and the waste contained therein;

(o) For waste consigned to a disposal facility, the maximum radiation level at the surface of each disposal container;

(p) A physical and chemical description of the waste;

(q) The total percentage by weight of the chelating agent for any waste containing more than 0.1 percent by weight of a chelating agent and the name of the principal chelating agent;

(r) The approximate volume of waste within the container;

(s) The sorbing media or solidification media, if any, and the identity of the vendor and name of the brand of any solidification media;

(t) For discrete waste types, including, without limitation, activated materials, contaminated equipment, mechanical filters, sealed sources and devices and wastes in solidification media or stabilization media, the identities and activities of individual radionuclides associated with or contained in the waste types;

(u) The total radioactivity within each container;

(v) For waste that is consigned to a disposal facility, the classification of the waste as set forth in NAC 459.8265; and

(w) The name of any waste that does not meet the structural stability requirements as set forth in NAC 459.8305.

4. A licensee who ships radioactive waste that is delivered without a disposal container must provide the following information on the manifest:

(a) The approximate volume and weight of the waste;

(b) A physical and chemical description of the waste;

(c) The total percentage by weight of the chelating agent for any waste containing more than 0.1 percent by weight of a chelating agent and the name of the principal chelating agent;

(d) For waste that is consigned to a disposal facility:

(1) The classification of the waste as set forth in NAC 459.8265; and

(2) The maximum radiation levels at the surface of the waste;

(e) The name of any waste that does not meet the structural stability requirements as set forth in NAC 459.8305; and

(f) The identities and activities of individual radionuclides contained in the waste, the masses of U-233, U-235 and plutonium in the special nuclear material and the masses of uranium and thorium in the source material.

5. A licensee who ships disposal containers of mixtures of waste originating from different waste generators or mixtures of waste shipped without a container for which portions of the mixture within the shipment originate from different waste generators shall provide the following information on the manifest:

(a) For homogeneous mixtures of waste, including, without limitation, ash from an incinerator, the waste description applicable to the mixture and the volume of the waste attributed to each waste generator.

(b) For heterogeneous mixtures of waste, including, without limitation, the combined products from a large compactor, the identification of each waste generator contributing waste to the disposal container.

(c) For discrete waste types, including, without limitation, activated materials, contaminated equipment, mechanical filters, sealed sources and devices, and wastes in solidification media or stabilization media, the identities and activities of individual radionuclides contained in the waste types.

(d) For each waste generator:

(1) The volume of waste within the disposal container;

(2) A physical and chemical description of the waste, including, without limitation, the solidification media, if any;

(3) The total percentage by weight of the chelating agent for any disposal container containing [redacted]e than 0.1 percent by weight of a chelating agent and the name of the principal chelating agent;

(4) The sorbing media or solidification media, if any, and the identity of the vendor and name of the brand of any solidification media if the media is claimed to meet stability requirements as set forth in NAC 459.8305; and

(5) The identities and activities of any radionuclides contained in the waste, the masses of U-233, U-235 and plutonium in special nuclear material and the masses of uranium and thorium in source material in the waste.

6. A licensee who ships radioactive waste shall ensure that an authorized representative certifies, by signing and dating the shipment manifest, that the materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the United States Department of Transportation and the Division. By signing the certification, a waste collector certifies that the collected waste has not been tampered with in any manner that would invalidate the certification of the authorized representative of the licensee.

7. A licensee who ships radioactive waste shall provide on the required Environmental Protection Agency forms any information regarding hazardous, medical or other waste that is required to comply with Environmental Protection Agency regulations, as codified in 40 C.F.R. Parts 260, 261 and 263, as those provisions existed on January 26, 1999. The required Environmental Protection Agency forms must accompany the uniform manifest required by this section.

8. Copies of the manifests required by this section may be legible carbon copies, photocopies or computer printouts that reproduce the data in the format of the uniform manifest. NRC Forms 540, 540A, 541, 541A, 542 and 542A and their instructions may be obtained at no charge from the Information and Records Management Branch, Office of Information Resources Management, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, telephone (301) 415-7232.

9. As used in this section:

(a) "EPA identification number" means the number received pursuant to 40 C.F.R. Part 263, as those provisions existed on January 26, 1999.

(b) "High integrity container" means a container used to meet the structural stability requirements of NAC 459.830 and the United States Department of Transportation requirements for shipping a package that contains a type A quantity of radioactive waste.

(c) "Waste description" means the physical, chemical and radiological description of the waste that is required on NRC Form 541.

(Added to NAC by Bd. of Health by R084-98, eff. 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.8235 Procedure for transfer to land disposal facility, licensed waste collector or licensed waste processor. (NRS 459.030**,** 459.201**)**

1. Any licensee who transfers radioactive waste to a land disposal facility or to a licensed waste collector shall comply with all the requirements of this section. Any licensee who transfers waste to a licensed waste processor for processing, treatment or repackaging shall comply with the requirements of paragraphs (d) to (i), inclusive, of subsection 2.

2. A licensee shall:

(a) Prepare all wastes so that they are in compliance with the permitted classes of waste set forth in NAC 459.8265 and 459.830 and meet the requirements for stability set forth in NAC 459.8305;

(b) Label each disposal container or transport package to identify whether it contains Class A, Class B or Class C waste, as set forth in NAC 459.8265 and 459.827;

(c) Conduct a program of inspection, including managerial evaluation of audits, to ensure that the wastes conform to permitted classes and the requirements for physical form and packaging;

(d) Prepare the NRC uniform low-level radioactive waste manifest that contains the required information and certifications;

(e) Forward or electronically transfer a copy of the NRC uniform low-level radioactive waste manifest to the intended consignee so that the receipt of the manifest precedes the shipment or so that the manifest is delivered to the consignee with the waste at the time the waste is transferred to the consignee;

(f) Include NRC Form 540 or NRC Form 540A, as applicable, with the shipment;

(g) Receive acknowledgment of the receipt of the shipment in the form of a signed copy of NRC Form 540;

(h) Retain or electronically store a copy of the uniform low-level radioactive waste manifest and documentation of the acknowledgment of receipt as the required record of transfer of the licensed material; and

(i) For a shipment or part of a shipment for which an acknowledgment of its receipt has not been received within 20 days after the shipping date, conduct the investigation required pursuant to NAC 459.8255.

(Added to NAC by Bd. of Health, eff. 4-27-84; A by R084-98, 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.824 Duties of waste collector who collects and handles only prepackaged waste. (NRS 459.030**,** 459.201**)** A waste collector who collects and handles only prepackaged waste shall:

1. Acknowledge receipt of the waste from the shipper by returning a signed copy of NRC Form 540 within 1 week after receiving the waste.

2. Prepare a new shipping manifest to reflect consolidated shipments that meets the requirements of NAC 459.8231. The waste collector shall ensure that for each container of waste in the shipment NRC Form 540 identifies the generator of that container of waste.

3. Comply with the provisions of paragraphs (e) to (i), inclusive, of subsection 2 of NAC 459.8235.

4. Notify the shipper and Division when any shipment or part of a shipment has not arrived within 60 days after receipt of an advanced manifest unless the waste collector is notified by the shipper that the shipment has been cancelled.

(Added to NAC by Bd. of Health, eff. 4-27-84; A by R084-98, 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.8245 Duties of waste processor who processes, treats or repackages waste. (NRS 459.030**,** 459.201**)** A waste processor who processes, treats or repackages wastes shall:

1. Acknowledge receipt of the waste from the shipper by returning a signed copy of NRC Form 540 within 1 week after receipt of the waste.

2. Prepare a new shipping manifest which contains the required information and certificate, the preparation of which is acknowledgment that the waste processor is responsible for the waste. For each container of waste in the shipment, the manifest must set forth the waste generator, the volume of preprocessed waste and any other information required pursuant to NAC 459.8231.

3. Prepare all wastes so that the waste is classified according to NAC 459.8265 and meets the requirements of NAC 459.830 and 459.8305.

4. Label each package of waste to identify whether it is Class A, Class B or Class C waste in accordance with NAC 459.8265.

5. Conduct a program of inspection, including a managerial evaluation of audits, to ensure that the waste conforms to permitted classes and the requirements for physical form and packaging.

6. Forward or electronically transfer a copy of the uniform low-level radioactive waste manifest to the consignee so that the manifest is received before or at the same time the shipment is delivered to the consignee.

7. Include NRC Form 540 or Form 540A, as applicable, with the shipment.

8. Receive acknowledgment of the receipt of the shipment in the form of a signed copy of NRC Form 540.

9. Retain or electronically store a copy of the uniform low-level radioactive waste manifest and documentation of acknowledgment of receipt as the required record of transfer of licensed material.

10. For any shipment or part of a shipment for which an acknowledgment of its receipt has not been received within 20 days after the shipping date, conduct the investigation required by NAC 459.8255.

11. Notify the shipper and Division when any shipment or part of a shipment has not arrived within 60 days after receipt of an advanced manifest, unless the waste processor is notified by the shipper that the shipment has been cancelled.

(Added to NAC by Bd. of Health, eff. 4-27-84; A by R084-98, 1-26-99; A by Dep't of Human Resources by R137-01, 5-30-2003)

NAC 459.825 Labels identifying classification of waste. (NRS 459.201**)** A generator of waste or broker who processes, treats or repackages waste must affix a label to each package of waste before shipment to identify it as containing Class A, Class B or Class C waste.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.8255 Investigation and report if receipt not acknowledged. (NRS 459.201**)** Any shipment or part of a shipment of waste which is delivered by a shipper to an authorized recipient and for which acknowledgment of its receipt is not returned within 20 days after the shipping date must be:

1. Investigated by the shipper, including tracing of the shipment; and

2. Reported by the shipper to the Division when the investigation is begun, and reported in writing to the Division within 2 weeks after completion of the investigation.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.826 Duties of operator of land disposal facility. (NRS 459.201**)** An operator of a land disposal facility shall:

1. Acknowledge receipt of the waste within 1 week after its receipt by returning a signed copy of NRC Form 540 to the shipper. The shipper to be notified is the licensee who last possessed the waste and transferred the waste to the operator. The returned copy or electronic copy of NRC Form 540 must indicate any discrepancies between materials listed on NRC Form 540 and materials received.

2. Maintain copies of all completed manifests and electronically store the information required pursuant to NAC 459.8165 until the Division authorizes their disposition.

3. Notify the shipper and the Division when any shipment or part of a shipment has not arrived within 60 days after receipt of an advance manifest, unless the operator of the land disposal facility is notified by the shipper that the shipment has been cancelled.

4. Notify the Division within 5 days after receipt of a shipment of any discrepancies between the materials listed on NRC Form 540 and the materials received.

(Added to NAC by Bd. of Health, eff. 4-27-84; A by R084-98, 1-26-99)

Classification of Radioactive Waste

NAC 459.8265 Characteristics of each class. (NRS 459.201**)** Radioactive waste is classified according to its concentration of radionuclides and the following characteristics:

1. Class A waste is waste that meets the minimum requirements for packaging. Class A waste must be segregated from other classes of waste unless it meets the requirements for stability, in which case it does not have to be segregated.
2. Class B waste is waste that meets more rigorous requirements on form to ensure stability after disposal. Class B waste must meet the minimum requirements for physical form and packaging and for stability.
3. Class C waste is waste that not only meets more rigorous requirements on form to ensure stability but also requires additional measures at the disposal area to protect against inadvertent intrusion. Class C waste must meet the minimum requirements for physical form and packaging and for stability.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.827 Waste containing long-lived radionuclides. (NRS 459.201**)** If the radioactive waste contains only the long-lived radionuclides listed in Table 1, classification must be determined as follows:

TABLE 1

Radionuclide	Concentration in curies/cubic meter
C-14	8
C-14 in activated metal	80
Ni-59 in activated metal	220
Nb-94 in activated metal	0.2
Tc-99	3
I-129	0.08
Alpha emitting transuranic radionuclides with half-life greater than 5 years	100*
Pu-241	3,500*
Cm-242	20,000*

* Units are nanocuries per gram

1. If the concentration does not exceed 0.1 times the value in Table 1, the waste is Class A;
2. If the concentration exceeds 0.1 times the value in Table 1, the waste is Class C; and
3. If the concentration exceeds the value in Table 1, the waste is not acceptable for burial at any state-owned disposal area.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.8275 Waste containing short-lived radionuclides. (NRS 459.201**)**

1. If the radioactive waste does not contain any of the long-lived radionuclides listed in Table 1, classification must be determined based on the concentrations of short-lived radionuclides listed in Table 2. If a radionuclide is not listed in Table 2, it does not need to be considered in determining the class of the waste.

TABLE 2

Radionuclide	Concentration in curies/cubic meter		
	Column 1	Column 2	Column 3
Total of all radionuclides with less than 5-year half-life	700	**	**
H-3	40	**	**
Co-60	700	**	**
Ni-63	3.5	70	700
Ni-63 in activated metal	35	700	7000
Sr-90	0.04	150	7000
Cs-137	1	44	4600

** There are no limits established for these radionuclides in Class B or C wastes. Practical considerations such as

the effects of external radiation and the internal generation of heat on the transportation, handling and disposal of the waste will limit the concentrations for these wastes. These wastes are Class B unless the concentrations of other radionuclides in Table 2 result in the waste being Class C independently of these radionuclides.

2. If the concentration does not exceed the value in Column 1, the waste is Class A.

3. If the concentration exceeds the value in Column 1, but does not exceed the value in Column 2, the waste is Class B.

4. If the concentration exceeds the value in Column 2, but does not exceed the value in Column 3, the waste is Class C.

5. If the concentration exceeds the value in Column 3, the waste is not acceptable for burial at a state-owned disposal area.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.828 Waste containing mixture of long-lived and short-lived radionuclides. (NRS 459.201**)** If the radioactive waste contains a mixture of long-lived and short-lived radionuclides, some of which are listed in Table 1 and some of which are listed in Table 2, classification must be determined as follows:

1. If the concentration of a radionuclide listed in Table 1 is less than 0.1 times the value listed in Table 1, the class must be determined by the concentration of radionuclides listed in Table 2; and

2. If the concentration of a radionuclide listed in Table 1 exceeds 0.1 times the value listed in Table 1, the waste is Class C if the concentration of radionuclides listed in Table 2 does not exceed the value shown in Column 3 of Table 2.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.8285 Absence of listed radionuclides. (NRS 459.201**)** If the radioactive waste does not contain any of the radionuclides listed in Tables 1 and 2, it is Class A.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.829 Waste containing mixture of radionuclides: Computation of classification. (NRS 459.201**)** If the waste contains a mixture of radionuclides, the classification must be determined by dividing each nuclide's concentration by its limit in the appropriate table and adding the resulting quotients. In computing this sum, all limits must all be taken from the same column of the same table. The sum of the fractions for the column must be less than 1.0 if the class of the waste is to be determined by that column. For example, a package of waste contains Sr-90 in a concentration of 50 Ci/m^3 and Cs-137 in a concentration of 22 Ci/m^3. Since the concentration of one of the nuclides exceeds the value in Column 1 of Table 2, they must be compared to the values in Column 2. The computations of the fractions are: for Sr-90, 50/150 = 0.33; for Cs-137, 22/44 = 0.5. The sum of the fractions is: 0.33 + 0.5 = 0.83. Since the sum is less than 1.0, the waste is Class B.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.8295 Determination of concentration of radionuclide. (NRS 459.201**)**

1. The concentration of a radionuclide may be determined by an indirect method such as the use of a scaling factor which relates the inferred concentration of one radionuclide to the concentration of another that is measured, or by radionuclide material accountability, if there is a reasonable assurance that the indirect method can be correlated with actual measurements.

2. The concentration of a radionuclide may be averaged over the volume of the waste, or over the weight of the waste if the concentration is expressed as nanocuries per gram.

(Added to NAC by Bd. of Health, eff. 4-27-84)

NAC 459.830 Requirements for physical form and packaging for all classes. (NRS 459.201**)**

1. The minimum requirements for physical form and packaging for all classes of waste are as follows:

(a) Radioactive wastes must be packaged in conformance with the conditions of the license issued to the operator of the disposal area to which the waste will be shipped, and if the conditions in the license for disposal are more restrictive than the provisions of NAC 459.8231 to 459.8305, inclusive, the conditions in the license must govern;

(b) Wastes must not be packaged for disposal in cardboard or fiberboard boxes;

(c) Liquid waste must be packaged in absorbent material sufficient to absorb twice the volume of the liquid;

(d) Solid waste containing a liquid must contain as little free standing, noncorrosive liquid as is reasonably achievable, but in no case may the amount of the liquid exceed 1 percent of the volume;

(e) Waste must not be readily capable of detonation or of explosive decomposition or reaction at normal pressures and temperatures or capable of explosive reaction with water;

(f) Waste must not contain or be capable of generating quantities of toxic gases, vapors or fumes which are harmful to persons transporting, handling or disposing of the waste, except for radioactive gaseous waste which is packaged in accordance with the provisions of paragraph (h);

(g) Waste must not be pyrophoric unless the pyrophoric materials contained in the waste are treated, prepared and

packaged to be nonflammable;

(h) Waste in a gaseous form must be packaged at a pressure that does not exceed 1.5 atmospheres at 20 degrees C and an amount of activity that does not exceed 100 curies per container;

(i) Waste containing hazardous, biological, pathogenic or infectious material must be treated to reduce to the maximum extent practicable the potential hazard from the nonradiological materials; and

(j) Waste containing radium 226 must be in the form of a sealed source and packaged in a specification 2 R inside containment vessel or its equivalent before it can be accepted for disposal at the state-owned disposal area.

2. As used in this section, "pyrophoric" means capable of spontaneous ignition and includes any:

(a) Liquid that ignites spontaneously in dry or moist air at or below 130 degrees F (54.5 degrees C).

(b) Solid material, other than one classed as an explosive, which under normal conditions may cause a fire through friction or heat retained from manufacturing or processing, or which can be readily ignited and when ignited burns so vigorously and persistently as to create a serious hazard to persons or property while being transported, handled or disposed of. Pyrophoric solid materials include spontaneously combustible and water-reactive materials.

(Added to NAC by Bd. of Health, eff. 4-27-84; A 6-23-86; R084-98, 1-26-99)

NAC 459.8305 Minimum requirements for stability of wastes. (NRS 459.201**)** The minimum requirements for the stability of wastes are as follows:

1. Waste must have structural stability and generally maintain its physical dimensions and its form under the expected conditions of disposal and its internal factors such as the effects of radiation and chemical changes. Structural stability may be provided by the form of the waste, the processing of the waste to a stable form or by placing the waste in a container for disposal or other structure that provides stability after disposal.

2. Liquid wastes or waste containing liquid must be converted into a form that contains as little free standing and noncorrosive liquid as is reasonably achievable, but in no case may the liquid exceed 1 percent of the volume of the waste if the waste is in a container for disposal which is designed to ensure stability, or 0.5 percent of the volume of the waste if the waste is processed to a stable form.

3. Any space within the waste or between the waste and its package must be reduced to the extent practicable.

(Added to NAC by Bd. of Health, eff. 4-27-84)

Disposal of Waste in State-Owned Area

NAC 459.850 Definitions. (NRS 459.201**)** As used in NAC 459.850 to 459.950, inclusive, unless the context otherwise requires:

1. "Authorized inspector" means the Division or a third party designated by the Division to inspect the program of an applicant or licensee for packaging and transporting low-level radioactive waste.

2. "Broker" means any person other than a common or contract carrier who collects or receives radioactive waste from a producer of radioactive waste and who charges for the service of disposing of the waste at the state-owned disposal area or who takes responsibility for packaging radioactive waste or labeling containers in conformance with applicable regulations as a service to the producer of the waste.

[Bd. of Health, Disposal of Radioactive Waste Reg. §§ 1.1-1.3, eff. 8-21-81]—(NAC A 4-24-86; 6-23-86)

NAC 459.860 Severability. (NRS 459.201**)** If any of the provisions of NAC 459.850 to 459.950, inclusive, or any application thereof to any person, thing, or circumstance is held invalid, it is intended that such invalidity not affect the remaining provisions, or their application, that can be given effect without the invalid provision or application.

[Bd. of Health, Disposal of Radioactive Waste Reg. § 8.1, eff. 8-21-81]

NAC 459.865 License required; effect of license. (NRS 459.201**)**

1. Any shipper or producer of radioactive waste or any broker receiving such waste from another person for the purpose of disposal who desires to dispose of that waste at the state-owned disposal area near Beatty, Nevada, must obtain a license from the Division before shipping the waste to the disposal area.

2. The issuance of a license pursuant to NAC 459.850 to 459.950, inclusive, is merely evidence of a revocable privilege and does not expressly or impliedly create a property right or interest in the license.

[Bd. of Health, Disposal of Radioactive Waste Reg. § 2.1, eff. 8-21-81]

NAC 459.870 Application for license. (NRS 459.201**)** To obtain a license, a person must:

1. Submit a written application to the Division on a form furnished by the Division, and provide the information requested on the form and any other information requested by the Division.

2. Permit an audit and inspection of his program for radioactive waste to be conducted by an authorized inspector at the site where the waste is generated or a broker holds it awaiting shipment, unless the applicant has a record of satisfactory compliance with the regulations of the United States Department of Transportation, as determined by the Division.

3. Agree to allow unannounced inspections of the site by an authorized inspector, unless the applicant has a record of satisfactory compliance with the regulations of the United States Department of Transportation, as determined by the

Division.

4. Enter into an agreement with the State of Nevada to hold it and the Division harmless from any loss or expense which may arise from liability or consequential damage caused by the licensee's shipment of radioactive waste from its place of origin to the state-owned disposal area. The Division may waive this requirement if the licensee is not permitted by state or federal law to enter into such an agreement.

5. Agree to comply with all federal and state regulations relating to the transportation and packaging of radioactive waste and the conditions of the license issued to the operator of the state-owned disposal area.

6. Pay in advance the fee established for the license.

[Bd. of Health, Disposal of Radioactive Waste Reg. §§ 2.2-2.2.7, eff. 8-21-81]—(NAC A 6-23-86)

NAC 459.875 Audit and inspection prerequisite to licensing. (NRS 459.201**)** To obtain qualification of his program for packaging radioactive waste, an applicant for a license must submit to the authorized inspector a request to have an audit and inspection of the program. No license may be issued until an audit and inspection has been completed.

[Bd. of Health, Disposal of Radioactive Waste Reg. § 2.6, eff. 8-21-81]

NAC 459.885 Suspension or revocation of license. (NRS 459.201**)**

1. If any licensee ships radioactive waste to the state-owned disposal area in violation of NAC 459.910, the Division may suspend his license for up to 1 year:

(a) After giving him prior notice; and

(b) After a representative of the Division has conducted an inspection of the licensee's radioactive waste at the disposal area or an authorized inspector has conducted an inspection at the site of the licensee's program for packaging the radioactive waste.

2. During the period of such a suspension, all radioactive waste packaged for shipment by the licensee must be inspected by an authorized inspector before shipment of the waste to the state-owned disposal area. If the licensee violates any provision of NAC 459.910 while his license is suspended, an additional period of suspension may be added to the existing period of suspension for each such violation.

3. The Division may, without giving prior notice to the licensee and as an emergency measure, suspend his license for a violation of NAC 459.850 to 459.950, inclusive, if it is determined by an inspection that the violation created or may have created a potential hazard to public health or safety.

4. During a period of suspension, the licensee shall attach to the shipping document which accompanies each shipment to the state-owned disposal area, an inspection report showing that an inspection of the shipment has been completed by an authorized inspector.

5. The Division may suspend or revoke a license if the licensee fails to pay a required fee within 30 days after the date of billing.

[Bd. of Health, Disposal of Radioactive Waste Reg. §§ 3.1-3.4, eff. 8-21-81]

NAC 459.890 Reinstatement of suspended license. (NRS 459.201**)**

1. The Division may reinstate a suspended license before a period of suspension has ended if:

(a) The licensee's packaging program for radioactive waste and the qualifications of the personnel engaged in that program have been reexamined by the authorized inspector;

(b) The program and qualifications are determined by the Division to be adequate; and

(c) The licensee has paid any penalties which have been imposed.

2. A licensee shall include with his first shipment under a reinstated license a document which states that the period of its suspension has ended.

[Bd. of Health, Disposal of Radioactive Waste Reg. §§ 5.1-5.2, eff. 8-21-81]

NAC 459.900 Compliance with applicable federal and state laws. (NRS 459.201**)**

1. If any agency of the Federal Government is subject to a federal statute or regulation which precludes its compliance with any aspect of NAC 459.850 to 459.950, inclusive, the agency may enter into separate arrangements with the Division for disposal of radioactive waste in the state-owned disposal area if the agency gives assurances, satisfactory to the Division, that its shipments of radioactive waste to the area will be in compliance with all applicable provisions of federal law and the provisions of state law concerning burial of the waste at the area.

2. Radioactive waste being shipped to the state-owned disposal area must remain packaged in compliance with applicable federal regulations and NAC 459.850 to 459.950, inclusive, until the waste is received at the disposal area for burial. The radioactive waste must be in such a physical condition and be so packaged that the operator of the disposal area is able to dispose of the waste without violating any condition of his license to operate the area.

[Bd. of Health, Disposal of Radioactive Waste Reg. §§ 2.3 & 2.4, eff. 8-21-81]

NAC 459.910 Duties of licensee. (NRS 459.201**)** A licensee:

1. Shall carry out his own written program for ensuring the quality of the packaging of the radioactive waste and radioactive material.

2. Shall package the radioactive waste and radioactive material in accordance with:

(a) The regulations of the Secretary of Transportation concerning the transportation of hazardous material 49 C.F.R. Parts 171 to 177, inclusive, revised as of October 1, 1987. The Board hereby incorporates those regulations by reference. Those regulations are contained in one volume of the Code of Federal Regulations and may be obtained by mail from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 979050, St. Louis, Missouri 63197-9000, or by toll-free telephone at (866) 512-1800, at a price of $25.

(b) The regulations of the Nuclear Regulatory Commission concerning the packaging and transport of radioactive material in 10 C.F.R. Part 71 revised as of March 31, 1987. The State Board of Health hereby incorporates those regulations by reference. Those regulations may be obtained by mail from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 979050, St. Louis, Missouri 63197-9000, or by toll-free telephone at (866) 512-1800, at a price of $1.44.

3. May ship only solid radioactive waste to the state-owned disposal area. Any liquid radioactive waste must, before shipment, be solidified by a method, other than by using urea formaldehyde, which will ensure that there will not be any liquid in the shipping containers upon their arrival at the disposal area.

4. Shall not ship solid waste contaminated with radium 226 to the state-owned disposal area.

[Bd. of Health, Disposal of Radioactive Waste Reg. §§ 2.5-2.5.3.1, eff. 8-21-81]—(NAC A 4-27-84; 6-23-86; 9-6-88)

NAC 459.920 Additional inspections. (NRS 459.201**)** During each year a licensee shall allow at least four unannounced inspections of the site of his program for packaging radioactive waste, in addition to any inspections which may be required as a result of his noncompliance with NAC 459.850 to 459.950, inclusive.

[Bd. of Health, Disposal of Radioactive Waste Reg. § 4.1, eff. 8-21-81]

NAC 459.940 Fees. (NRS 459.201, 459.211**)**

1. A person who holds a license to use the state-owned disposal area may be assessed a fee on a prorated basis for the remaining effective period of a license.

2. The Division may suspend or revoke the license of the person who operates the state-owned area for disposal of radioactive waste if he fails to pay the required fee within 30 days after the date of billing.

3. Fees collected by the Division pursuant to chapter 459 of NRS are not refundable.

[Bd. of Health, Disposal of Radioactive Waste Reg. §§ 6.1-6.3, eff. 8-21-81]

NAC 459.943 Burial at state-owned disposal area; restrictions. (NRS 459.201**)** An operator of a disposal area shall bury at the state-owned disposal area not more than 200,000 cubic feet of waste in any year and not more than a total of 1,400,000 cubic feet of waste during the 7-year period beginning January 1, 1986, and ending December 31, 1992, unless written authorization to bury additional waste has been obtained from the Division.

(Added to NAC by Bd. of Health, eff. 6-23-86)

NAC 459.945 Surcharge for waste generated in state not party to compact. (NRS 459.201, 459.211**)**

1. Any person who ships waste generated in a state not a party to the Rocky Mountain Low-Level Radioactive Waste Compact to the state-owned disposal area shall pay to the Division a surcharge as follows:

(a) From March 9, 1987, to December 31, 1987, inclusive, $10 per cubic foot of waste.

(b) From January 1, 1988, to December 31, 1989, inclusive, $20 per cubic foot of waste.

(c) From January 1, 1990, to December 31, 1992, inclusive, $40 per cubic foot of waste.

2. The Division may impose a surcharge in an amount not to exceed the maximum allowed by the Low-Level Radioactive Waste Policy Amendments Acts of 1985, Public Law 99-240, as it existed on March 9, 1987.

3. The surcharges imposed by this section must be received by the business office of the Division in Carson City, Nevada, on or before the eighth calendar day of the month following the month in which the waste was delivered to the disposal area.

4. The Division may initiate disciplinary proceedings against a person who ships waste to the disposal area if the person does not pay the surcharges required by subsections 1 and 2 in the manner required by subsection 3. The administrative penalties may include the denial of future access to the disposal area and the recovery of any attorney's fees or costs necessary to collect the surcharges.

(Added to NAC by Bd. of Health, eff. 4-24-86; A 3-9-87; 8-31-89)

NAC 459.947 Periodic determination of whether disposal charges are reasonable. (NRS 459.201, 459.211**)**

1. The Division will, at least once every 2 years during the first calendar quarter of each even-numbered year, compare the disposal charges for the burial of waste at all existing commercial waste disposal areas in the United States.

2. If the disposal charges at the state-owned disposal area do not exceed the average of the disposal charges of the existing commercial waste disposal areas in the United States by more than 10 percent, the Division will:

(a) Find that the disposal charges for the state-owned disposal site are reasonable; and

(b) Submit the results of the comparison of disposal charges to the Rocky Mountain Low-Level Radioactive Waste Board for review and approval, as may be required by law.

3. If the disposal charges at the state-owned disposal area exceed the average of the disposal charges at the existing commercial waste disposal areas in the United States by more than 10 percent, the Division will:

(a) Conduct a public hearing to receive evidence and testimony concerning the reasonableness of the disp charges;

(b) Review the financial records of the operator of the state-owned disposal area concerning the operation of the disposal area and any of its related operations;

(c) Make a finding concerning the reasonableness of the disposal charges based on the record of the public hearing;

(d) If the Division finds that the charges are not reasonable, order the operator of the state-owned disposal area to reduce the disposal charges so that they do not exceed by more than 10 percent the average of the disposal charges of the existing commercial waste disposal areas in the United States; and

(e) Submit a copy of the record of the public hearing, the findings of the Division and any order issued by itto the Rocky Mountain Low-Level Radioactive Waste Board for review and approval.

(Added to NAC by Bd. of Health, eff. 2-18-88)

NAC 459.948 Determination of whether proposed increase in disposal charges is reasonable. (NRS 459.201**,** 459.211**)**

1. The operator of the state-owned disposal area shall submit to the Division, in writing, any proposed increase in disposal charges at least 45 days before the proposed increase becomes effective.

2. The Division will determine whether the proposed increase in disposal charges exceeds the average disposal charges of the existing commercial waste disposal areas in the United States by more than 10 percent.

3. If the proposed increase exceeds the average disposal charges at those existing disposal areas by more than 10 percent, the Division will follow the procedure prescribed in subsection 3 of NAC 459.947.

(Added to NAC by Bd. of Health, eff. 2-18-88)

NAC 459.950 Penalties. (NRS 459.201**)**

1. The administrative penalties in subsection 3 of NRS 459.221 are in addition to suspension of a permit which may be imposed pursuant to that subsection.

2. The person licensed to operate the state-owned area for disposal of radioactive waste may be assessed administrative penalties by the Division of not more than $3,000 per day for each separate failure to comply with an agreement, license, regulation or statute governing the operation of the disposal area.

[Bd. of Health, Disposal of Radioactive Waste Reg. §§ 7.1 & 7.2, eff. 8-21-81]

REGULATION OF HIGHLY HAZARDOUS SUBSTANCES AND EXPLOSIVES

General Provisions

NAC 459.952 Definitions. (NRS 459.3818**)** As used in NAC 459.952 to 459.95528, inclusive, unless the context otherwise requires, the words and terms defined in NAC 459.95211 to 459.95312, inclusive, have the meanings ascribed to them in those sections.

(Added to NAC by Div. of Environmental Protec., eff. 7-10-92; A by Environmental Comm'n by R121-98, 5-27-99; R041-01, 10-25-2001; R137-04, 2-15-2005)

NAC 459.95211 "Accidental release" defined. (NRS 459.3818**)**

1. "Accidental release" means:

(a) An unintentional discharge from a process of any amount of a highly hazardous substance into the air, water or land, including, without limitation, any unintentional discharges within a building that encloses a process; or

(b) A fire or an explosion at a facility involving a highly hazardous substance or explosive.

2. The term does not include emissions of highly hazardous substances from piping component threaded connections, valve and equipment packing, or malfunctioning pollution control devices unless such an emission would qualify as a catastrophic release.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R041-01, 10-25-2001; R137-04, 2-15-2005)

NAC 459.95213 "Active mitigation" defined. (NRS 459.3818**)** "Active mitigation" means equipment, devices or technologies that work with human, mechanical or other sources of energy, and function to contain or minimize the consequences of an accidental release.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99)

NAC 459.95215 "Administrative controls" defined. (NRS 459.3818**)** "Administrative controls" means written procedural mechanisms that are used to control a hazard.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99)

NAC 459.95225 "C.A.P.P." defined. (NRS 459.3818**)** "C.A.P.P." means the Chemical Accident Prevention Program for the State of Nevada and encompasses the provisions of NRS 459.380 to 459.3874, inclusive, and NAC 459.952 to 459.95528, inclusive.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.9523 "C.A.S." defined. (NRS 459.3818**)** "C.A.S." means the Chemical Abstracts Service.
(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99)

NAC 459.95235 "Catastrophic release" defined. (NRS 459.3818**)** "Catastrophic release" means an uncontrolled emission, fire or explosion involving one or more highly hazardous substances or explosives that presents imminent and substantial endangerment to the health of the employees, the public health or the environment. The term includes events that occur within a building or other structure that contains the substance or explosive.
(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R041-01, 10-25-2001; R137-04, 2-15-2005)

NAC 459.9524 "Division" defined. (NRS 459.3818**)** "Division" means the Division of Environmental Protection of the State Department of Conservation and Natural Resources.
(Added to NAC by Div. of Environmental Protec., eff. 7-10-92)

NAC 459.95242 "Emergency response program" defined. (NRS 459.3818**)** "Emergency response program" means the procedures and practices that are developed and implemented pursuant to NAC 459.9544 and 459.95442.
(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R041-01, 10-25-2001; R137-04, 2-15-2005)

NAC 459.95244 "Endpoint" defined. (NRS 459.3818**)** "Endpoint" means the toxic concentration, ambient overpressure, radiant heat level or lowest flammable gas concentration achieved at the outer geographical boundary of the off-site consequence analysis.
(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99)

NAC 459.95246 "Environmental receptor" defined. (NRS 459.3818**)** "Environmental receptor" means:
1. A national or state park, forest or monument;
2. An officially designated wildlife sanctuary, preserve, refuge or area; or
3. A federal wilderness area,

➥ which can be identified on a local map prepared by the United States Geological Survey and which could be exposed to toxic concentrations, radiant heat or overpressure greater than or equal to the endpoints set forth in NAC 459.95364 as a result of an accidental release.
(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99)

NAC 459.952465 "Explosive" defined. (NRS 459.3818**)** "Explosive" means a chemical classified as an explosive pursuant to subsections 2 and 3 of NAC 459.9533.
(Added to NAC by Environmental Comm'n by R137-04, eff. 2-15-2005)

NAC 459.95247 "Explosives manufacturing operation" defined. (NRS 459.3818**)** "Explosives manufacturing operation" means a process that involves the manufacture of explosives for sale even if highly hazardous substances are also used in the explosives manufacturing operation. The term includes the manufacture of devices containing explosives and explosive storage sites that are incidental to the manufacture of explosives for sale.
(Added to NAC by Environmental Comm'n by R041-01, eff. 10-25-2001; A by R137-04, 2-15-2005)

NAC 459.95248 "Facility" defined. (NRS 459.3818**)** "Facility" has the meaning ascribed to it in NRS 459.38075.
(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.9525 "Field gas" defined. (NRS 459.3818**)** "Field gas" means gas that is extracted from a production well before the gas enters a natural gas processing plant.
(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99)

NAC 459.95251 "First responding fire station" defined. (NRS 459.3818**)** "First responding fire station" means the local fire department station that typically responds to emergency calls from a facility and is usually the station that is first on the scene during an emergency.
(Added to NAC by Environmental Comm'n by R137-04, eff. 2-15-2005)

NAC 459.95252 "Hazard assessment" defined. (NRS 459.3818**)** "Hazard assessment" means an evaluation of the potential on-site and off-site consequences of an accidental release that an owner or operator develops pursuant to NAC 459.95364 to 459.95376, inclusive.
(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.95253 "Hazardous materials response station" defined. (NRS 459.3818**)** "Hazardous materials response station" means a local fire department station that is equipped and trained to provide a hazardous materials response to a facility in accordance with 29 C.F.R. § 1910.120(q).
(Added to NAC by Environmental Comm'n by R137-04, eff. 2-15-2005)

NAC 459.95255 "Highly hazardous substance" defined. (NRS 459.3818**)** "Highly hazardous substance" means a chemical listed in subsection 1 of NAC 459.9533, regardless of the amount or quantity of the chemical present.
(Added to NAC by Environmental Comm'n by R137-04, eff. 2-15-2005)

NAC 459.95256 "Hot work" defined. (NRS 459.3818**)** "Hot work" means work involving electric or gas welding, cutting, brazing, or similar flame-producing or spark-producing operations.
(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99)

NAC 459.95259 "Local building official" defined. (NRS 459.3818**)** "Local building official" means the governmental entity charged with the administration and enforcement of local building codes.
(Added to NAC by Environmental Comm'n by R041-01, eff. 10-25-2001)

NAC 459.95263 "Medical treatment" defined. (NRS 459.3818**)** "Medical treatment" means treatment, other than first aid, that is administered by a physician or other personnel pursuant to standing orders from a physician.
(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99)

NAC 459.95265 "Mitigation" and "mitigation system" defined. (NRS 459.3818**)** "Mitigation" or "mitigation system" means activities, technologies or equipment specifically designed or deployed to:
1. Capture or control a substance upon loss of containment in order to minimize exposure of the employee, the public or the environment; or
2. Minimize the impact of a fire or explosion on the employee, the public or the environment.
(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.95267 "N.A.I.C.S." defined. (NRS 459.3818**)** "N.A.I.C.S." means the North American Industry Classification System.
(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99)

NAC 459.95269 "Natural gas processing plant" defined. (NRS 459.3818**)** "Natural gas processing plant" means a processing site that:
1. Is engaged in:
(a) The extraction of natural gas liquids from field gas;
(b) The fractionation of mixed natural gas liquids to natural gas products; or
(c) Both extraction and fractionation; and
2. Is classified as N.A.I.C.S. code 211112, which is adopted by reference pursuant to NAC 459.95528.
(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99)

NAC 459.952695 "New process" defined. (NRS 459.3818**)** "New process" means a process that has been, or will be, installed at a facility and will be in operation for the first time at that location. The term includes, without limitation, a new explosives manufacturing operation.
(Added to NAC by Environmental Comm'n by R041-01, eff. 10-25-2001)

NAC 459.95271 "N.F.P.A." defined. (NRS 459.3818**)** "N.F.P.A." means the National Fire Protection Association.
(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99)

NAC 459.95273 "Off-site" defined. (NRS 459.3818**)** "Off-site" means an area:
1. Beyond the property boundary of the facility; and
2. Within the property boundary to which the public has routine and unrestricted access during or outside business hours.
(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99)

NAC 459.95275 "Owner or operator" defined. (NRS 459.3818**)** "Owner or operator" means any natural person, business or social organization or other legal entity, including, without limitation, a corporation, partnership, association, trust or unincorporated organization, who owns, leases, operates, controls or supervises a facility that contains any process subject to C.A.P.P.
(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.95277 "Passive mitigation" defined. (NRS 459.3818**)** "Passive mitigation" means equipment, devices or technologies that work without human, mechanical or other sources of energy, and function to contain or minimize the consequences of an accidental release.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99)

NAC 459.95279 "Prevention program" defined. (NRS 459.3818**)** "Prevention program" means procedures and practices that are developed and implemented pursuant to NAC 459.95412 to 459.95435, inclusive.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R041-01, 10-25-2001; R137-04, 2-15-2005)

NAC 459.95281 "Process" defined. (NRS 459.3818**)** "Process" means:

1. Any activity that involves a highly hazardous substance or an explosive, including, without limitation, the use, storage, manufacturing, handling or on-site movement, or any combination thereof, of such a substance or explosive.
2. A group of vessels that are used in connection with such activity, including vessels that are:

(a) Interconnected; or

(b) Separate, but located in such a manner that a highly hazardous substance or explosive could potentially be released, including, without limitation, a release, fire or explosion in one vessel that could cause a release, fire or explosion in another vessel.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R041-01, 10-25-2001; R137-04, 2-15-2005)

NAC 459.95283 "Process hazard analysis" defined. (NRS 459.3818**)** "Process hazard analysis" means the analysis performed pursuant to NAC 459.95414.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99)

NAC 459.95285 "Produced water" defined. (NRS 459.3818**)** "Produced water" means water that is:

1. Extracted from the earth from an oil or natural gas production well; or
2. Separated from oil or natural gas after extraction.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99)

NAC 459.95289 "Public" defined. (NRS 459.3818**)** "Public" means one or more natural persons other than employees or contractors of a facility.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99)

NAC 459.95291 "Public receptor" defined. (NRS 459.3818**)** "Public receptor" means an off-site:

1. Residence;
2. Institution such as a school or hospital;
3. Industrial, commercial or office building; or
4. Park or recreational area,

➥ that is inhabited or occupied by the public without restriction by the facility, in which the public could be exposed as a result of an accidental release to toxic concentrations, radiant heat or overpressure.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99)

NAC 459.95292 "Replacement in kind" defined. (NRS 459.3818**)** "Replacement in kind" means a replacement of equipment, instruments, procedures, raw material and processing conditions that satisfy the design specifications.

(Added to NAC by Environmental Comm'n by R137-04, eff. 2-15-2005)

NAC 459.95297 "Threshold quantity" defined. (NRS 459.3818**)** "Threshold quantity" means the quantity of highly hazardous substance specified in subsection 1 of NAC 459.9533.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.95312 "Vessel" defined. (NRS 459.3818**)** "Vessel" has the meaning ascribed to it in NRS 459.38125.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

Applicability of Program

NAC 459.95321 Determination by owner or operator. (NRS 459.3818**,** 459.3833**)** The owner or operator shall, pursuant to NAC 459.95321, 459.95323 and 459.9533, determine for each process within the boundary of his facility if the process is subject to C.A.P.P.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.95323 Criteria for determination. (NRS 459.3818**,** 459.3833**)**

1. Except as otherwise provided in NAC 459.95486, a process is subject to C.A.P.P. if:

(a) The process is not exempted pursuant to NRS 459.3814 and the process contains a highly hazardous substance in a quantity:

(1) Equal to or greater than the amount set forth in subsection 1 of NAC 459.9533 under the column labeled "Threshold Quantity"; or

(2) Less than the amount set forth in subsection 1 of NAC 459.9533 under the column labeled "Threshold Quantity" if there are two or more releases of one or more highly hazardous substances from the facility during a 12-month period and the quantity for each release is in excess of the amount set forth in subsection 1 of NAC 459.9533 for the highly hazardous substance under the column labeled "Two Release Quantity"; or

(b) The process is an explosives manufacturing operation.

2. The following highly hazardous substances need not be considered when determining whether at least a threshold quantity is present in a process for the purposes of subsection 1:

(a) A substance denoted as toxic if the concentration of the substance in a mixture is less than 1 percent by weight of the mixture. Except for oleum, toluene 2, 4-diisocyanate, toluene 2, 6-diisocyanate and toluene diisocyanate (unspecified isomer), if the concentration of the toxic substance in the mixture is 1 percent or greater by weight of the mixture and the owner or operator demonstrates in writing that the partial pressure of the substance in the mixture under handling or storage conditions in any portion of the process is less than 10 millimeters of mercury, the amount of the substance in the mixture in that portion of the process need not be considered when determining whether at least a threshold quantity is present in the process. A toxic substance is designated as "T" in the table in subsection 1 of NAC 459.9533 under the column labeled "Tox (T) or Flam (F)."

(b) Except as otherwise provided in paragraphs (c) and (d), a substance denoted as flammable if the concentration of the substance in a mixture is less than 1 percent by weight of the mixture or the concentration of the flammable substance in the mixture is 1 percent or greater by weight of the mixture and the owner or operator demonstrates in writing that the mixture does not have a flammability hazard rating of "4" as described in *N.F.P.A. 704: Standard System for the Identification of the Hazards of Materials for Emergency Response*, which is adopted by reference pursuant to NAC 459.95528. If the concentration of the flammable substance in the mixture is 1 percent or greater by weight of the mixture and the owner or operator does not demonstrate that the mixture does not have a flammability hazard rating of "4," the entire weight of the mixture must be treated as the flammable substance to determine whether a threshold quantity is present at the facility. The boiling and flash point must be defined and determined pursuant to *N.F.P.A. 30: Flammable and Combustible Liquids Code*, which is adopted by reference pursuant to NAC 459.95528. A flammable substance is designated as "F" in the table in subsection 1 of NAC 459.9533 under the column labeled "Tox (T) or Flam (F)."

(c) Gasoline if it is distributed or stored for use as fuel for an internal combustion engine.

(d) A naturally occurring hydrocarbon mixture before such a mixture has entered into a natural gas processing plant or a petroleum refining process unit. A naturally occurring hydrocarbon mixture includes any combination of condensate, crude oil, field gas and produced water.

(e) A substance that is contained in an article.

(f) A substance when it is being used:

(1) As a structural component of the facility;

(2) With products for routine janitorial maintenance;

(3) By employees in foods, drugs, cosmetics or other personal items;

(4) In process water or noncontact cooling water drawn from the environment or municipal sources; or

(5) In air as compressed air or as part of combustion.

(g) A substance that is manufactured, processed or used in a laboratory at a facility under the supervision of a technically qualified individual as defined in 40 C.F.R. § 720.3(ee). This exemption does not apply to:

(1) Specialty chemical production;

(2) The manufacturing, processing or use of a highly hazardous substance in pilot plant scale operations; or

(3) Activities conducted outside of the laboratory.

(h) Propane when used as a fuel or held for sale as a fuel at a retail facility.

3. As used in this section:

(a) "Article" has the meaning ascribed to it in 29 C.F.R. § 1910.1200(c).

(b) "Crude oil" means a naturally occurring, unrefined petroleum liquid.

(c) "Petroleum refining process" means a process that:

(1) Is used in an establishment which is primarily engaged in petroleum refining as defined in N.A.I.C.S. Code 32411, which is adopted by reference pursuant to NAC 459.95528; and

(2) Is used to:

(I) Produce a transportation fuel such as gasoline, diesel fuel or jet fuel;

(II) Produce a heating fuel such as kerosene, fuel gas distillate or fuel oil;

(III) Produce a lubricant;

(IV) Separate petroleum; or

(V) Separate, crack, react or reform an intermediate petroleum stream.

(d) "Retail facility" means a facility at which more than one-half of the income is obtained from direct sales to end users or at which more than one-half of the fuel sold, by volume, is sold through a cylinder exchange program.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R041-01, 10-25-2001; R [redacted]04, 2-15-2005)

Table of Substances

NAC 459.9533 Tabulated values for threshold quantity, two release quantity and toxic endpoints; classification of substance as explosive. (NRS 459.3816, 459.3818, 459.3833)

1. The following table sets forth the list of highly hazardous substances and the parameters associated with carrying out C.A.P.P.:

Chemical Name	Alternate Chemical Name	Mixture Description	CAS Number	Threshold Quantity (lbs)	Two Release Quantity (lbs)	Two Release Source note 1	Tox (T) or Flam (F)	Toxic Endpoint (mg/L)
Acetaldehyde	Ethanal		75-07-0	2,500	1,000	1	F	
Acetylene	Ethyne		74-86-2	10,000	1,000	3	F	
Acrolein	2-Propenol		107-02-8	150	1	1 & 2	T	0.0011
Acrylonitrile	2-Propenenitrile		107-13-1	20,000	100	1 & 2	T	0.076
Acrylyl chloride	2-Propenoyl chloride		814-68-6	250	100	2	T	0.00090
Alkylaluminums				5,000	50*	3		
Allyl alcohol	2-Propen-1-ol		107-18-6	15,000	100	1 & 2	T	0.036
Allyl chloride	3-chloropropene		107-05-1	1,000	100	3	T	0.1252
Allylamine	2-Propen-1-amine		107-11-9	1,000	500	2	T	0.0032
Ammonia	Anhydrous Ammonia	Anhydrous	7664-41-7	5,000	100	1 & 2	T	0.14
Ammonia	Ammonia solution Ammonium hydroxide	20 wt% to 44 wt%	7664-41-7	20,000 note 2	1,000	1	T	0.14
Ammonia	Ammonia solution Ammonium hydroxide	concentration greater than 44% ammonia by weight	7664-41-7	10,000 note 2	1,000	1	T	0.14
Ammonium perchlorate			7790-98-9	7,500	75*	3		
Ammonium permanganate			7787-36-2	7,500	75*	3		
Arsenous trichloride			7784-34-1	15,000	1	1 & 2	T	0.010
Arsine	Arsenic Hydride		7784-42-1	100	10	3	T	0.0019
bis(Chloromethyl) Ether	Chloromethyl Ether		542-88-1	100	10	1 & 2	T	0.00025
Boron trichloride			10294-34-5	2,500	100	3	T	0.010
Boron trifluoride			7637-07-2	250	25	3	T	0.028
Boron trifluoride w/Methyl Ether		1:1 ratio	353-42-4	15,000	1,000	2	T	0.023
Bromine			7726-95-6	1,500	500	2	T	0.0065
Bromine chloride			13863-41-7	1,500	10	3	T	0.00472
Bromine pentafluoride			7789-30-2	2,500	100	3	T	0.00715
Bromine trifluoride			7787-71-5	15,000	1000	3	T	0.0025
Bromotrifluor-ethylene			598-73-2	10,000	1,000	3	F	
1,3-Butadiene			106-99-0	10,000	10	1	F	
Butane			106-97-8	10,000	1,000	3	F	
1-Butene			106-98-9	10,000	1,000	3	F	
2-Butene			107-01-7	10,000	1,000	3	F	
Butene			25167-67-3	10,000	1,000	3	F	

2-Butene-cis			590-18-1	10,000	1,000	3	F	
2-Butene-trans			624-64-6	10,000	1,000	3	F	
Butyl hydroperoxide (Tertiary)			75-91-2	5,000	50*	3		
Butyl perbenzoate (Tertiary)			614-45-9	7,500	75*	3		
Carbon disulfide			75-15-0	20,000	100	1 & 2	T	0.16
Carbon oxysulfide	Carbon Oxide Sulfide		463-58-1	10,000	100	1	F	
Carbonyl fluoride			353-50-4	2,500	10	3	T	0.00972
Cellulose nitrate		concentration greater than 12.6% nitrogen	9004-70-0	2,500	25*	3		
Chlorine			7782-50-5	1,500	10	1 & 2	T	0.0087
Chlorine dioxide			10049-04-4	1,000	100	3	T	0.0028
Chlorine monoxide			7791-21-1	10,000	1,000	3	F	
Chlorine pentafluoride			13637-63-3	1,000	10	3	T	0.003
Chlorine trifluoride			7790-91-2	1,000	100	3	T	0.0038
Chlorodiethyl-aluminum	Diethyl-aluminum Chloride		96-10-6	5,000	50*	3		
1-Chloro-2,4-Dinitrobenzene			97-00-7	5,000	50*	3		
Chloroform			67-66-3	20,000	10	1 & 2	T	0.49
Chloromethyl methyl ether			107-30-2	500	10	1 & 2	T	0.0018
Chloropicrin			76-06-2	500	50	3	T	0.00134
Chloropicrin/Methylbromide mix				1,500	500	3	T	0.00078
Chloropicrin/Methylchloride mix				1,500	500	3	T	
1-Chloropropylene			590-21-6	10,000	1,000	3	F	
2-Chloropropylene			557-98-2	10,000	1,000	3	F	
Crotonaldehyde	2-Butenal		4170-30-3	20,000	100	1 & 2	T	0.029
Crotonaldehyde, (E)-	2-Butenal, (E)-		123-73-9	20,000	100	1 & 2	T	0.029
Cumene Hydroperoxide			80-15-9	5,000	10	1		
Cyanogen	Ethanedinitrile		460-19-5	2,500	100	1	F	
Cyanogen chloride			506-77-4	500	10	1	T	0.030
Cyanuric fluoride			675-14-9	100	10	3	T	0.00017
Cyclohexylamine	Cyclohex-animine		108-91-8	15,000	1,000	2	T	0.16
Cyclopropane			75-19-4	10,000	1,000	3	F	
Diacetyl peroxide		concentration greater than 70%	110-22-5	5,000 note 2	50*	3		
Diazomethane			334-88-3	500	10	3		
Dibenzoyl peroxide			94-36-0	7,500	75*	3		
Diborane			19287-45-7	100	10	3	T	0.0011
Dibutyl peroxide (tertiary)			110-05-4	5,000	50*	3		
Dichloro acetylene			7572-29-4	250	10	3		
Dichlorosilane			4109-96-0	2,500	100	3	F	
Diethylzinc			557-20-0	10,000	100*	3		

Difluoroethane			75-37-6	10,000	1,000	3	F	
Diisopropyl peroxydicarbonate			105-64-6	7,500	75*	3		
Dilauroyl peroxide			105-74-8	7,500	75*	3		
Dimethyl sulfide			75-18-3	100	10	3	T	1.27
Dimethylamine		anhydrous	124-40-3	2,500	1,000	1	F	
Dimethyl-dichlorosilane			75-78-5	1,000	500	2	T	0.026
1,1-Dimethylhydrazine			57-14-7	1,000	10	1 & 2	T	0.012
2,2-Dimethylpropane			463-82-1	10,000	1,000	3	F	
2,4-Dinitroanaline			97-02-9	5,000	50*	3		
Epichlorohydrin			106-89-8	20,000	100	1 & 2	T	0.076
Ethane			74-84-0	10,000	1,000	3	F	
Ethyl acetylene	1-Butyne		107-00-6	10,000	1,000	3	F	
Ethyl chloride			75-00-3	10,000	100	1	F	
Ethyl ether			60-29-7	10,000	100	1	F	
Ethyl mercaptan	Ethanethiol		75-08-1	10,000	1,000	3	F	
Ethyl nitrite			109-95-5	5,000	50*	3	F	
Ethylamine	Ethanamine		75-04-7	7,500	100	1	F	
Ethylene	Ethene		74-85-1	10,000	1,000	3	F	
Ethylene fluorohydrin			371-62-0	100	10	2	T	0.0008
Ethylene oxide	Oxirane		75-21-8	5,000	10	1 & 2	T	0.090
Ethylenediamine			107-15-3	20,000	5,000	1 & 2	T	0.49
Ethyleneimine	Aziridine		151-56-4	1,000	1	1 & 2	T	0.018
Fluorine			7782-41-4	100	10	1 & 2	T	0.0039
Formaldehyde		concentration of 37% or greater by weight	50-00-0	1,000 note 2	100	1 & 2	T	0.012
Furan			110-00-9	500	100	1 & 2	T	0.0012
Hexafluoroacetone			684-16-2	5,000	10	3	T	0.0068
Hydrazine			302-01-2	15,000	1	1 & 2	T	0.011
Hydrochloric acid		37% or greater	7647-01-0	15,000 note 2	1,000	3	T	0.030
Hydrofluoric acid		50% or greater	7664-39-3	1,000 note 2	100	1	T	0.016
Hydrogen			1333-74-0	10,000	1,000	3	F	
Hydrogen bromide			10035-10-6	5,000	10	3	T	0.01
Hydrogen chloride		Anhydrous	7647-01-0	5,000	100	3	T	0.030
Hydrogen cyanide	Hydrocyanic acid	Anhydrous	74-90-8	1,000	10	1 & 2	T	0.011
Hydrogen fluoride		Anhydrous	7664-39-3	1,000	100	1 & 2	T	0.016
Hydrogen peroxide		concentration of 52% or greater by weight	7722-84-1	7,500 note 2	1,000	2		
Hydrogen selenide			7783-07-5	150	10	2	T	0.00066
Hydrogen sulfide			7783-06-4	1,500	100	1 & 2	T	0.042
Hydroxylamine			7803-49-8	2,500	25*	3		
Iron, pentacarbonyl			13463-40-6	250	100	2	T	0.00044

Isobutane	1,1-dimethyl ethane		75-28-5	10,000	1,000	3	F	
Isobutyronitrile			78-82-0	20,000	1,000	2	T	0.14
Isopentane			78-78-4	10,000	1,000	3	F	
Isoprene			78-79-5	10,000	100	1	F	
Isopropyl chloride	2 - chloropropane		75-29-6	10,000	1,000	3	F	
Isopropyl chloroformate			108-23-6	15,000	1,000	2	T	0.10
Isopropyl formate			625-55-8	500	100	3	T	0.0014
Isopropylamine			75-31-0	5,000	1,000	3	F	
Ketene			463-51-4	100	10	3	T	0.18
Mercury			7439-97-6	200,000	5,000	3	T	0.0021
Methacrylaldehyde			78-85-3	1,000	500	3	T	0.007
Methacryloyl chloride			920-46-7	150	100	2	T	0.0006
Methacryloyloxyethyl isocyanate			30674-80-7	100	10	3	T	0.00063
Methane			74-82-8	10,000	1,000	3	F	
Methyl acrylonitrile	Meth-acrylonitrile		126-98-7	250	25	3	T	0.0027
Methyl bromide			74-83-9	2,500	500	3	T	0.194
3-Methyl-1-butene	Isopentene		563-45-1	10,000	1,000	3	F	
2-Methyl-1-butene			563-46-2	10,000	1,000	3	F	
Methyl chloride			74-87-3	15,000	100	1	T	0.82
Methyl chloroformate			79-22-1	500	100	3	T	0.0019
Methyl disulfide			624-92-0	100	10	3	T	0.19
Methyl ether			115-10-6	10,000	1,000	3	F	
Methyl ethyl ketone peroxide	Ethyl methyl ketone peroxide	concentration greater than 60%	1338-23-4	5,000 note 2	10	1		
Methyl fluoroacetate			453-18-9	100	10	3	T	0.00025
Methyl fluorosulfate			421-20-5	100	10	3	T	0.00023
Methyl formate			107-31-3	10,000	1,000	3	F	
Methyl hydrazine			60-34-4	100	10	1 & 2	T	0.0094
Methyl iodide			74-88-4	7,500	100	1	T	0.29
Methyl isocyanate			624-83-9	250	10	1 & 2	T	0.0012
Methyl mercaptan			74-93-1	5,000	100	1 & 2	T	0.049
Methyl thiocyanate			556-64-9	20,000	10,000	2	T	0.085
Methyl vinyl ketone			78-94-4	100	10	2	T	0.00007
Methylamine	Methanamine	Anhydrous	74-89-5	1,000	100	1	F	
2-Methylpropene			115-11-7	10,000	1,000	3	F	
Methyltrichlorosilane			75-79-6	500	50	3	T	0.018
Nickel carbonyl			13463-39-3	150	10	1 & 2	T	0.00067
Nitric acid		80% or greater	7697-37-2	15,000 note 2	1,000	1 & 2	T	0.026
Nitric acid		concentration of 94.5% or greater by weight	7697-37-2	500 note 2	50	3	T	0.026
Nitric oxide	Nitrogen oxide		10102-43-9	250	10	1 & 2	T	0.031

Nitroaniline	para Nitroaniline		100-01-6	5,000	50*	3		
Nitrogen dioxide			10102-44-0	250	10	1 & 2	T	0.0282
Nitrogen oxides		NO; NO_2; N_2O_4; N_2O_3	10102-44-0	250	10	3	T	0.0282
Nitrogen tetroxide			10544-72-6	250	10	1	T	0.0564
Nitrogen trifluoride			7783-54-2	5,000	1,000	3	T	0.29
Nitrogen trioxide			10544-73-7	250	10	3	T	0.016
Nitromethane			75-52-5	2,500	25*	3		
Oleum	Fuming sulfuric acid	65 wt% or greater of SO_3	8014-95-7	1,000	500	3	T	0.010
Osmium tetroxide			20816-12-0	100	10	3	T	0.001
Oxygen difluoride	Fluorine monoxide		7783-41-7	100	10	3		
Ozone			10028-15-6	100	10	3		
Pentaborane			19624-22-7	100	10	3	T	0.00026
1,3-Pentadinene			504-60-9	10,000	100	1	F	
Pentane			109-66-0	10,000	1,000	3	F	
1-Pentene			109-67-1	10,000	1,000	3	F	
2-Pentene, (E)-			646-04-8	10,000	1,000	3	F	
2-Pentene, (Z)-			627-20-3	10,000	1,000	3	F	
Peracetic acid	Peroxyacetic acid	concentration greater than 60% acetic acid	79-21-0	1,000 note 2	500	2	T	0.0045
Perchloric acid		concentration greater than 60% by weight	7601-90-3	5,000 note 2	50*	3		
Perchloromethyl mercaptan			594-42-3	150	100	1 & 2	T	0.0076
Perchloryl fluoride			7616-94-6	5,000	100	3	T	0.042
Phosgene	Carbonyl chloride		75-44-5	100	10	1 & 2	T	0.00081
Phosphine	Hydrogen phosphide		7803-51-2	100	10	3	T	0.0035
Phosphorus oxychloride	Phosphoryl chloride		10025-87-3	1,000	500	3	T	0.0030
Phosphorus trichloride			7719-12-2	1,000	500	3	T	0.028
Piperidine			110-89-4	15,000	1,000	2	T	0.022
Propadiene	1,2 Propadiene		463-49-0	10,000	1,000	3	F	
Propane			74-98-6	10,000	1,000	3	F	
Propargyl bromide	3-Bromopropyne		106-96-7	100	10	2	T	0.00003
Propionitrile			107-12-0	10,000	10	1 & 2	T	0.0037
Propyl chloroformate			109-61-5	15,000	500	2	T	0.010
Propyl nitrate			627-13-4	100	25*	3		
Propylene	1 Propene		115-07-1	10,000	1,000	3	F	
Propylene oxide			75-56-9	10,000	100	1 & 2	T	0.59
Propyleneimine			75-55-8	10,000	1	1 & 2	T	0.12
Propyne	1-Propyne		74-99-7	10,000	1,000	3	F	
Sarin			107-44-8	100	10	2	T	0.00006
Selenium hexafluoride			7783-79-1	1,000	1	1	T	0.0016
Silane			7803-62-5	10,000	1,000	3	F	

Stibine	Antimony hydride		7803-52-3	500	10	3	T	0.0026
Sulfur dioxide		Anhydrous	7446-09-5	1,000	100	3	T	0.0078
Sulfur pentafluoride			5714-22-7	250	10	3	T	0.001
Sulfur tetrafluoride			7783-60-0	250	10	3	T	0.0092
Sulfur trioxide	Sulfuric Anhydride		7446-11-9	1,000	100	2	T	0.010
Tellurium hexafluoride			7783-80-4	250	10	3	T	0.0009
Tetrafluoroethylene			116-14-3	5,000	1,000	3	F	
Tetrafluorohydrazine			10036-47-2	5,000	500	3	T	0.0213
Tetramethyl Lead			75-74-1	1,000	100	2	T	0.0040
Tetramethylsilane			75-76-3	10,000	1,000	3	F	
Tetranitromethane			509-14-8	10,000	10	2	T	0.0040
Thionyl chloride			7719-09-7	250	100	3	T	0.0097
Titanium tetrachloride			7550-45-0	2,500	1,000	1 & 2	T	0.020
Toluene 2,4-diisocyanate			584-84-9	10,000	100	1 & 2	T	0.0070
Toluene 2,6-diisocyanate			91-08-7	10,000	100	1 & 2	T	0.0070
Toluene diisocyanate			26471-62-5	10,000	100	1 & 2	T	0.0070
Trichloro (chloromethyl) silane			1558-25-4	100	10	3	T	0.0003
Trichloro (dichlorophenyl) silane			27137-85-5	2,500	500	2	T	0.008
Trichlorosilane			10025-78-2	5,000	500	3	F	
Trifluoro-chloroethylene			79-38-9	10,000	500	3	F	
Trimethoxysilane			2487-90-3	1,500	500	3	T	0.01
Trimethylamine			75-50-3	10,000	100	1	F	
Trimethylchlorosilane			75-77-4	10,000	500	2	T	0.050
Vinyl acetate monomer			108-05-4	15,000	1,500	3	T	0.26
Vinyl acetylene			689-97-4	10,000	1,000	3	F	
Vinyl chloride			75-01-4	10,000	1	1	F	
Vinyl ethyl ether			109-92-2	10,000	1,000	3	F	
Vinyl fluoride			75-02-5	10,000	1,000	3	F	
Vinyl methyl ether			107-25-5	10,000	1,000	3	F	
Vinylidene chloride			75-35-4	10,000	100	1	F	
Vinylidene fluoride			75-38-7	10,000	1,000	3	F	

Table Notes:

Note 1: For Two Release Source Column: 1 = RQ as listed in 40 C.F.R. Part 302; 2 = RQ as listed in 40 C.F.R. Part 355; 3 = Two Release Quantity as determined in "Technical Basis Document for C.A.P.P. Two Release Quantities and Toxic Endpoints."

Note 2: The threshold quantity must be applied to the fraction of the chemical in the actual mixture.

* These substances must be involved in a fire or explosion to qualify as a release pursuant to subparagraph (2) of paragraph (a) of subsection 1 of NAC 459.95323.

2. Except as otherwise provided in subsection 3, a substance must be classified as an explosive if the substance is classified as division 1.1, 1.2, 1.3, 1.4 or 1.5 in column 3 of the Table of Hazardous Materials in 49 C.F.R. § 172.101, which is adopted by reference pursuant to NAC 459.95528.

3. The list of explosives as classified pursuant to subsection 2 excludes those substances described in 18 U.S.C. § 845(a).

4. If a substance:

(a) Is listed as a highly hazardous substance pursuant to subsection 1; and
(b) Is also classified as an explosive pursuant to subsection 2 which is not excluded pursuant to subsection 3,

➥ the substance must be treated as a highly hazardous substance for the purposes of NAC 459.952 to 459.95528, inclusive, if the substance is present in the process in excess of the threshold quantity set forth for the substance pursuant to subsection 1.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R041-01, 10-25-2001; R137-04, 2-15-2005; R019-07, 10-31-2007)

General Requirements

NAC 459.95332 Duties of owner or operator of facility. (NRS 459.3818**,** 459.3833**)** The owner or operator of a facility that has a process which is subject to C.A.P.P. shall:

1. Register annually with the Division pursuant to NAC 459.95348, 459.9535 and 459.95354;
2. Pay the annual fees pursuant to NAC 459.95334 if the facility contains one or more processes and does not have explosives manufacturing operations;
3. Pay the annual fees pursuant to NAC 459.953345 if the facility contains one or more explosives manufacturing operations;
4. Develop a management system pursuant to NAC 459.95341;
5. Conduct a hazard assessment pursuant to NAC 459.95364 to 459.95376, inclusive;
6. Develop and implement a prevention program pursuant to NAC 459.95412 to 459.95435, inclusive;
7. Develop and implement an emergency response program pursuant to NAC 459.9544 and 459.95442; and
8. Provide information to the Division in advance of an inspection pursuant to subsection 2 of NAC 459.9552.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R041-01, 10-25-2001; R137-04, 2-15-2005)

NAC 459.95333 Change in ownership of facility. (NRS 459.3818**,** 459.3833**)** If a facility with a process that is subject to C.A.P.P. changes ownership, the new owner or operator shall assume responsibility for full compliance with the requirements of NRS 459.380 to 459.3874, inclusive, and any regulations adopted pursuant thereto and:

1. If the annual registration required pursuant to NAC 459.95348 is not due, satisfy the requirements for registration set forth in NAC 459.95337 and 459.9535 not later than 14 days after the transfer of ownership; or
2. If the annual registration required pursuant to NAC 459.95348 is due, submit the annual registration.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)—(Substituted in revision for NAC 459.95512)

NAC 459.95334 Annual fee. (NRS 459.3818**,** 459.3824**,** 459.3833**)**

1. Except as otherwise provided in NAC 459.953345 and 459.95335, the owner or operator of a facility that contains one or more processes and does not have an explosive manufacturing operation shall pay the fee required by subsections 1 and 2 of NRS 459.3824 before July 31 of each year.
2. The amount of this annual fee for each facility will equal the sum of:
(a) A base fee that is established pursuant to subsection 4; and
(b) A graduated fee that is established pursuant to subsection 5.
3. The total annual fee required by this section must not exceed $35,000 for a facility.
4. The amount of the annual base fee that is authorized pursuant to subsection 1 of NRS 459.3824 is $5,600.
5. The amount of the annual graduated fee that is authorized pursuant to subsection 2 of NRS 459.3824 is $39 per unit of highly hazardous substance at a facility. A unit of highly hazardous substance is equal to the total amount of the highly hazardous substance present at a facility, divided by the corresponding threshold quantity set forth in subsection 1 of NAC 459.9533 for that highly hazardous substance.

(Added to NAC by Environmental Comm'n, eff. 7-6-92; A by R121-98, 5-27-99, eff. 6-21-99; R087-00, 7-27-2000; R087-00, 7-27-2000, eff. 7-1-2001; R137-04, 2-15-2005)

NAC 459.953345 Annual fees for facility with explosives manufacturing operation. (NRS 459.3818**,** 459.3824**,** 459.3833**)**

1. Except as otherwise provided in NAC 459.95335, an owner or operator of a facility that has an explosives manufacturing operation shall pay to the Division an annual fee before July 31, as prescribed in this section.
2. If the explosives manufacturing operation includes only the combining of ammonium nitrate and fuel oil mixture, the owner or operator of the facility of which the operation is a part shall pay to the Division an annual fee of $5,600.
3. If the explosives manufacturing operation includes any other type of explosives manufacturing, the owner or operator of the facility of which the operation is a part shall pay to the Division an annual fee of $13,500.
4. If a facility that has an explosives manufacturing operation also has a highly hazardous substance in a process in excess of the threshold quantity set forth for that highly hazardous substance in subsection 1 of NAC 459.9533, the owner or operator of the facility shall pay, in addition to the fees set forth in this section, the graduated fee set forth in subsection 5 of NAC 459.95334 and is exempt from the base fee set forth in subsection 4 of NAC 459.95334.

5. The total annual fee required by this section must not exceed $35,000 at any facility.

(Added to NAC by Environmental Comm'n by R041-01, eff. 10-25-2001; A by R137-04, 2-15-2005)

NAC 459.95335 Exemption from payment of certain annual fees. (NRS 459.3818**,** 459.3824**,** 459.3833**)**

1. Notwithstanding any provision of NAC 459.95334 or 459.953345 to the contrary, an owner or operator of a new process is exempt from the payment of annual fees related to the new process for the fiscal year in which the process or operation commences operation and for the following fiscal year.

2. The provisions of subsection 1 do not affect any other fees already being paid by an owner or operator of a facility for other processes or explosives manufacturing operations. In such a case, the provisions of subsection 1 apply only to the incremental annual fee as applied to the new process.

3. As used in this section, "fiscal year" means the fiscal year on which the state budget is based.

(Added to NAC by Environmental Comm'n by R041-01, eff. 10-25-2001; A by R137-04, 2-15-2005)—(Substituted in revision for NAC 459.953477)

NAC 459.95337 Certification of required documents. (NRS 459.3818**,** 459.3832**,** 459.3833**)**

1. Any document required to be submitted pursuant to NAC 459.952 to 459.95528, inclusive, that is required to be certified must contain language for certification that substantially conforms to one of the following forms:

(a) I certify under penalty of law that the information provided in this document is true, accurate and complete. I am aware that there are significant civil and criminal penalties for submitting false, inaccurate or incomplete information.

[Signature, title, date signed]

(b) I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attached documents and that, based on my inquiry of the natural persons immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil and criminal penalties for submitting false information.

[Signature, title, date signed]

2. The certification must be signed by the sole proprietor of the facility, the highest ranking corporate officer of the facility, a partner at the facility, the manager of the facility or a person designated by one of those persons to sign the certification.

(Added to NAC by Environmental Comm'n by R121-98, 5-27-99, eff. 6-21-99; A by R137-04, 2-15-2005)—(Substituted in revision for NAC 459.95358)

NAC 459.95341 Management system; implementation plan. (NRS 459.3818**,** 459.3833**)** The owner or operator of a facility with a process that is subject to C.A.P.P. shall develop:

1. A management system to oversee the implementation of all program requirements and:

(a) Assign a qualified person to have overall responsibility for the development, implementation and integration of the requirements of C.A.P.P.; or

(b) Create a team with overall responsibility for the development, implementation and integration of the requirements of C.A.P.P. The owner or operator shall document:

(1) The names of the persons who are members of the team; and

(2) The relevant lines of authority for the team by means of an organization chart or similar document.

2. An implementation plan that covers each element of the prevention program and each element of the emergency response program. The implementation plan must define how each requirement of each such element will be implemented at the facility and must provide a system that requires all information and documentation be controlled in a manner which ensures that the current information and documentation is in circulation and in use.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)—(Substituted in revision for NAC 459.95516)

NAC 459.95344 Reports of regulatory agencies. (NRS 459.3818**,** 459.382**)** A governmental entity or agency of the State that is required by subsection 1 of NRS 459.382 to submit a report to the Division shall do so, upon request, within 10 working days after a determination is made or an action is taken related to hazards involving highly hazardous substances or explosives at a facility. The report must be submitted on the following form:

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
CHEMICAL ACCIDENT PREVENTION PROGRAM
GOVERNMENTAL AGENCY REPORTING FORM

A facility which produces, uses, stores or handles a highly hazardous substance or manufactures an explosive for sale in a process subject to NAC 459.95323 is subject to the provisions of NRS 459.380 to 459.3874, inclusive. Pursuant to NRS 459.382, governmental entities or agencies of the State are required to complete the following information whenever a determination is made or an action is taken related to hazards involving highly hazardous substances or explosives at a facility. Please complete this form and return it to the Nevada Division of Environmental Protection, 333 West Nye Lane, Room 138, Carson City, Nevada 89706-0851.

1. Facility Name.....

2. Facility Location.....
.....
.....

3. Highly Hazardous Substances or Explosives Present at the Facility

Substance	Estimated Quantity (lbs.)
.....	.....
.....	.....
.....	.....

4. Describe any specific hazards related to highly hazardous substances or explosives which were noticed by regulatory or inspection staff at the facility.....
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.....
.....

5. Describe any action your agency has taken at this facility related to highly hazardous substances or explosives. Include orders, notices, penalties, etc. .....
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.....
.....
.....
.....

6. List statutes, regulations, standards or codes related to or controlling actions taken by your agency.....
.....
.....

7. Agency contact: ..... Phone: .....

8. Authorized signature: ..... Date: .....

Attach additional sheets if required.

(Added to NAC by Div. of Environmental Protec., eff. 7-10-92; A by R137-04, 2-15-2005)

Permits

NAC 459.95345 Permit required for construction; preliminary meeting with Division. (NRS 459.3818**,** 459.3829**)**

1. Before an owner or operator of a facility may commence the construction of a new process subject to C.A.P.P., the owner or operator must obtain a permit to construct the new process from the Division pursuant to NAC 459.95345 to 459.953467, inclusive.

2. Before applying for a permit to construct a new process, the owner or operator of the process must meet with the Division to discuss:

(a) The scope of the project and the applicable codes and standards relating to the design and construction of the project;

(b) The requirements for the submission of documents; and
(c) The schedule for the construction of the project.
(Added to NAC by Environmental Comm'n by R041-01, eff. 10-25-2001; A by R137-04, 2-15-2005)

NAC 459.953451 Application for permit to construct: Submission; contents; requirements for accompanying documents, specifications and calculations. (NRS 459.3818**,** 459.3829**)**

1. To obtain a permit to construct a new process subject to C.A.P.P., an owner or operator of a new process must submit to the Division a complete application for a permit to construct and two copies of the complete application. The Division shall determine which elements of the application, if any, will be reviewed at the site where the new process will be located.

2. An application for a permit to construct a new process must be made on a form prescribed by the Division and include:

(a) Registration for the process that includes:
(1) The information required by NAC 459.9535;
(2) A summary of the hazard assessment conducted pursuant to NAC 459.95364 to 459.95376, inclusive;
(3) The name, address and telephone number of the person submitting the plans;
(4) An overview of the project that includes a description of:
(I) The process;
(II) The hours of operation during which the process will be operated;
(III) The estimated number of personnel, for each shift, who will be working on the process, including, without limitation, personnel in operations, personnel in maintenance, office staff, contract personnel and any other personnel;
(IV) The modes, frequency and hours of transportation of the incoming and outgoing raw materials and products;
(V) The scope of the construction; and
(VI) The schedule for the project; and
(5) Information concerning the inspectors of the construction required pursuant to NAC 459.953461;
(b) A coordinated emergency response plan document developed pursuant to NAC 459.9544 and 459.95442;
(c) Information concerning the process and safety process hazard analysis required pursuant to NAC 459.953455;
(d) Documents, specifications and calculations required pursuant to NAC 459.953457, 459.953459 and 459.95346; and
(e) A copy of the conditional use permit issued pursuant to NRS 278.147.

3. Documents, specifications and calculations submitted pursuant to NAC 459.953457, 459.953459 and 459.95346 must:

(a) Be stamped or sealed in accordance with chapter 625 of NRS, and any regulations adopted pursuant thereto, by the engineer who has responsible charge of the document, specification or calculation; and
(b) Include a table of contents or cover sheet that complies with the requirements of chapter 625 of NRS and any regulations adopted pursuant thereto.
(Added to NAC by Environmental Comm'n by R041-01, eff. 10-25-2001; A by R137-04, 2-15-2005)

NAC 459.953455 Contents of application for permit to construct: Process hazard analysis; information concerning process safety. (NRS 459.3818**,** 459.3829**)**

1. In addition to any other information required to be included pursuant to NAC 459.95345 to 459.953475, inclusive, an application for a permit to construct must include:

(a) Information relating to the hazards of any highly hazardous substance or explosive as described in paragraph (a) of subsection 2 of NAC 459.95412.
(b) A description of the process chemistry, as required in NAC 459.95412, including, without limitation, a description of the potential side reactions, regardless of whether the reactions would create hazardous consequences.
(c) If not readily apparent from the piping and instrument diagrams, documentation concerning the control logic that explains the function of the process controllers, switches and interlocks. Such documentation must be as concise as possible to allow the Division to review and use the information efficiently.
(d) A material and energy balance as required in NAC 459.95412.
(e) A description of the safety system as required in NAC 459.95412.
(f) A complete process hazard analysis performed pursuant to NAC 459.95414.
(g) A list of vessels and rotating equipment, traceable to the piping and instrument diagram, and, if requested by the Division, design and code information.

2. The process hazard analysis and information concerning process safety included in an application for a permit to construct a new process must indicate the current revision number and date on which that revision was carried out.
(Added to NAC by Environmental Comm'n by R041-01, eff. 10-25-2001; A by R137-04, 2-15-2005)

NAC 459.953457 Contents of application for permit to construct: Site plan; plot plans of project area; diagrams; drawings. (NRS 459.3818**,** 459.3829**)**

1. In addition to any other information required to be included pursuant to NAC 459.95345 to 459.953475, inclusive, an application for a permit to construct a new process must include:

(a) A site plan, drawn to scale, that identifies the location within the facility of the new process on a map. A site plan

must include and indicate, without limitation:

(1) The city and county roads in the area of the facility of the new process.

(2) The area encompassing the endpoint of the worst-case release scenarios developed pursuant to NAC 459.95366 or the area encompassing an area extending 1 mile radially from the facility, whichever is larger.

(3) A graphical delineation of the endpoints of each worst-case release scenario and alternative release scenario developed pursuant to NAC 459.95366 and 459.95368.

(4) All major roads and transportation corridors.

(5) Routes for incoming and outgoing raw materials and products.

(6) The location of the first responding fire station and the hazardous materials response station. If the first responding fire station or hazardous materials response station is located outside the plan area, the site plan must include the address of the station and indicate the distance and direction that the station is from the facility.

(7) The location of schools, hospitals and other public receptors within the plan area.

(b) Plot plans of the project area, shown on separate drawings and drawn to scale, that show:

(1) The safety systems, including, without limitation, the locations of:

(I) Water and tankages for other materials associated with the fire suppression systems.

(II) The system pumps and the routing of the distribution piping.

(III) Hydrants, monitors and other similar fire suppression equipment.

(IV) The detectors of toxic and combustible gases and flames.

(V) Personal protective equipment.

(VI) Major process equipment.

(2) The location of the electrical hazardous areas. The plot plan must:

(I) Provide the necessary elevations and include detailed drawings to distinguish between electrically unclassified and electrically classified areas, as those terms are defined in Article 500 of the N.F.P.A. 70, the *National Electrical Code*, adopted by reference pursuant to NAC 459.95528; and

(II) Denote the nationally recognized code or standard upon which the drawing is based to determine the extent of the electrically classified areas.

(c) Process flow diagrams, shown on as many drawings as necessary, developed pursuant to NAC 459.95412. The process flow diagrams must correspond to the material and energy balance submitted pursuant to NAC 459.953455.

(d) Piping and instruments diagrams, shown on as many drawings as necessary, developed pursuant to NAC 459.95412. The piping and instrument diagrams must:

(1) Be submitted on paper that is 11 inches by 17 inches.

(2) Be on an easily legible scale.

(3) Cover the new process. The Division may request that the diagrams include any associated systems, including, without limitation, air, water, nitrogen and process drain systems, if the Division determines that the inclusion of the additional information is necessary to assist with the review of the process hazard analysis.

(4) Indicate all piping, equipment, instruments and controls.

(5) Correspond to:

(I) The process flow diagrams;

(II) The documentation concerning the control logic and the process hazard analysis submitted pursuant to NAC 459.953455; and

(III) The specifications submitted pursuant to NAC 459.953459.

(e) Drawings indicating the concrete foundations and structures related to the new process that are not subject to the review and approval of the local building official. These drawings must include and indicate:

(1) The preparation for the base and subbase, including, without limitation, compaction requirements;

(2) The requirements relating to forms, reinforcing bars and appurtenances;

(3) The specifications relating to concrete and grout;

(4) The requirements for testing and inspection; and

(5) The applicable codes, standards or industry recommended practices governing the design and construction to be used.

(f) Drawings for the structural steel support for the equipment and piping related to the new process that are not subject to the review and approval of the local building official. These drawings must include and indicate:

(1) Specifications for the steel and bolting;

(2) Requirements for welding, testing and inspection; and

(3) The applicable codes, standards or industry recommended practices governing the design and construction to be used.

2. A drawing included pursuant to this section in an application for a permit to construct must indicate the current revision number and date of the drawing and be of sufficient quality so that a legible copy can be made of the drawing. If a drawing is drawn to scale, the scale must be indicated and a bar scale must be included.

(Added to NAC by Environmental Comm'n by R041-01, eff. 10-25-2001; A by R137-04, 2-15-2005)

NAC 459.953459 Contents of application for permit to construct: Specifications. (NRS 459.3818**,** 459.3829**)** Specifications included in an application for a permit to construct a new process:

1. Must indicate the current revision number and date on which the specifications were developed;
2. Must define:

(a) The applicable codes, standards or industry recommended practices to be followed for the design, construction and inspection of the new process;

(b) The design conditions, including, without limitation, maximum allowable working pressures, the design temperatures and the seismic criteria, where applicable;

(c) The required materials of construction;

(d) The qualification requirements for:

(1) The installation methods to be used; and

(2) The personnel performing the construction and inspection activities; and

(e) The requirements for inspection and testing; and

3. Must be provided for process piping, fittings and valves. Requirements for inspection, examination and testing related to piping construction must be appropriate for the application, and must, without limitation:

(a) Meet the requirements defined in Chapter VI of *ASME B31.3 - 1999 Process Piping with Addenda*, which is adopted by reference pursuant to NAC 459.95528;

(b) Require examination of:

(1) Not less than 5 percent of all circumferential butt and miter groove welds by random radiography and require that the welds meet the acceptable criteria for normal fluid service specified in Chapter VI of *ASME B31.3*; and

(2) Not less than 5 percent of socket welds and other fillet welds by magnetic particle, liquid penetrant or ultrasonic testing and require that the welds meet the acceptance criteria for normal fluid service specified in Chapter VI of *ASME B31.3*.

(Added to NAC by Environmental Comm'n by R041-01, eff. 10-25-2001; A by R137-04, 2-15-2005)

NAC 459.95346 Contents of application for permit to construct: Calculations. (NRS 459.3818**,** 459.3829**)**

1. In addition to any other information required to be included, an application for a permit to construct a new process must include calculations for:

(a) Concrete foundations for drawings submitted pursuant to NAC 459.953457, including, without limitation, a soils report to support the design calculations;

(b) Structural steel drawings submitted pursuant to NAC 459.953457; and

(c) The capacity of pressure relief devices and pressure relief systems to be included in the new process.

2. Calculations included in an application for a permit to construct a new process must indicate the current revision number and the date of the current calculation.

3. Each set of calculations must include a cite to the applicable code, standard or industry recommended practice governing the design and construction that was used in making the calculation.

4. If the calculations are computer-generated, the calculations must include:

(a) A complete description of the mathematical model used in the design; and

(b) An identification of the design program used, input data required, limitations on the application of the program and the final results.

5. Upon the request of the Division, an applicant for a permit to construct shall provide supporting information for the calculations provided in the application, including, without limitation, data generated by vendors.

(Added to NAC by Environmental Comm'n by R041-01, eff. 10-25-2001; A by R137-04, 2-15-2005)

NAC 459.953461 Contents of application for permit to construct: Information concerning inspectors for construction of process pipes, concrete foundations and structural steel. (NRS 459.3818**,** 459.3829**)**

1. An applicant for a permit to construct must include in the application information concerning the inspectors for the construction of process pipes, concrete foundations and structural steel if these activities are to be permitted pursuant to NAC 459.953467.

2. The information concerning the inspectors must identify:

(a) Each inspector to be employed by the applicant;

(b) The scope of the inspection services to be provided by each inspector, including, without limitation, the types of observations and tests to be used; and

(c) The qualifications of each inspector that will enable the inspector to perform the inspection. If the inspector is required to be certified or hold other specific credentials to perform his duties, the applicant must include a copy of the required certifications or credentials.

(Added to NAC by Environmental Comm'n by R041-01, eff. 10-25-2001)

NAC 459.953463 Initial review of application for permit to construct; notification of applicant concerning completeness of application. (NRS 459.3818**,** 459.3829**)**

1. Upon receipt of an application for a permit to construct a new process, the Division shall review the application to determine if the application includes all the information required by NAC 459.953451. Not later than 30 days after the date on which an application is received, the Division shall provide to the applicant its initial determination as to the completeness of the application.

2. If the Division determines that an application for a permit to construct does not include all the inform[redacted] required by NAC 459.953451, the Division shall notify the applicant of its determination and include in the notice a description or list of the deficiencies.

3. If the Division determines that an application for a permit to construct is not complete, the Division may:

(a) Return all the submitted information to the applicant and require the applicant to resubmit the application when completed; or

(b) Delay the review of the incomplete application until the applicant submits the required information and the application is determined to be complete.

(Added to NAC by Environmental Comm'n by R041-01, eff. 10-25-2001)

NAC 459.953465 Notice of receipt of application for permit to construct; period for public comment; action by Division after period of public comment. (NRS 459.3818**,** 459.3829**)**

1. Upon determining that an application for a permit to construct a new process is complete, the Division shall issue a notice of its receipt of the application. The notice must:

(a) Be sent to the applicant and the local governing body in the area in which the new process is to be located, and be published in a newspaper of general circulation for the area in which the process is to be located; and

(b) Summarize the review to be conducted by the Division on the application for the permit to construct and state that the following information will be available for public review:

(1) The registration submitted pursuant to NAC 459.953451;

(2) The coordinated emergency plan document;

(3) The site plan; and

(4) A copy of the conditional use permit.

2. The period for public comment must be 30 days and commences on the date on which the notice is published in the newspaper.

3. Not later than 15 days after the date on which the period for public comment concerning an application for a permit to construct closes, the Division may, after considering the documents that are part of the application, require further modifications if such modifications are determined necessary to satisfy the requirements set forth in NAC 459.953467 for issuing a permit to construct.

(Added to NAC by Environmental Comm'n by R041-01, eff. 10-25-2001; A by R137-04, 2-15-2005)

NAC 459.953467 Conditions for issuance of permit to construct; approval of site plan; certain modifications in construction to be reflected in pre-start-up safety review. (NRS 459.3818**,** 459.3829**)**

1. The Division shall issue a permit to construct a new process if the Division:

(a) Approves the analysis of off-site consequences developed pursuant to NAC 459.95364 to 459.95376, inclusive;

(b) Determines that the inspectors for the construction to be used by the applicant for the permit to construct:

(1) Are capable of providing an inspection as required by the applicable specifications, codes and standards, and of ensuring that the construction and installation of the new process is performed pursuant to those specifications, codes and standards;

(2) Are qualified by experience and, if applicable, hold the proper certifications and credentials to perform their duties as inspectors; and

(3) Are not employed by or under contract with any entity that will be performing the construction activity subject to the permit to construct unless that entity is the owner or operator;

(c) Determines that:

(1) The emergency response program developed pursuant to NAC 459.9544 and 459.95442 is complete;

(2) Full-time emergency response capability is available; and

(3) Hazardous materials response capability:

(I) Is available pursuant to the requirements of 29 C.F.R. § 1910.120;

(II) Is available 24 hours a day; and

(III) Will be provided by an organization that is not a volunteer fire department;

(d) Determines that the process hazard analysis complies with NAC 459.95414;

(e) Approves the site plan developed pursuant to NAC 459.953457;

(f) Determines that:

(1) The plans identifying the locations of the electrical hazardous area developed pursuant to NAC 459.953457 are in compliance with the applicable codes and standards, except that the Division may accept a local building official's approval of the drawing if the criteria set forth in NAC 459.953457 are met;

(2) The piping and instrument diagrams are consistent with the process flow diagrams and specifications;

(3) The drawings of the concrete foundation are consistent with the applicable calculations submitted;

(4) The drawings relating to the structural steel to be used in the construction are consistent with the applicable calculations submitted;

(5) The specifications submitted comply with the applicable codes and standards, and the selected materials and design parameters are determined to be compatible with the process; and

(6) The calculations submitted provide answers that represent generally accepted calculation methods and comply

with the appropriate codes, standards and industry recommended practices, where applicable;

(g) Finds, upon its review of the portions of the new process, that those portions are in conformance with any requirement set forth in the conditional use permit issued pursuant to NRS 278.147 that require compliance with any part of NRS 459.380 to 459.3874, inclusive, or any regulation adopted pursuant thereto;

(h) Completes the public review and comment process and any modifications required by NAC 459.953465 have been put into place; and

(i) Determines that the applicant is not delinquent on the payment of fees assessed pursuant to NAC 459.953475.

2. For the Division to approve a site plan:

(a) The worst-case release scenarios developed pursuant to NAC 459.95366 must be mitigated in a manner acceptable to the Division to minimize the impact on public receptors located outside the industrial zoning district in which the new process will be located. At a minimum, some level of passive or active mitigation must be employed.

(b) The alternate release scenarios developed pursuant to NAC 459.95368 must be mitigated in a manner acceptable to the Division to minimize the impact on public receptors located outside the industrial zoning district in which the new process will be located. At a minimum, some level of mitigation must be employed, including, without limitation, the use of toxic or combustible gas sensors, as appropriate, that must be physically located to enable the detection of a release and a response thereto in a timely manner to minimize the impact of the release.

(c) The locations of the emergency responders as shown on the site plan must be consistent with the locations of the emergency responders identified in the emergency response program.

3. Any modification in the construction of a new process allowed pursuant to subsection 1 that causes the alteration of any document, drawing or specification must be reflected in the pre-start-up safety review conducted pursuant to NAC 459.95425.

(Added to NAC by Environmental Comm'n by R041-01, eff. 10-25-2001; A by R137-04, 2-15-2005)

NAC 459.953469 Commencement of construction before issuance of permit to construct. (NRS 459.3818**,** 459.3829**)**

1. If the Division determines that a new process is being constructed in the interest of mitigating the effects of acutely hazardous conditions on public safety, the environment or the health of personnel, and timely implementation of the new process is critical to ensure the preservation of those objectives, the Division may allow the owner or operator to commence construction on the new process before the permit to construct is issued.

2. The owner or operator of a new process may commence construction before a permit to construct is issued if:

(a) The owner or operator submits with its application for a permit to construct a letter detailing the reasons for the request to begin construction before the issuance of the permit to construct; and

(b) The Division determines the application to be complete and has not identified any significant unmitigated hazard.

3. The Division may:

(a) Impose such conditions as it determines necessary in authorizing an owner or operator to commence construction before a permit to construct is issued; and

(b) Revoke the authorization if it determines that the owner or operator has not complied with the conditions imposed.

(Added to NAC by Environmental Comm'n by R041-01, eff. 10-25-2001)

NAC 459.95347 Maintenance and availability of information during construction activity; revised schedule for construction upon issuance of permit to construct. (NRS 459.3818**,** 459.3829**)**

1. During any construction activity done on a new process approved in accordance with NAC 459.953467, the owner or operator of the new process shall:

(a) Maintain on-site:

(1) All documents, drawings and specifications related to the construction and operation of the new process;

(2) All records relating to inspections and testing related to the construction; and

(3) All records relating to the construction procedure and qualifications of persons performing the construction; and

(b) Make available such information to the Division or an authorized representative of the Division upon request by the Division or its representative.

2. Upon the issuance of a permit to construct, the owner or operator to whom the permit is issued shall provide the Division with a revised schedule for the construction that includes the approximate timing as to when:

(a) Concrete foundations will be poured;

(b) The erection of the structural steel components will be commenced;

(c) The fabrication of the process piping will be commenced;

(d) The hydrotesting for the process piping will be commenced; and

(e) Any other activities identified by the Division or an authorized representative of the Division will be performed or commenced.

(Added to NAC by Environmental Comm'n by R041-01, eff. 10-25-2001; A by R137-04, 2-15-2005)

NAC 459.953471 Permit to operate: Requirements to commence operation or to bring highly hazardous substances or explosives onto site of new process. (NRS 459.3818**,** 459.3829**)** Before an owner or operator of a facility:

1. Commences the operation of a new process; or

2. Brings any highly hazardous substances or explosives onto the site of the new process,
➥ the owner or operator must obtain a permit to operate from the Division pursuant to NAC 459.953473.
(Added to NAC by Environmental Comm'n by R041-01, eff. 10-25-2001; A by R137-04, 2-15-2005)

NAC 459.953473 Permit to operate: Conditions for issuance; notification of Division when certain requirements are satisfied. (NRS 459.3818, 459.3829)

1. The Division shall issue a permit to operate to the owner or operator of a new process only if:

(a) The Division has issued a permit to construct the new process;

(b) The owner or operator has received all appropriate permits from the local building official for the drawings and calculations for the construction of concrete foundations and structural steel;

(c) The Division determines that the requirements set forth in NAC 459.95341, 459.953475 and 459.95412 to 459.95442, inclusive, have been satisfied; and

(d) The owner or operator is not delinquent on the payment of fees assessed pursuant to NAC 459.953475.

2. The owner or operator of a new process shall notify the Division when the owner or operator determines that the new process satisfies the requirements of any provision set forth in NAC 459.95341 or 459.95412 to 459.95442, inclusive, and is ready for review by the Division.

(Added to NAC by Environmental Comm'n by R041-01, eff. 10-25-2001; A by R137-04, 2-15-2005)

NAC 459.953475 Fees; request for Division to cease evaluation for permit. (NRS 459.3818, 459.3829)

1. An owner or operator of a new process shall remit fees to the Division for activities conducted by the Division relating to permitting activities conducted pursuant to NAC 459.95345 to 459.953473, inclusive.

2. Upon the determination by the Division that an application for a permit to construct a new process is complete, the owner or operator shall remit $5,000 to the Division. The Division shall issue invoices to the owner or operator for any costs in excess of $5,000, except that:

(a) If the new process has 5 or less piping and instrument diagrams, not including drawing legend sheets and utility piping and instrument diagrams, invoices may not be issued for more than a cumulative amount of $40,000;

(b) If the new process has at least 6 but not more than 20 piping and instrument diagrams, not including drawing legend sheets and utility piping and instrument diagrams, invoices may not be issued for more than a cumulative amount of $50,000; or

(c) If the new process has more than 20 piping and instrument diagrams, not including drawing legend sheets and utility piping and instrument diagrams, invoices may not be issued for more than a cumulative amount of $50,000, plus $500 for each piping and instrument diagram in excess of 20 diagrams.

3. The Division shall accrue charges for activities relating to the permitting of the new process conducted by:

(a) Personnel of the Division in the amount of $68 per hour; and

(b) Contractors in an amount equal to the cost to the Division, plus 5 percent.

4. The Division shall not require the owner or operator to pay more than the maximum cumulative amount for the respective new process as set forth in subsection 2, except that fees related to:

(a) The review of the concrete foundations or structural steel design; and

(b) Reviewing corrections,
➥ must not be considered when determining the maximum fee owed by the owner or operator.

5. After issuing a permit to operate to an owner or operator, the Division shall refund any excess fee paid to the Division by the owner or operator pursuant to this section.

6. The owner or operator may request in writing that the Division cease work on evaluating the application for a permit to construct, or evaluating whether the owner or operator has satisfied the requirements for the issuance of a permit to operate, at any time before the permit is issued. Upon receipt of such a request, the Division shall stop its evaluation and:

(a) Issue an invoice to the owner or operator for any outstanding money due pursuant to this section, including any money committed to any engineering contractor for review services; or

(b) Refund any excess fee paid to the Division by the owner or operator pursuant to this section,
➥ as appropriate.

(Added to NAC by Environmental Comm'n by R041-01, eff. 10-25-2001; A by R137-04, 2-15-2005)

Registration

NAC 459.95348 General requirements. (NRS 459.3818, 459.3822, 459.3832, 459.3833)

1. The owner or operator shall:

(a) Complete annually a single registration form covering all processes subject to C.A.P.P.;

(b) Submit the annual registration pursuant to subsection 6 to the Division on or before June 21 of each year; and

(c) Certify the annual registration pursuant to NAC 459.95337.

2. The registration must reflect the maximum quantity of all highly hazardous substances and explosives on-site between June 1 of the previous year and May 31 of the current year.

3. Except as otherwise provided in this subsection, before starting a new process, the owner or operator shall submit a

registration form covering all the processes subject to C.A.P.P., including the new process, at least 90 days before introducing the highly hazardous substance or explosive into the facility. An owner or operator does not need to submit a registration form pursuant to this subsection to include a new process in his registration if the owner or operator has submitted an application for a permit to construct for the new process pursuant to NAC 459.953451.

4. If a facility is or becomes subject to the provisions of subparagraph (2) of paragraph (a) of subsection 1 of NAC 459.95323, the owner or operator shall submit the registration pursuant to subsection 6 not later than 90 days after the provisions of subparagraph (2) of paragraph (a) of subsection 1 of NAC 459.95323 take effect.

5. If the State Environmental Commission amends a threshold quantity or mixture concentration of a substance or adds a new substance to the table of highly hazardous substances set forth in subsection 1 of NAC 459.9533 and a facility has a process that uses the new substance or that uses the substance in an amount that exceeds the amended threshold quantity or mixture of concentration, the owner or operator shall, not later than 90 days after the effective date of the regulation which contains the addition or amendment, submit to the Division registration for the process in accordance with subsection 6.

6. A complete registration consists of:

(a) Information about the facility as set forth in NAC 459.9535;

(b) A summary of the accident history in accordance with NAC 459.95354;

(c) The status of any recommendation of the process hazard analysis developed pursuant to subsection 8 of NAC 459.95414 that was unresolved when the registration for the previous year was submitted;

(d) Such other information that may be required by the Division; and

(e) Certification as set forth in NAC 459.95337.

(Added to NAC by Environmental Comm'n by R121-98, 5-27-99, eff. 6-21-99; A by R041-01, 10-25-2001; R137-04, 2-15-2005)

REVISER'S NOTE.

The regulation of the State Environmental Commission filed with the Secretary of State on February 15, 2005 (LCB File No. R137-04), which amended this section, contains the following provision not included in NAC:

"Notwithstanding any provision of NAC 459.95348 to the contrary, an owner or operator who, on February 15, 2005, holds an annual registration covering all the processes subject to the tier A or tier B program that was issued pursuant to the former provisions of NAC 459.95348 shall be deemed to hold an annual registration for those processes issued pursuant to the provisions of NAC 459.95348 as amended by this regulation."

NAC 459.9535 Annual registration: Information concerning facility. (NRS 459.3818**,** 459.3822**,** 459.3833**)** Information about the facility on the annual registration form must include:

1. The name, street, city, county, state, zip code, latitude and longitude of the facility, the method for obtaining the latitude and longitude, and a description of the location that the latitude and longitude represent.
2. The Dun & Bradstreet number for the facility.
3. The name and Dun & Bradstreet number of any parent corporation.
4. The name, telephone number and mailing address of the owner or operator.
5. The name and title of the person with overall responsibility for the implementation of C.A.P.P.
6. The name, title, telephone number during normal business hours and telephone number that is available 24 hours per day of an emergency contact.
7. For each process:

(a) The name and C.A.S. number of each substance.

(b) The maximum quantity of each substance on-site between June 1 of the previous year and May 31 of the current year. For a new process, the owner or operator shall include in its annual registration form information about the maximum inventory they expect to have on-site through the following May 31.

(c) The N.A.I.C.S. code that is applicable to the process.

8. The identifier assigned by the United States Environmental Protection Agency, if any, to the facility.
9. The number of full-time employees at the facility.
10. Whether the facility is subject to 29 C.F.R. § 1910.119.
11. Whether the facility is subject to 40 C.F.R. Part 355.
12. Whether the facility has an operating permit pursuant to 40 C.F.R. Part 70 and, if applicable, the permit number.
13. The date of the last safety inspection of the facility by a federal, state or local governmental agency and the identity of the inspecting entity.

(Added to NAC by Environmental Comm'n by R121-98, 5-27-99, eff. 6-21-99; A by R041-01, 10-25-2001; R137-04, 2-15-2005)

NAC 459.95354 Annual registration: Accident history of facility. (NRS 459.3818**,** 459.3822**,** 459.3833**)** An annual registration must include an accident history of the facility for the period starting on June 1 of the previous year and ending on May 31 of the current year. The accident history of the facility must include a description of:

1. Any unanticipated or unusual event at the facility that resulted in the release, including, without limitation, any accidental releases, of any highly hazardous substance or explosive; and
2. The efforts undertaken by the owner and operator of the facility to assess the reasons and develop a remedy for the release or accidental release of the substance.

(Added to NAC by Environmental Comm'n by R121-98, 5-27-99, eff. 6-21-99; A by R041-01, 10-25-2[redacted]R137-04, 2-15-2005)

Hazard Assessments

NAC 459.95364 Parameters for analysis of off-site consequences. (NRS 459.3818**,** 459.3833**)**

1. An owner or operator shall use the following endpoints when preparing an analysis of off-site consequences:

(a) For toxic highly hazardous substances, the toxic endpoints provided pursuant to NAC 459.9533;

(b) For flammable highly hazardous substances and explosives:

(1) In a scenario that studies the potential effects of an explosion, an overpressure of 1 psi (0.0703 kilograms per square centimeter);

(2) In a scenario that studies radiant heat and exposure time, a radiant heat of 5 kw/m^2 (1586 BTU per hour per square foot) for 40 seconds; or

(3) In a scenario that studies the lower flammability limit, the lower flammability limit provided by the N.F.P.A. or other generally recognized sources; or

(c) If an endpoint is not provided pursuant to NAC 459.9533 or a substance is not designated or classified as toxic, flammable or explosive pursuant to NAC 459.9533, the owner or operator shall define an appropriate endpoint that results in the greatest impact to employees and public receptors. The owner or operator shall define a toxic endpoint in a manner that is comparable to the health impacts defined by ERPG-2 of the *Emergency Response Planning Guidelines Series*, which is adopted by reference pursuant to NAC 459.95528, and shall define a flammable or explosive endpoint as set forth in paragraph (b).

2. The owner or operator shall use a wind speed of 1.5 meters per second (4.9 feet per second) and an atmospheric stability class of F when preparing the worst-case release analysis, except that, if the owner or operator demonstrates that local meteorological data show a higher minimum wind speed or less stable atmosphere at all times during the previous 3 years, these minimums may be used. For an analysis of an alternative scenario, the owner or operator shall use the typical meteorological conditions.

3. Except as otherwise provided in this subsection, the owner or operator shall use the highest daily maximum temperature during the previous 3 years and the average humidity for the site based on temperature and humidity data gathered on-site or at a local meteorological station for a worst-case release analysis involving a toxic highly hazardous substance. A facility using the *R.M.P. Guidance for Off-Site Consequence Analysis*, which is adopted by reference pursuant to NAC 459.95528, may use 25°C (77°F) and 50 percent humidity as values for these variables. For an analysis of an alternative scenario, the owner or operator may use typical temperature and humidity data gathered on-site or at a local meteorological station.

4. The owner or operator shall analyze:

(a) A worst-case release of a toxic highly hazardous substance assuming a ground level (0 feet) release.

(b) An alternative scenario involving a toxic highly hazardous substance using the release height that is determined by the release scenario.

5. The owner or operator shall use urban or rural topography for a worst-case release scenario or an alternative scenario, as appropriate. An urban topography has many obstacles, such as buildings and trees, in the immediate area. A rural topography has no buildings in the immediate area, and the terrain is generally flat and unobstructed.

6. The owner or operator shall ensure that any table or model used for a dispersion analysis of a toxic highly hazardous substance appropriately accounts for gas density.

7. For a worst-case release analysis, the owner or operator shall assume that a liquid other than a gas which is liquefied by refrigeration only is released at the highest daily maximum temperature based on data for the previous 3 years appropriate for the facility, or at process temperature, whichever is higher. For an alternative scenario, the owner or operator may assume that the substance is released at a process or ambient temperature which is appropriate for the scenario.

8. As used in this section, "typical meteorological conditions" means the temperature, wind speed, cloud cover and atmospheric stability class that prevail at the site based on data gathered at or near the site or from a local meteorological station.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.95366 Analysis of worst-case scenarios. (NRS 459.3818**,** 459.3833**)**

1. The owner or operator of a facility may use the guidelines set forth in the *R.M.P. Guidance for Off-Site Consequence Analysis*, which is adopted by reference pursuant to NAC 459.95528, to calculate any of the values required in this section.

2. For each process, the owner or operator shall prepare:

(a) One worst-case release scenario that is estimated to create the greatest distance in any direction to an endpoint resulting from an accidental release of a toxic highly hazardous substance under worst-case conditions as described in NAC 459.95364;

(b) One worst-case release scenario that is estimated to create the greatest distance in any direction to an endpoint resulting from an accidental ignition or detonation of a flammable or explosive substance under worst-case release

conditions as described in NAC 459.95364; and

(c) Additional worst-case release scenarios for a facility if:

(1) A worst-case release from another process at the facility potentially affects different public receptors than those affected by the worst-case release scenario prepared pursuant to paragraphs (a) and (b); or

(2) A toxic or flammable highly hazardous substance is present in excess of the threshold quantity and was not considered as part of the worst-case release scenarios prepared pursuant to paragraphs (a) and (b).

3. When preparing a worst-case release scenario:

(a) For a highly hazardous substance, the owner or operator shall assume that the release quantity is the greater of:

(1) For substances in a vessel, the greatest amount held in a single vessel, taking into account administrative controls that limit the maximum quantity.

(2) For substances in pipes, the greatest amount in a pipe, taking into account administrative controls that limit the maximum quantity.

(b) For an explosive, the owner or operator shall select the inventory that produces the greatest distance to an endpoint.

4. The owner or operator shall model each substance as a toxic substance, a flammable substance or an explosive as described in NAC 459.9533. If a substance is not described as a toxic substance, a flammable substance or an explosive pursuant to NAC 459.9533, the owner or operator shall select the scenario providing the most significant impact on employees and the public.

5. For toxic substances that are normally gases at ambient temperature and handled as a gas or as a liquid under pressure, the owner or operator shall:

(a) Assume that the quantity in the vessel or pipe, as determined pursuant to subsection 3, is released as a gas over a period of 10 minutes;

(b) Assume that the release rate, in pounds per minute, is the total quantity divided by 10, unless passivemitigation systems are in place; and

(c) Calculate the impact of passive mitigation measures on the release rate using the *R.M.P. Guidance for Off-Site Consequence Analysis*, which is adopted by reference pursuant to NAC 459.95528.

6. For gases handled as refrigerated liquids at ambient pressure, the owner or operator:

(a) Shall assume that the substance is released as a gas in 10 minutes, if the released substance is not contained by passive mitigation systems or if the contained pool would have a depth of 1 cm (0.39 inch) or less; and

(b) May assume that the quantity of the substance in the vessel or pipe, as determined pursuant to subsection 3, is spilled instantaneously to form a liquid pool, if the released substance is contained by passive mitigation systems in a pool with a depth greater than 1 cm (0.39 inch). The owner or operator shall calculate the volatilization rate at the boiling point of the substance and at the conditions set forth in subsections 7, 8 and 9.

7. For toxic substances that are normally liquids at ambient temperature, the owner or operator shall assume that the quantity in the vessel or pipe, as determined pursuant to subsection 3, is spilled instantaneously to form a liquid pool. The owner or operator shall determine the surface area of the pool by assuming that the liquid spreads to 1 cm (0.39 inch) deep, unless passive mitigation systems are in place that serve to contain the spill and limit the surface area. If passive mitigation is in place, the owner or operator shall use the surface area of the contained liquid to calculate the volatilization rate. If the release would occur onto a surface that is not paved or smooth, the owner or operator may take into account the actual surface characteristics.

8. When determining the volatilization rate for purposes of subsection 7, the owner or operator shall account for:

(a) The highest daily maximum temperature occurring during the past 3 years;

(b) The temperature of the substance in the vessel; and

(c) If the liquid spilled is a mixture or solution, the concentration of the substance.

9. For purposes of subsection 7, the owner or operator shall determine the rate of release to air from the volatilization rate of the liquid pool determined pursuant to subsection 8. The owner or operator may use the methodology set forth in the *R.M.P. Guidance for Off-Site Consequence Analysis*, which is adopted by reference pursuant to NAC 459.95528, or another publicly available technique that accounts for the modeling conditions and is recognized in the industry as a current practice. The owner or operator may use a proprietary model that accounts for the modeling conditions if the owner or operator allows the Division access to the model and describes to local emergency planners, upon request, the features of the model and any differences from publicly available models.

10. The owner or operator shall assume that the quantity of the flammable substance determined pursuant to subsection 3 vaporizes resulting in a vapor cloud explosion. The owner or operator shall use a yield factor of 10 percent of the available energy released in the explosion to determine the distance to the explosion endpoint if the model used is based on TNT-equivalent methods.

11. For explosives, the owner or operator shall employ methods for calculating overpressure based upon generally accepted practices.

12. The owner or operator shall use the parameters defined in NAC 459.95364 to determine the distance to the endpoints. The owner or operator may use the methodology provided in the *R.M.P. Guidance for Off-Site Consequence Analysis*, which is adopted by reference pursuant to NAC 459.95528, or any commercially or publicly available technique for air dispersion modeling if the technique accounts for the modeling conditions and is recognized in the industry as a current practice. The owner or operator may use a proprietary model that accounts for the modeling conditions if the owner or operator allows the Division access to the model and describes to local emergency planners, upon request, the

features of the model and any differences in the model from publicly available models.

13. The owner or operator may consider passive mitigation systems for the worst-case release scenario analysis if the mitigation system is capable of withstanding the event that triggered the release and still function as intended.

14. Notwithstanding the provisions of subsection 3, the owner or operator shall select as the worst-case scenario for a flammable substance, the worst-case scenario for a toxic highly hazardous substance or the worst-case scenario for an explosive, a scenario based on proximity to the boundary of the facility and smaller quantities of the substance handled at a higher process temperature or pressure if such a scenario would result in a greater distance to an endpoint beyond the facility boundary than the scenario provided pursuant to subsection 3.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R041-01, 10-25-2001; R137-04, 2-15-2005)

NAC 459.95368 Analysis of alternative release scenarios. (NRS 459.3818**,** 459.3833**)**

1. The owner or operator shall identify and analyze at least one alternative release scenario for each toxic highly hazardous substance that is used in a process and at least one alternative release scenario to represent all flammable highly hazardous substances or explosives that are used in processes.

2. The facility may use the *R.M.P. Guidance for Off-Site Consequence Analysis*, which is adopted by reference pursuant to NAC 459.95528, to calculate any of the values required in this section.

3. For each scenario required pursuant to subsection 1, the owner or operator shall select a scenario that:

(a) Is more likely to occur than the worst-case release scenario developed pursuant to NAC 459.95366; and

(b) Will reach an endpoint off-site. If no alternate release scenario will reach an endpoint off-site, then the owner or operator shall select the alternate release scenario with the most significant on-site impact.

4. The owner or operator shall consider, without limitation and where applicable, scenarios in which:

(a) A transfer hose releases because of splits or sudden uncoupling of the hose;

(b) Process piping releases because of a failure at a flange, joint, weld, valve and valve seal, drain or bleed;

(c) A process vessel or pump releases because of a crack or a failure of a seal, drain, bleed or plug;

(d) A vessel overfills and spills, or overpressurizes and vents through a relief valve or rupture disc; and

(e) A shipping container is mishandled and thereby breaks or is punctured leading to a spill.

5. The owner or operator:

(a) Shall use the appropriate parameters set forth in NAC 459.95364 to determine the distance to the endpoints;

(b) May use:

(1) The methodology provided in the *R.M.P. Guidance for Off-Site Consequence Analysis*, which is adopted by reference pursuant to NAC 459.95528; or

(2) A commercially or publicly available technique for air dispersion modeling, if the technique accounts for the specified modeling conditions and is recognized in the industry as a current practice; and

(c) May use a proprietary model that accounts for the modeling conditions if the owner or operator allows the Division access to the model and describes to local emergency planners, upon request, the features of the model and any differences from publicly available models.

6. The owner or operator may consider active and passive mitigation systems for an alternative release scenario if the mitigation systems are capable of withstanding the event that triggered the release and still function as intended.

7. When selecting the alternative release scenarios, the owner or operator shall consider, without limitation:

(a) Any accidental release and any incident that was investigated pursuant to NAC 459.95429; and

(b) The analyses performed pursuant to NAC 459.95414.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.9537 Estimation of population potentially affected. (NRS 459.3818**,** 459.3833**)**

1. The owner or operator shall estimate the population within a circle that has its center at the point of the release and a radius that is the equivalent of the distance to the endpoint determined pursuant to NAC 459.95364. In making the estimation of the population, the owner or operator shall take into account the presence of institutions, such as schools, hospitals, prisons, parks and recreational areas, and major commercial, office and industrial buildings within the circle.

2. The owner or operator may use the *R.M.P. Guidance for Off-Site Consequence Analysis*, which is adopted by reference pursuant to NAC 459.95528, to calculate the values required in this section.

3. The owner or operator may use the most recent census data or any other updated information to estimate the population potentially affected.

4. The owner or operator shall estimate the population to two significant digits.

5. The owner or operator shall maintain at his facility the current estimate of population made pursuant to this section.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.95372 Definition of environmental receptors. (NRS 459.3818**,** 459.3833**)**

1. The owner or operator shall define the environmental receptors within a circle with its center at the point of the release and a radius that is the equivalent of the distance to the endpoint determined pursuant to NAC 459.95364.

2. The owner or operator may use the *R.M.P. Guidance for Off-Site Consequence Analysis*, which is adopted by reference pursuant to NAC 459.95528, to calculate the values required in this section.

3. The owner or operator may rely on information provided on local maps prepared by the United States Geological Survey or on any source containing United States Geological Survey data to identify environmental receptors.

4. The owner or operator shall maintain at his facility the current list of environmental receptors defined by the owner or operator pursuant to this section.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.95374 Review and update of off-site consequence analyses; revised analyses. (NRS 459.3818**,** 459.3833**)**

1. The owner or operator shall review and update the off-site consequence analyses developed pursuant to NAC 459.95364 to 459.95372, inclusive, at least once every 5 years.

2. If there is a change at a facility in a process that involves a highly hazardous substance or explosive or the quantity of such a substance or explosive that is stored or handled at the facility, or if any other change at the facility might reasonably be expected to increase or decrease the distance to the endpoint by a factor of two or more, the owner or operator shall prepare a revised analysis not later than 6 months after the change.

3. The owner or operator shall maintain at his facility the revised analysis prepared pursuant to this section.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.95376 Documentation to be maintained concerning worst-case release scenarios and alternative release scenarios. (NRS 459.3818**,** 459.3833**)** The owner or operator shall maintain at his facility:

1. For worst-case release scenarios:

(a) A description of the vessel or pipeline and substance that the owner or operator selected as worst-case; and

(b) A list of the assumptions and parameters that the owner or operator used, including, without limitation:

(1) A description of any administrative controls and passive mitigation that the owner or operator assumed to limit the quantity of the substance which would be released;

(2) The anticipated effect of the controls and mitigation on the release quantity and rate; and

(3) The reasons why the owner or operator selected these assumptions and parameters.

2. For alternative release scenarios:

(a) A description of the scenarios that the owner or operator identified; and

(b) A list of the assumptions and parameters that the owner or operator used, including, without limitation:

(1) A description of any administrative controls and active or passive mitigation that the owner or operator assumed to limit the quantity of the substance which would be released;

(2) The anticipated effect of the controls and mitigation on the release quantity and rate; and

(3) The reasons why the owner or operator selected these assumptions and parameters.

3. For worst-case scenarios and alternative release scenarios:

(a) Documentation of:

(1) The estimated quantity released, release rate and duration of release;

(2) The methodology that the owner or operator used to determine the distance to the endpoints; and

(3) The data that the owner or operator used to estimate the population and environmental receptors which potentially will be affected; and

(b) Verification that the active and passive mitigation systems are designed to remain functional under the conditions of the release scenarios.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99)

Prevention Programs

NAC 459.95412 Compilation of information concerning process safety. (NRS 459.3818**,** 459.3833**)**

1. The owner or operator of a facility with a process that is subject to C.A.P.P. shall compile written information concerning process safety before conducting a process hazard analysis required pursuant to NAC 459.95414.

2. The information concerning process safety must include, without limitation, information pertaining to:

(a) The hazards of the highly hazardous substances or explosives, including, without limitation:

(1) Toxicity information;

(2) Permissible exposure limits;

(3) Physical data;

(4) Reactivity data;

(5) Corrosivity data;

(6) Thermal and chemical stability data; and

(7) The foreseeable hazardous effects of inadvertent mixing of different materials.

➥ Material safety data sheets that satisfy the requirements of 29 C.F.R. § 1910.1200(g) may be used to comply with this requirement to the extent they contain the information required by this paragraph.

(b) The technology of the process, including, without limitation:

(1) A block flow diagram or simplified process flow diagram;

(2) The process chemistry;

(3) The maximum intended inventory;

(4) The safe upper and lower limits for any applicable process variable, including, without limitation, temperature, pressure, flow and composition; and

(5) An evaluation of the consequences of deviations.

(c) The equipment in the process, including, without limitation:

(1) The materials of construction;

(2) Piping and instrument diagrams;

(3) Electrical classification;

(4) The design of the relief system and the basis for the design;

(5) The design of the ventilation system;

(6) Design codes and standards that were employed;

(7) The material and energy balances for processes that were built after May 26, 1992; and

(8) The safety systems, such as interlocks, detection or suppression systems.

3. The owner or operator shall evaluate processes and equipment for conformance to applicable codes, standards and good engineering practices and document that the processes and equipment comply with recognized and generally accepted good engineering practices.

4. For existing processes and equipment designed and constructed in accordance with codes, standards or practices that are no longer in general use, the owner or operator shall determine and document that the equipment is designed, maintained, inspected, tested and operating in a safe manner.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.95414 Process hazard analysis. (NRS 459.3818**,** 459.3833**)**

1. The owner or operator shall perform an initial process hazard analysis on a process that is subject to C.A.P.P. before introducing highly hazardous substances or explosives to the process.

2. An owner or operator may use a process hazard analysis that was previously completed to comply with NRS 459.380 to 459.3874, inclusive, or 29 C.F.R. § 1910.119(e) to satisfy the requirement to perform an initial process hazard analysis provided that the analysis reflects the current process.

3. The owner or operator shall obtain the approval of the Division concerning the methodology of the process hazard analysis before conducting the analysis.

4. The owner or operator shall select one or more of the following methodologies as required by the complexity of the process:

(a) A "what if" analysis;

(b) A checklist;

(c) A "what if" analysis combined with a checklist;

(d) A hazard and operability study;

(e) A failure mode and effects analysis;

(f) A fault tree analysis; or

(g) An appropriate equivalent methodology.

5. When preparing a process hazard analysis, an owner or operator shall consider:

(a) The hazards of the process;

(b) Any previous incident that had a likely potential for catastrophic consequences, including, without limitation, near misses or accidental releases;

(c) The engineering and administrative controls that are applicable to the hazards and their interrelationships, including, without limitation, the appropriate application of detection methodologies such as process monitoring, control instrumentation with alarms or detection hardware;

(d) The consequences of a failure of engineering and administrative controls;

(e) The siting of the facility;

(f) The human factors; and

(g) A qualitative evaluation of a range of the possible safety and health effects of a failure of controls.

6. If not evaluated as part of the process hazard analysis pursuant to subsections 1 to 5, inclusive, a separate, dedicated hazard analysis, utilizing a checklist or other appropriate method, must be conducted to evaluate:

(a) Human factors;

(b) Facility siting; and

(c) External forces.

7. The owner or operator shall conduct the process hazard analysis with a team with expertise in engineering and process operations. The team must consist of two or more persons and include at least:

(a) One member who has experience and knowledge specific to the process being evaluated; and

(b) One member who is knowledgeable in the methodology for the specific process hazard analysis being used.

8. The owner or operator shall:

(a) Promptly evaluate the findings and recommendations of the team formed pursuant to subsection 7;

(b) Determine and document a course of action based on the evaluation;

(c) Develop a written schedule of when the actions are to be completed;

(d) Complete the actions as soon as possible and document each such completion; and

(e) Communicate the actions to operating, maintenance and other employees whose work assignm are in the process and who may be affected by the recommendations or actions.

9. At least once every 5 years after the completion of the initial process hazard analysis, a team that satisfies the requirements of subsection 7 shall update and revalidate the process hazard analysis to ensure that the process hazard analysis is consistent with the current process.

10. A process hazard analysis must be updated and revalidated using a team meeting the requirements of subsection 7 and pursuant to the procedures set forth in NAC 459.9549 to 459.955, inclusive.

11. An owner or operator shall retain a process hazard analysis and an update and revalidation for each process subject to this section, as well as any documented resolution of recommendations described in subsection 8, for the life of the process.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R041-01, 10-25-2001; R137-04, 2-15-2005)

NAC 459.95416 Operating procedures. (NRS 459.3818**,** 459.3833**)**

1. The owner or operator of a facility with a process that is subject to C.A.P.P. shall develop and implement written operating procedures for that process which:

(a) Are consistent with the process safety information developed pursuant to NAC 459.95412; and

(b) Provide clear instructions for safely conducting such a process.

2. The operating procedures must include:

(a) Steps for each operating phase, including, without limitation, steps for:

(1) The initial start-up;

(2) Normal operations;

(3) Temporary operations;

(4) An emergency shutdown, including, without limitation, a description of the conditions under which an emergency shutdown is required and the assignment of responsibility for a shutdown to a qualified operator;

(5) Emergency operations;

(6) A normal shutdown; and

(7) Start-up following a turnaround or an emergency shutdown.

(b) Operating limits, including, without limitation:

(1) The consequences of a deviation; and

(2) The steps required to correct or avoid a deviation.

(c) Safety and health considerations, including, without limitation:

(1) The properties of, and hazards presented by, the chemicals used in the process;

(2) The precautions that are necessary to prevent exposure, including, without limitation, engineering controls, administrative controls and personal protective equipment;

(3) Control measures to be taken if physical contact or airborne exposure occurs;

(4) Quality control for raw materials;

(5) Control of hazardous chemical inventory levels; and

(6) Any special or unique hazards.

(d) A description of the safety systems and their functions.

3. The owner or operator shall:

(a) Ensure that the operating procedures are readily accessible to employees who work in or maintain an applicable process;

(b) Review the operating procedures as often as necessary to ensure that they reflect current operating practice, including, without limitation, any change to a process that may result from a change in process chemicals, technology or equipment;

(c) Certify annually that the operating procedures are current and accurate; and

(d) Develop and implement safe work practices for employees and contractors to provide for the control of:

(1) Hazards during a lockout or tagout;

(2) Hazards during a confined space entry;

(3) Hazards while opening the equipment or piping associated with a process;

(4) Entrance into the facility by maintenance, contractor, laboratory or other support personnel; and

(5) Any other hazards that may be encountered.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.95418 Training procedures. (NRS 459.3818**,** 459.3833**)** The owner or operator of a facility with a process that is subject to C.A.P.P.:

1. Shall, except as otherwise provided in subsection 2, ensure that each employee who is operating a process or will operate a process is trained in an overview of the process and in the operating procedures created pursuant to NAC 459.95416. Such training must include, without limitation, training in:

(a) The layout of the plant;

(b) The location of equipment and instruments;

(c) The specific safety and health hazards;
(d) Emergency operations, including, without limitation, procedures for an emergency shutdown;
(e) Safe work practices that are applicable to the job tasks of the employee; and
(f) The program for the management of changes developed and implemented pursuant to NAC 459.95423, including instruction on how to recognize activities that are not replacement in kind.

2. May, in lieu of providing the training required pursuant to subsection 1, certify in writing that an employee who was operating a process on May 26, 1992, possesses the required knowledge, skills and abilities to carry out the duties and responsibilities safely as specified in the operating procedures.

3. Shall provide an employee with refresher training at least once every 3 years, and more often if it is determined after consultation with the employees who operate the process to be necessary, to ensure that the employee understands and adheres to the current operating procedures of the process.

4. May provide employees with any combination of classroom and field training, including, without limitation, on-the-job training. Training must, at a minimum, follow a predefined syllabus or checklist to ensure that each employee receives training which is essential to his job performance. On-the-job training, if it is the only method employed, does not satisfy the requirements of this subsection unless it follows a predefined syllabus or checklist.

5. Shall ascertain that each employee who operates a process has received and understood the training required pursuant to this section.

6. Shall prepare records that include, without limitation:
(a) The identity of the employee;
(b) The date of training;
(c) The substance of the training provided on that date; and
(d) The means used to verify that the employee understood the training, including, without limitation, any test records from such verification.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R041-01, 10-25-2001; R137-04, 2-15-2005)

NAC 459.95421 Procedures for maintenance of equipment. (NRS 459.3818**,** 459.3833**)**

1. The owner or operator of a facility with a process subject to C.A.P.P. shall:
(a) Establish and implement written procedures to ensure the ongoing integrity of the equipment listed in subsection 2;
(b) Provide each employee who is involved in maintaining the ongoing integrity of the equipment listed in subsection 2 with:
(1) An overview of the process that uses the equipment and the potential hazards of the process;
(2) Training in the procedures that are applicable to the job tasks of the employee to ensure that the employee can perform the job tasks in a safe manner; and
(3) Training in the program for the management of changes developed and implemented pursuant to NAC 459.95423, including instruction on how to recognize activities that are not replacement in kind;
(c) Perform inspections and tests on process equipment listed in subsection 2;
(d) Ensure that the procedures for inspection and testing follow recognized and generally accepted good engineering practices;
(e) Ensure that the inspections and tests of the equipment are performed:
(1) In the frequency required by good engineeringpractices and consistent with any applicable recommendations from the manufacturer of the equipment; or
(2) More frequently if determined to be necessary by previous experience in operating the equipment;
(f) Document each inspection and test that has been performed on the equipment, including, without limitation, documentation of:
(1) The date of the inspection or test;
(2) The name of the person who performed the inspection or test;
(3) The serial number or other identifier of the equipment on which the inspection or test was performed;
(4) A description of the inspection or test performed; and
(5) The results of the inspection or test;
(g) Correct any deficiencies in the equipment that are outside the acceptable limits which are described by the process safety information developed pursuant to NAC 459.95412 before using the equipment again;
(h) In the construction of new processes and equipment, ensure that the equipment, as fabricated, is suitable for the process for which it will be used;
(i) Perform appropriate checks and inspections to ensure that equipment is installed properly and consistent with design specifications and instructions from the manufacturer; and
(j) Ensure that maintenance materials, spare parts and equipment are suitable for the process for which they will be used.

2. This section applies to:
(a) Pressure vessels and storage tanks;
(b) Piping systems, including, without limitation, piping components such as valves;
(c) Relief and vent systems and devices;

(d) Emergency shutdown systems;
(e) Controls, including, without limitation, monitoring devices and sensors, alarms and interlocks; and
(f) Rotating equipment.
(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.95423 Procedures for management of certain changes. (NRS 459.3818**,** 459.3833**)** The owner or operator of a facility with a process that is subject to C.A.P.P. shall:
1. Establish and implement written procedures to manage changes, other than a replacement in kind, to:
(a) Chemicals, technology, equipment and procedures that are used in a process; and
(b) Buildings, structures and equipment that affect a process;
2. Evaluate the impact of changes to organizational structure or staffing levels on the implementation of the prevention program and the emergency response program;
3. Ensure that the procedures established pursuant to subsection 1 require that the following considerations are addressed before one of the changes described in subsection 1 occur and that the procedures specify the criteria for review and approval of each of the following considerations:
(a) The technical basis for the proposed change;
(b) The impact of change on safety and health;
(c) Whether any modifications to operating procedures will be necessary;
(d) The time necessary to make the proposed change; and
(e) The requirements for authorization for the elements of the proposed change;
4. Inform and train for the change any employee who is involved in the operation of the process that is affected by the change and any maintenance or contract employee whose job tasks will be affected by the change before the start-up of the process or of the affected part of the process; and
5. Update:
(a) The process safety information required pursuant to NAC 459.95412; and
(b) The operating procedures or practices required pursuant to NAC 459.95416.
(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.95425 Pre-start-up safety review. (NRS 459.3818**,** 459.3833**)**
1. The owner or operator of a facility with a process that is subject to C.A.P.P. shall perform a pre-start-up safety review for new facilities and for modified facilities when the modification is significant enough to require a change in the process safety information.
2. A pre-start-up safety review must confirm that before a highly hazardous substance or explosive is introduced into a process:
(a) Construction and equipment is in accordance with design specifications;
(b) Safety, operating, maintenance and emergency procedures are in place and are adequate;
(c) For new or modified facilities, a process hazard analysis has been performed and recommendations have been resolved or implemented before start-up;
(d) Modified facilities meet the requirements concerning the management of changes set forth in NAC 459.95423; and
(e) Training of each employee involved in operating and maintaining the process has been completed.
(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.95427 Evaluation and documentation of compliance. (NRS 459.3818**,** 459.3833**)**
1. The owner or operator of a facility with a process that is subject to C.A.P.P. shall:
(a) Certify at least once every 3 years that an evaluation has been performed of whether adequate procedures and practices as required pursuant to NAC 459.95412 to 459.95442, inclusive, have been developed and implemented;
(b) Create a report of the findings of the evaluation made pursuant to paragraph (a);
(c) Promptly determine and document an appropriate response to any deficiency that is discovered during the evaluation;
(d) Document that any deficiency discovered during the evaluation has been corrected; and
(e) Retain the two most recent reports.
2. The evaluation must be conducted by at least one person who is knowledgeable in the process.
(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.95429 Investigation of incidents; incident reports; corrective action. (NRS 459.3818**,** 459.3833**)** The owner or operator of a facility with a process that is subject to C.A.P.P. shall:
1. Investigate any incident that resulted in, or could reasonably have resulted in, a catastrophic release and take corrective action to prevent recurrence of the incident.
2. Initiate the investigation of the incident as promptly as possible, but not later than 48 hours after the incident.
3. Establish a team to investigate the incident. The team must consist of two or more persons and include at least:
(a) One person who is knowledgeable in the process involved, including, without limitation, a contract employee if his work was involved in the incident; and

(b) One person who possesses appropriate knowledge and experience to investigate and analyze the incident thoroughly.

4. Prepare an incident report at the conclusion of the investigation which must include, at a minimum:

(a) The date of the incident;

(b) The date the investigation of the incident began;

(c) A description of the incident;

(d) The factors that contributed to the incident; and

(e) Recommendations resulting from the investigation.

5. Establish a system to address and resolve the findings and recommendations of the incident report promptly.

6. Document any solutions and corrective actions taken.

7. Ensure that the incident report is reviewed with all affected personnel whose job tasks are relevant to the findings of the incident report, including, without limitation, contract employees where applicable.

8. Retain the incident report for 5 years.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.95431 Employee participation. (NRS 459.3818**,** 459.3833**)** The owner or operator of a facility with a process that is subject to C.A.P.P. shall:

1. Develop a written plan of action regarding the implementation of the employee participation required by this section;

2. Consult with employees and their representatives about:

(a) Conducting and developing process hazard analyses; and

(b) Developing and implementing the other requirements of NAC 459.95412 to 459.95442, inclusive; and

3. Provide to employees and their representatives access to process hazard analyses and other information which is developed pursuant to NAC 459.95412 to 459.95442, inclusive.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.95433 Hot work permits. (NRS 459.3818**,** 459.3833**)** The owner or operator of a facility with a process that is subject to C.A.P.P. shall:

1. Issue a hot work permit for hot work conducted on or near a process;

2. Document in the permit:

(a) That the fire prevention and protection requirements in 29 C.F.R. § 1910.252(a) are implemented before beginning hot work;

(b) The dates which are authorized for hot work; and

(c) The object on which hot work is to be performed; and

3. Keep the permit on file until completion of the hot work.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.95435 Duties of owner or operator concerning contractors; duties of contractors. (NRS 459.3818**,** 459.3833**)**

1. The owner or operator of a facility with a process that is subject to C.A.P.P. shall:

(a) When selecting a contractor, obtain and evaluate information regarding the safety performance and programs of the contractor;

(b) Inform the contractor of known potential fire, explosion or toxic release hazards related to the work of the contractor and to the process on which he is working;

(c) Explain to the contractor the applicable provisions of NAC 459.9544 and 459.95442;

(d) Develop and implement safe work practices consistent with NAC 459.95416; and

(e) Periodically evaluate the performance of the contractor in satisfying the requirements of subsection 2.

2. The contractor shall:

(a) Ensure that each of his employees who will work on the process is trained in the work practices necessary to perform his job safely;

(b) Ensure that each of his employees who will work on the process is instructed in:

(1) The known potential fire, explosion or toxic release hazards related to his job and the process on which he is working; and

(2) The applicable provisions of the emergency action plan;

(c) Document that each of his employees who will work on the process has received and understood the training required pursuant to this subsection;

(d) Prepare a record that contains:

(1) The identity of the employee;

(2) The date of training; and

(3) The means used to verify that the employee understood the training;

(e) Ensure that each of his employees who works on the process follows the safety rules of the facility, including, without limitation, the safe work practices required pursuant to NAC 459.95416; and

(f) Advise the owner or operator of any unique hazards presented by or found during the work of an empl[redacted].

3. This section:

(a) Applies to contractors who perform maintenance or repair, turnaround, major renovation, or specialty work on or adjacent to a process.

(b) Does not apply to contractors who provide incidental services that do not influence process safety, including, without limitation, janitorial work, food and drink services, laundry, delivery or other supply services.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

Emergency Response Programs

NAC 459.9544 Compliance; exemption. (NRS 459.3818**,** 459.3833**)**

1. Except as otherwise provided in subsection 2, the owner or operator of a facility with a process that is subject to C.A.P.P. shall comply with the requirements of NAC 459.95442.

2. The owner or operator of a facility in which the employees will not respond to an accidental release is not required to comply with the provisions of NAC 459.95442 if:

(a) For facilities subject to 29 C.F.R. Part 1910, the facility has implemented a written emergency action plan that contains the elements set forth in 29 C.F.R. § 1910.38(c)-(f);

(b) Appropriate mechanisms are in place to notify emergency responders when there is a need for a response; and

(c) The facility has coordinated response actions with the local fire department. For response actions to be coordinated, the owner or operator shall:

(1) Identify the first responding fire station and hazardous materials response station;

(2) Review the written emergency action plan and appropriate mechanisms for notification developed for the facility with the responders identified in subparagraph (1) or their representatives;

(3) Keep a written record of such review meetings, including comments by the responders or their representatives to the written emergency action plan and appropriate mechanisms for notification of the responders; and

(4) Update information on a basis agreeable to the owner or operator and the responders.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R041-01, 10-25-2001; R137-04, 2-15-2005)

NAC 459.95442 Establishment and implementation; review and coordination; written program. (NRS 459.3818**,** 459.3833**)**

1. An owner or operator shall:

(a) Establish and implement an emergency response program to protect employees, public health and the environment, which program must include:

(1) For facilities subject to 29 C.F.R. Part 1910, a written emergency action plan that contains the elements set forth in 29 C.F.R. § 1910.38(c)-(f);

(2) For facilities subject to 29 C.F.R. Part 1910, a program that contains the elements outlined in 29 C.F.R. § 1910.120(q);

(3) Procedures for informing the public and local emergency response agencies about an accidental release;

(4) Documentation of proper first-aid and emergency medical treatment necessary to treat accidental human exposures;

(5) Procedures and measures for emergency response after an accidental release;

(6) Procedures for the use, inspection, testing and maintenance of emergency response equipment;

(7) Training for all employees in relevant procedures for emergency response; and

(8) Procedures to review and update, as appropriate, the emergency response program to reflect changes at the facility and ensure that employees are informed of changes.

(b) Review and coordinate the emergency response program developed pursuant to paragraph (a) with local emergency responders. For response actions to be coordinated, the owner or operator shall:

(1) Identify the first responding fire station and hazardous materials response station;

(2) Review the emergency response program developed for the facility with the responders identified in subparagraph (1) or their representatives;

(3) Keep a written record of such review meetings, including comments by the responders or their representatives to the emergency response program for the facility; and

(4) Update information on a basis agreeable to the owner or operator and the responder.

2. A written program satisfies the requirements of this section if it:

(a) Complies with other federal contingency plan regulations and the requirements set forth in subsection 1; or

(b) Complies with the requirements set forth in subsection 1 and is consistent with the approach of the National Response Team's Integrated Contingency Plan Guidance set forth in 61 Fed. Reg. 28,641-28,664 and 31,103-31,104 (1996).

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R041-01, 10-25-2001; R137-04, 2-15-2005)

Two or More Releases From Facility

NAC 459.95486 Prerequisites for exemption of process from C.A.P.P.; continued compliance. (NRS 459.3813**,** 459.3818**)**

1. A process that is otherwise subject to C.A.P.P. pursuant to subparagraph (2) of paragraph (a) of subsection 1 of NAC 459.95323 is not subject to C.A.P.P. if:

(a) Two or more years have elapsed since the owner or operator has registered pursuant to NAC 459.95348 and completed the process hazard analysis;

(b) The owner or operator has complied with all relevant requirements of C.A.P.P.;

(c) The recommendations developed pursuant to subsection 8 of NAC 459.95414 are implemented; and

(d) The State Environmental Commission has granted the exemption pursuant to NAC 459.95488.

2. The Division shall require continued compliance with C.A.P.P. until the recommendations from the process hazard analysis are completed and the State Environmental Commission has granted the exemption pursuant to NAC 459.95488.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.95488 Grant of exemption from C.A.P.P.: Procedure; considerations. (NRS 459.3813**,** 459.3818**,** 459.3832**)**

1. In order to be granted an exemption by the State Environmental Commission from C.A.P.P., the owner or operator of a facility with a process that is subject to C.A.P.P. pursuant to subparagraph (2) of paragraph (a) of subsection 1 of NAC 459.95323 must submit:

(a) A written letter to the Division requesting exemption from C.A.P.P.; and

(b) A list indicating that the recommendations developed pursuant to subsection 8 of NAC 459.95414 have been implemented. The list must be certified pursuant to NAC 459.95337.

2. Not later than 60 calendar days after the Division receives the information submitted to it pursuant to subsection 1, the Division shall verify compliance with paragraphs (a), (b) and (c) of subsection 1 of NAC 459.95486.

3. Not later than 90 calendar days after the Division receives the information submitted to it pursuant to subsection 1, the Division shall:

(a) Document its findings concerning the verification made pursuant to subsection 2; and

(b) Notify the owner or operator in writing of the findings made pursuant to paragraph (a).

4. Once the owner or operator has received notice that the Division has verified compliance with paragraphs (a), (b) and (c) of subsection 1 of NAC 459.95486, he may petition the State Environmental Commission to become exempt from C.A.P.P. by filing with the Secretary of the State Environmental Commission:

(a) A letter requesting exemption from C.A.P.P.; and

(b) A copy of the findings of the Division made pursuant to subsection 3.

5. Upon receiving the letter and findings from an owner or operator pursuant to subsection 4, the Secretary of the State Environmental Commission shall:

(a) Schedule a review of the petition at the next meeting of the State Environmental Commission; and

(b) Notify the public by publication and the use of public service announcements of the petition.

6. At the hearing, the State Environmental Commission will consider the following to determine whether it will grant the petition:

(a) Whether the causes of any releases have been adequately mitigated to prevent future releases;

(b) Whether the facility has an adequate program in place to maintain the accident prevention program established pursuant to C.A.P.P.;

(c) Whether the Division believes that the exemption should be granted; and

(d) Whether the facility has had an accidental release since becoming subject to C.A.P.P.

7. If the State Environmental Commission:

(a) Grants the exemption, the exemption will become effective on the day following the hearing.

(b) Does not grant the exemption, the Commission will provide the owner or operator with an explanation of the reason the Commission denied the exemption.

8. The owner or operator may reapply for the exemption at any time.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

Revalidation of Process Hazard Analysis

NAC 459.9549 General requirements; new analysis in lieu of revalidation. (NRS 459.3818**,** 459.3833**)**

1. The revalidation of a process hazard analysis that is required pursuant to NAC 459.95414 must:

(a) Confirm pursuant to NAC 459.95496, 459.95498 and 459.955 that the analysis is valid for the current process;

(b) Determine the status of recommendations from the previous process hazard analysis; and

(c) Satisfy the requirements of NAC 459.95414.

2. The owner or operator may perform a new process hazard analysis in lieu of revalidating a previous analysis, if:

(a) The process hazard analysis satisfies the requirements of NAC 459.95414; and

(b) All the supporting information, including, without limitation, the process safety information, operating procedures,

training program, mechanical integrity program and emergency response program reflect current operations.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.95496 Current process safety information and hazard assessment. (NRS 459.3818**,** 459.3833**)**

1. A revalidated process hazard analysis must reflect current process safety information required pursuant to NAC 459.95412. The owner or operator shall document specifically how the accuracy of the process safety information was validated.

2. A revalidated process hazard analysis must reflect the current hazard assessment.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.95498 Current procedures and programs. (NRS 459.3818**,** 459.3833**)** A revalidated process hazard analysis must reflect current operating procedures, training programs, maintenance programs and emergency response programs required pursuant to NAC 459.95416, 459.95418, 459.95421, 459.9544 and 459.95442. The owner or operator shall document specifically how the accuracy of such information was validated.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.955 Consideration of incidents; recommendations for correction of deficiencies. (NRS 459.3818**,** 459.3833**)**

1. All incidents that had the potential for, or actually resulted in, a release, fire or explosion involving a highly hazardous substance or explosive must be considered by the person or team conducting a revalidation of a process hazard analysis.

2. The revalidation of the analysis must include, without limitation:

(a) A review of the recommendations that were made as a result of the investigation; and

(b) Confirmation that the recommendations are being implemented in a timely manner.

3. If a deficient element of a prevention program was a contributing factor to an incident, the person or team conducting the revalidation shall make recommendations to correct the deficiency.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

Administration and Enforcement

NAC 459.9552 Site inspections. (NRS 459.3818**,** 459.3832**,** 459.3833**,** 459.387**)**

1. The Division shall conduct a site inspection pursuant to this section at least once per year for each facility registered pursuant to NAC 459.95348.

2. The Division may request information from the owner or operator of the facility in advance of any inspection related to compliance with any C.A.P.P. requirement. The Division may require that any information submitted pursuant to this subsection be certified pursuant to NAC 459.95337.

3. Except as otherwise provided in subsection 4, during a site inspection, the Division shall:

(a) Evaluate whether the facility is in compliance with the requirements of its:

(1) Prevention program;

(2) Emergency response program; and

(3) Hazard assessment; and

(b) Validate information submitted by the owner or operator of the facility.

4. The Division is not obligated to perform the evaluation pursuant to paragraph (a) of subsection 3 in its entirety on an annual basis, but may fulfill the requirements of paragraph (a) of subsection 3 over multiple inspections, prioritizing the order of the evaluation by perceived program deficiencies and potential hazard.

5. The Division must document the inspection results in a written report. The report must include, without limitation:

(a) The name of the facility, dates of inspection and the names of facility personnel present;

(b) Processes reviewed and hazardous materials involved;

(c) The findings and conclusions of the inspection; and

(d) The corrective actions required of the owner or operator of the facility.

6. Copies of the report prepared pursuant to subsection 5 must:

(a) Be placed in the facility file, which must be available for public review; and

(b) Be sent to the owner or operator of the facility.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R137-04, 2-15-2005)

NAC 459.95521 Investigation of accidents. (NRS 459.3818**,** 459.38195**,** 459.3824**)**

1. The Division may investigate an accident occurring in connection with a process that involves one or more highly hazardous substances or explosives at a facility which results in an uncontrolled emission, fire or explosion and which presents or presented an imminent and substantial danger to the health of the employees of the facility, the public health or the environment, to determine the cause of the accident if the owner or operator of the facility:

(a) Is unwilling to commence and has not commenced an investigation of the accident in a timely manner; or

(b) Is not capable of conducting an investigation and has not retained persons who have expertise to conduct an

investigation of the accident.

2. Except as otherwise provided in subsection 3, before the Division commences an investigation of an accident, the Division must provide written notice to the owner or operator:

(a) Defining the scope of the investigation;

(b) Citing the Division's authority and the reasons pursuant to subsection 1 for conducting the investigation;

(c) Providing an explanation of how the Division's costs will be recovered; and

(d) Informing the owner or operator that if the owner or operator fails to commence an investigation of the accident within 24 hours after receiving the written notice, the Division will commence its investigation of the accident and begin accruing costs.

3. The provisions of subsection 2 do not preclude the Division from commencing its investigation immediately if the Division determines that time is of the essence in gathering data.

4. The decision by the Division to conduct an investigation pursuant to this section does not relieve the owner or operator of the obligation to investigate pursuant to NAC 459.95429.

5. Except as otherwise provided in subsection 6, the Division shall accrue costs for the investigation and invoice the owner or operator the following amounts:

(a) For activities conducted by personnel of the Division, the amount of $68 per hour;

(b) For activities conducted by contractors, an amount equal to the cost to the Division; and

(c) Such other amounts as are necessary for the Division to recover all costs incurred by the Division in conducting the investigation.

6. In no event may the total amount invoiced by the Division pursuant to subsection 5 for an investigation exceed the total costs incurred by the Division in conducting the investigation.

7. An investigation conducted by the Division pursuant to this section shall be deemed complete when, to the satisfaction of the Division:

(a) The direct cause of the accident and each contributing cause or potential cause of the accident has been identified;

(b) Each root cause of the accident, or each potential root cause, has been identified;

(c) The remedial steps to prevent recurrence of the accident have been identified; and

(d) The remedial steps so identified have been implemented.

8. As used in this section:

(a) "Direct cause of the accident" means the condition or event that resulted in the accident.

(b) "Expertise to conduct an investigation" means having technical or operational knowledge plus knowledge of investigative techniques to make a determination of the direct, contributing and root causes of an accident.

(c) "In a timely manner" means to start the investigation process with a formally defined investigation team within 48 hours after the accident.

(d) "Is not capable of conducting an investigation" means that the owner or operator does not have the expertise to conduct an investigation within the group of employees and contractors of the owner or operator.

(e) "Root cause of the accident" means a condition or event that, if corrected, would prevent recurrence of the accident.

(Added to NAC by Environmental Comm'n by R137-04, eff. 2-15-2005)

NAC 459.95523 Protection of confidentiality of certain information. (NRS 459.3818**,** 459.3822**)**

1. The Division shall, in accordance with this section and NRS 459.3822, protect the confidentiality of any information that is obtained pursuant to C.A.P.P., including any information obtained through an observation made by the Division during a visit to a facility.

2. To protect the confidentiality of information, the owner or operator of the facility must request such protection in writing, indicating which information is to be protected and stating how the conditions in NRS 459.3822 are satisfied.

3. A request for, and the granting of, the protection of the confidentiality of information made pursuant to this section does not constitute a request for, or the granting of, an extension of any deadlines for reporting required pursuant to C.A.P.P., and the pending status of such a request does not prohibit access to the information or facility by the Division.

4. In addition to providing the confidential information to the Division, the owner or operator of the facility for which protection of the confidentiality of information is obtained pursuant to this section shall, upon the request of the Division, provide a redacted version of any submitted information that is intended for public review which substitutes the term "CBI" or provides generic information for the information deemed confidential.

(Added to NAC by Environmental Comm'n by R137-04, eff. 2-15-2005)

NAC 459.95526 Administration and enforcement of certain federal regulations. (NRS 459.3818**,** 459.3833**)**

1. The provisions of this section apply only during periods when federal authority is delegated to the Division pursuant to Subpart E of 40 C.F.R. Part 63.

2. Upon receiving delegation of federal authority pursuant to Subpart E of 40 C.F.R. Part 63, the Division shall administer and enforce the provisions of 40 C.F.R. §§ 68.3 to 68.215, inclusive, and Appendix A of 40 C.F.R. Part 68, which are hereby adopted by reference.

3. A copy of the volume that contains 40 C.F.R. §§ 68.3 to 68.215, inclusive, or Appendix A of 40 C.F.R. Part 68 can be obtained by mail from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 979050, St. Louis, Missouri 63197-9000, or by toll-free telephone at (866) 512-1800, at a cost of $29. These sections are also

available, free of charge, from the Government Printing Office at the Internet address http://www.gpoaccess.

(Added to NAC by Environmental Comm'n by R137-04, eff. 2-15-2005)

NAC 459.95528 Adoption by reference of certain codes and standards. (NRS 459.3818**,** 459.3833**)** The following provisions are hereby adopted by reference:

1. Codes 211112, 32211, 32411, 32511, 325181, 325188, 325192, 325199, 325211, 325311 and 32532 of the 2002 version of the N.A.I.C.S. A copy of the N.A.I.C.S. may be obtained from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161, at a cost of $49.

2. *N.F.P.A. 704: Standard System for the Identification of the Hazards of Materials for Emergency Response*, 2001 edition. A copy may be obtained from the National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, Massachusetts 02269-9101, at a cost of $28.75.

3. *N.F.P.A. 30: Flammable and Combustible Liquids Code*, 2003 edition. A copy may be obtained from the National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, Massachusetts 02269-9101, at a cost of $38.25.

4. ERPG-2 of the *Emergency Response Planning Guidelines Series*. A copy of ERPG-2 may be obtained from the American Industrial Hygiene Association, 2700 Prosperity Avenue, Suite 250, Fairfax, Virginia 22031, at a cost of $15.

5. *R.M.P. Guidance for Off-Site Consequence Analysis*. A copy may be obtained free of charge from the United States Environmental Protection Agency, National Service Center for Environmental Publications, P.O. Box 42419, Cincinnati, Ohio 45242-2419.

6. *N.F.P.A. 70*, the 2002 version of the *National Electrical Code*. A copy may be obtained from the National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, Massachusetts 02269-9101, at a cost of $65.

7. 49 C.F.R. § 172.101. A copy of the volume that contains 49 C.F.R. § 172.101 may be obtained by mail from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 979050, St. Louis, Missouri 63197-9000, or by toll-free telephone at (866) 512-1800, at a cost of $49. That section is also available, free of charge, from the Government Printing Office at the Internet address http://www.gpoaccess.gov.

8. *ASME B31.3 - 1999 Process Piping with Addenda*. A copy of this standard may be obtained from the American Society of Mechanical Engineers, P.O. Box 2300, Fairfield, New Jersey 07007-2300, at a cost of $255.

9. *ASME B31.5 - 2001 Refrigeration Piping and Heat Transfer Components*. A copy of this standard may be obtained from the American Society of Mechanical Engineers, P.O. Box 2300, Fairfield, New Jersey 07007-2300, at a cost of $105.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R041-01, 10-25-2001; R137-04, 2-15-2005)

NUCLEAR PROJECTS

NAC 459.960 Definitions. (NRS 459.0092**)** As used in NAC 459.960 to 459.969, inclusive, unless the context otherwise requires, the words and terms defined in NRS 459.009 have the meanings ascribed to them in that section.

(Added to NAC by Comm'n on Nuclear Projects, eff. 6-23-86)

NAC 459.963 Clarification of regulations. (NRS 459.0092**)**

1. An interested party may obtain clarification of any of the provisions of NAC 459.960 to 459.969, inclusive, by directing a request to the Executive Director of the Agency at the following address:

Agency for Nuclear Projects/Nuclear
Waste Project Office
Capitol Complex
1802 North Carson Street, Suite 252
Carson City, Nevada 89710

2. If the requester is dissatisfied with the response of the Executive Director, he may petition the Commission for such clarification. In order to be heard at its next regularly scheduled meeting, the petition must be received by the Commission in time to be included as an item on the agenda for that meeting.

(Added to NAC by Comm'n on Nuclear Projects, eff. 6-23-86)

NAC 459.965 Meetings of Commission. (NRS 459.0092**)** Regular meetings of the Commission will be scheduled at the pleasure of a majority of the members of the Commission. Special meetings may be called by the Chairman to consider matters which must be addressed in advance of the regular meeting. Interested parties may present items for the Commission to consider for inclusion in the agenda for special or regularly scheduled meetings.

(Added to NAC by Comm'n on Nuclear Projects, eff. 6-23-86)

NAC 459.967 Correspondence with Agency. (NRS 459.0092**)** All written communications, payments, transactions and other pertinent documents involving the business of the Agency must be addressed to the Executive Director, who shall receive and process the documents or assign the matter to the administrator of a division of the Agency for disposition. The Executive Director or a person on the staff delegated by him shall respond to any correspondence in the

name of the Agency.
(Added to NAC by Comm'n on Nuclear Projects, eff. 6-23-86)

NAC 459.969 Notification of action of Agency; fee for copies. (NRS 459.0092)
1. The Agency shall notify every person who has submitted a written request to be notified of any significant action by the Agency, including the adoption of rules or regulations. Each such request expires each year on December 31. A renewal of such a request for the following year may be made on or after December 1. Information disseminated pursuant to such a request must be sent to the last address filed by the person with the Agency.
2. The Agency may charge a person who is not a governmental entity a fee for providing copies of any regulations of the Commission. The fee must be based on the cost of reproduction.
(Added to NAC by Comm'n on Nuclear Projects, eff. 6-23-86)

CERTIFICATION OF LABORATORIES TO ANALYZE WASTE SAMPLES

General Provisions

NAC 459.96902 Definitions. (NRS 459.485, 459.500) As used in NAC 459.96902 to 459.9699, inclusive, unless the context otherwise requires, the words and terms defined in NAC 459.96904 to 459.96944, inclusive, have the meanings ascribed to them in those sections.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96904 "Accuracy" defined. (NRS 459.485, 459.500) "Accuracy" has the meaning ascribed to it in Appendix A of chapter 1 of the *Standards*.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96906 "Analyst" defined. (NRS 459.485, 459.500) "Analyst" means a chemist, microbiologist, physicist or technician who:
1. Is qualified to conduct analyses of waste samples pursuant to the provisions of the manual specified in paragraph (e) of subsection 1 of NAC 459.96948; and
2. Performs those tests or assists in performing those tests with other qualified employees of a certified laboratory.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96908 "Analyte" defined. (NRS 459.485, 459.500) "Analyte" means any compound, element, radical, isotope, contaminant organism, species or other substance for which a waste sample is tested by a laboratory.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.9691 "Approved method of testing" defined. (NRS 459.485, 459.500) "Approved method of testing" means a laboratory procedure specified in subsection 4 of NAC 459.96958 that is approved by the Environmental Protection Agency or the Division to test a waste sample.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96912 "Certified laboratory" defined. (NRS 459.485, 459.500) "Certified laboratory" means a laboratory for which a certificate to conduct analyses of waste samples is issued pursuant to the provisions of NAC 459.96902 to 459.9699, inclusive.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96914 "Commission" defined. (NRS 459.485, 459.500) "Commission" means the State Environmental Commission.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96916 "Director" defined. (NRS 459.485, 459.500) "Director" means:
1. A person who is qualified to administer any technical or scientific operation of a certified laboratory and supervise the procedures for the testing and reporting of the results of tests pursuant to the provisions of the *Standards*; or
2. A chemist, microbiologist or physicist who is qualified to engage in an activity specified in subsection 1 pursuant to the provisions of the manual specified in paragraph (e) of subsection 1 of NAC 459.96948.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96918 "Division" defined. (NRS 459.485, 459.500) "Division" means the Division of Environmental Protection of the State Department of Conservation and Natural Resources.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.9692 "Federal Act" defined. (NRS 459.485, 459.500) "Federal Act" means the Resource Conservation and

Recovery Act of 1976, 42 U.S.C. §§ 6901 et seq.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96922 "National Environmental Laboratory Accreditation Conference" defined. (NRS 459.485**,** 459.500**)** "National Environmental Laboratory Accreditation Conference" has the meaning ascribed to it in Appendix A of chapter 1 of the *Standards*.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96924 "National Environmental Laboratory Accreditation Program" defined. (NRS 459.485**,** 459.500**)** "National Environmental Laboratory Accreditation Program" has the meaning ascribed to it in Appendix A of chapter 1 of the *Standards*.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96926 "Performance-based measurement system" defined. (NRS 459.485**,** 459.500**)** "Performance-based measurement system" has the meaning ascribed to it in Appendix A of chapter 1 of the *Standards*.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96928 "Precision" defined. (NRS 459.485**,** 459.500**)** "Precision" has the meaning ascribed to it in Appendix A of chapter 1 of the *Standards*.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.9693 "Proficiency test sample" defined. (NRS 459.485**,** 459.500**)** "Proficiency test sample" has the meaning ascribed to it in Appendix A of chapter 1 of the *Standards*.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96932 "Proficiency testing program" defined. (NRS 459.485**,** 459.500**)** "Proficiency testing program" has the meaning ascribed to it in Appendix A of chapter 1 of the *Standards*.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96934 "Quality control sample" defined. (NRS 459.485**,** 459.500**)** "Quality control sample" means an uncontaminated waste sample that is spiked with a known analyte and provided to a laboratory for analysis to determine the performance of the laboratory in testing for the presence of that analyte by using a specified method of testing for the analyte.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96936 "Quality manual" defined. (NRS 459.485**,** 459.500**)** "Quality manual" has the meaning ascribed to it in Appendix A of chapter 1 of the *Standards*.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96938 "Sensitivity" defined. (NRS 459.485**,** 459.500**)** "Sensitivity" has the meaning ascribed to it in Appendix A of chapter 1 of the *Standards*.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.9694 "Spike" defined. (NRS 459.485**,** 459.500**)** "Spike" has the meaning ascribed to it in Appendix A of chapter 1 of the *Standards*.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96942 "*Standards*" defined. (NRS 459.485**,** 459.500**)** "*Standards*" means the *Standards* of the National Environmental Laboratory Accreditation Conference adopted by reference pursuant to the provisions of NAC 459.96946.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96944 "Waste sample" defined. (NRS 459.485**,** 459.500**)** "Waste sample" means a sample of any substance obtained from any natural source or any other source to identify whether waste is hazardous waste or to detect the presence of hazardous waste or a regulated substance in soil or water.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

Guidelines and Procedures

NAC 459.96946 Adoption by reference of *National Environmental Laboratory Accreditation Conference-Constitution, Bylaws, and Standards*. (NRS 459.485**,** 459.500**)** The Commission hereby adopts by reference the *National Environmental Laboratory Accreditation Conference-Constitution, Bylaws, and Standards*, EPA 600/R-98/151, in the

form most recently published by the Environmental Protection Agency, unless the Commission gives notice pursuant to the provisions of NAC 459.9699 that the most recent publication is not suitable for this State. The publication is available, free of charge, from the Environmental Protection Agency, Office of Research and Development, 401 M Street, SW, Washington, D.C. 20460, or from the Environmental Protection Agency at the Internet address http://www.epa.gov/nerlesd1/land-sci/nelac/index.html.

(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96948 Adoption by reference of certain publications related to sample collection procedures, analytical methodologies and requirements for certification. (NRS 459.485, 459.500)

1. The Commission hereby adopts by reference the following publications in the forms most recently published, unless the Commission gives notice pursuant to the provisions of NAC 459.9699 that the most recent publication is not suitable for this State. The publications are available, unless otherwise provided in this section, by mail from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161, or by telephone at (800) 553-6847. The publications may also be obtained from the National Technical Information Service at the Internet address http://www.ntis.gov/ordering.htm. The publications are:

(a) *Consensus Method for Determining Groundwaters Under the Direct Influence of Surface Water Using Microscopic Particulate Analysis (MPA)*, EPA/910/9-92/029, Order Number PB93-180818, for the price of $37.

(b) *DBP/ICR Analytical Methods Manual*, EPA/814/B-96/002, Order Number PB96-157516, for the price of $52.

(c) *ICR Microbial Laboratory Manual*, EPA/600/R-95/178, Order Number PB96-157557, for the price of $74.

(d) *ICR Sampling Manual*, April 1996, EPA/814/B-96/001, Order Number PB96-157508, for the price of $52.

(e) *Manual for the Certification of Laboratories Analyzing Drinking Water: Criteria and Procedures, Quality Assurance*, 4th edition, EPA/815/B-97/001, Order Number PB97-171490, for the price of $51.

(f) *Method 100.2: Determination of Asbestos Structures over 10 Micrometers in Length in Drinking Water*, June 1994, EPA/600/R-94/134, Order Number PB94-201902, for the price of $33.50.

(g) *Method 1613: Tetra-Through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS, Revision B*, October 1994, EPA/821/B-94/005, Order Number PB95-104774, for the price of $39.50.

(h) *Method 1664, Revision A: N-Hexane Extractable Material (HEM; Oil and Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-Polar Material) by Extraction and Gravimetry*, February 1999, EPA/821/R-98/002, Order Number PB99-121949, for the price of $33.50. The publication is also available, free of charge, from the Environmental Protection Agency at the Internet address http://www.epa.gov/ost/methods/1664f051.html.

(i) *Methods for the Determination of Inorganic Substances in Environmental Samples*, August 1993, EPA/600/R-93/100, Order Number PB94-120821, for the price of $52.

(j) *Methods for the Determination of Metals in Environmental Samples*, EPA/600/4-91/010, Order Number PB91-231498, for the price of $81.

(k) *Methods for the Determination of Metals in Environmental Samples, Supplement I*, EPA/600/R-94/111, Order Number PB95-125472, for the price of $74.

(l) *Methods for the Determination of Nonconventional Pesticides in Municipal and Industrial Wastewater, Volume I, Revision 1*, August 1993, EPA/821/R-93/010A, Order Number PB94-121654, for the price of $152.50.

(m) *Methods for the Determination of Organic Compounds in Drinking Water, Supplement 1*, EPA/600/4-90/020, Order Number PB91-146027, for the price of $68.50.

(n) *Methods for the Determination of Organic Compounds in Drinking Water, Supplement 2*, EPA/600/R-92/129, Order Number PB92-207703, for the price of $74.

(o) *Methods for the Determination of Organic Compounds in Drinking Water, Supplement 3*, EPA/600/R-95/131, Order Number PB95-261616, for the price of $117.

(p) *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, 4th edition, EPA/600/4-90/027F, Order Number PB94- 114733, for the price of $81.

(q) *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms*, 3rd edition, EPA/600/4-91/002, Order Number PB96-141452, for the price of $86.50.

(r) *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Marine and Estuarine Organisms*, 2nd edition, EPA/600/4-91/003, Order Number PB96-141445, for the price of $111.50.

(s) *Technical Notes on Drinking Water Methods*, EPA/600/R-94/173, Order Number PB95-104766, for the price of $37.

(t) *Test Methods for "Escherichia Coli" in Drinking Water: EC Medium with Mug Tube Procedure, Nutrient Agar with Mug Membrane Filter Procedure*, EPA/600/4-91/016, Order Number PB91-234591, for the price of $17.50.

(u) *USEPA Contract Laboratory Program: Statement of Work for Organics Analysis: Multi-Media, Multi-Concentration, OLM01.0 (Includes Revisions OLM01.1 through OLM01.8)*, EPA/540/R-94/078, Order Number PB95-963508, for the price of $100. The publication is also available, free of charge, from the Environmental Protection Agency at the Internet address http://www.epa.gov/superfund/programs/clp/organic.htm.

(v) *USEPA Contract Laboratory Program: Statement of Work for Inorganics Analysis: Multi-Media, Multi-Concentration, ILM02.1*, EPA/540/R-94/095, Order Number PB95-963514, for the price of $81. The publication is also available, free of charge, from the Environmental Protection Agency at the Internet address http://www.epa.gov/superfund/programs/clp/inorg.htm.

2. The Commission hereby adopts by reference the following publications in the forms most recently published, unless the Commission gives notice pursuant to the provisions of NAC 459.9699 that the most recent publication is not suitable for this State. The publications are available by mail from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161, or by telephone at (800) 553-6847. The publications are:

(a) *Interim Radiochemical Methodology for Drinking Water*, EPA/600/4-75-008, Order Number PB253258, for the price of $37.

(b) *Method 100.1: Analytical Method for Determination of Asbestos Fibers in Water*, September 1983, EPA/600/4-83-043, Order Number PB83-260471, for the price of $78.50.

(c) *Methods for the Chemical Analysis of Water and Wastes, EPA/600/4-79-020,* Order Number PB84-128677, for the price of $117.

(d) *Methods for the Determination of Organic Compounds in Drinking Water*, Revised July 1991, EPA/600/4-88/039, Order Number PB91-231480, for the price of $89.50.

(e) *Prescribed Procedures for Measurement of Radioactivity in Drinking Water*, EPA/600/4-80-032, Order Number PB80-224744, for the price of $47.50.

(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.9695 Adoption by reference of *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*. (NRS 459.485**,** 459.500**)** The Commission hereby adopts by reference *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, 3rd edition, and *Updates I, II, IIA, IIB and III*, Publication Number 955-001-00000-1, in the form most recently published, unless the Commission gives notice pursuant to the provisions of NAC 459.9699 that the most recent publication is not suitable for this State. The publication is available by mail from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 979050, St. Louis, Missouri 63197-9000, or by toll-free telephone at (866) 512-1800, for the price of $367. The publication is also available, free of charge, from the Environmental Protection Agency at the Internet address http://www.epa.gov/epaoswer/hazwaste/test/main.htm.

(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96952 Adoption by reference of *Method 1600-Membrane Filter Test Method for Enterococci in Water.* (NRS 459.485**,** 459.500**)** The Commission hereby adopts by reference *Method 1600-Membrane Filter Test Method for Enterococci in Water*, May 1997, EPA-821-R-97-004, in the form most recently published, unless the Commission gives notice pursuant to the provisions of NAC 459.9699 that the most recent publication is not suitable for this State. The publication is available, free of charge, by mail from the Environmental Protection Agency, National Center for Environmental Publications and Information, P.O. Box 42419, Cincinnati, Ohio 45242-0419, or by telephone at (800) 490-9198.

(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96954 Adoption of certain ASTM standards and other publications related to calibration and testing laboratories, and examination of water and wastewater. (NRS 459.485**,** 459.500**)** The following publications are hereby adopted by the Commission in the forms most recently published, unless the Environmental Protection Agency fails to publish notice of its approval of the publication in the Federal Register or the Commission gives notice pursuant to the provisions of NAC 459.9699 that the most recent publication is not suitable for this State:

1. *Annual Book of ASTM Standards*, Section 5, "Petroleum Products, Lubricants, and Fossil Fuels," which is available by mail from ASTM International, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428-2959, by telephone at (610) 832-9585 or at the Internet address http://www.astm.org, for the price of $999.

2. *Annual Book of ASTM Standards*, Section 11, "Water and Environmental Technology," which is available by mail from ASTM International, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428-2959, by telephone at (610) 832-9585 or at the Internet address http://www.astm.org, for the price of $906.

3. *ISO/IEC Guide 25, General Requirements for the Competence of Calibration and Testing Laboratories*, 1990, which is available by mail from Global Engineering Documents, 15 Inverness Way East, Englewood, Colorado 80112-5776, by telephone at (800) 854-7179 or at the Internet address http://www.global.ihs.com, for the price of $35.

4. *Standard Methods for the Examination of Water and Wastewater*, Order Number 10079, available by mail from the American Water Works Association, Customer Service, 6666 West Quincy Avenue, Denver, Colorado 80235, by telephone at (800) 926-7337 or at the Internet address http://www.awwa.org/bookstore/ProductList.cfm, for the price of $155 for members and $200 for nonmembers.

(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96956 Interpretation of provisions; resolution of conflicting requirements. (NRS 459.485**,** 459.500**)**

1. The provisions of NAC 459.96902 to 459.9699, inclusive, must not be interpreted to circumvent any of those provisions to make them less effective. If more than one interpretation exists for any of those provisions, the more restrictive interpretation applies.

2. If any publication adopted by reference pursuant to the provisions of NAC 459.96946 to 459.96954, inclusive, conflicts with any provision of NAC 459.96902 to 459.9699, inclusive, or with the *Standards*, the provision set forth in

NAC 459.96902 to 459.9699, inclusive, or the *Standards* applies.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96958 Scope of certification. (NRS 459.485**,** 459.500**)**
1. A laboratory may obtain certification pursuant to the provisions of NAC 459.96902 to 459.9699, inclusive, to perform analyses for the purposes of NRS 459.400 to 459.600, inclusive, 459.610 to 459.658, inclusive, and 459.800 to 459.856, inclusive, to identify whether waste is hazardous waste or to detect the presence of hazardous waste or a regulated substance in soil or water.
2. The scientific disciplines for which a laboratory may obtain certification are:
(a) Chemistry;
(b) Microbiology; and
(c) Radiochemistry.
3. A laboratory may obtain certification pursuant to the provisions of NAC 459.96902 to 459.9699, inclusive, for any program relating to the analysis of a waste sample approved by the Environmental Protection Agency pursuant to the Federal Act.
4. Except as otherwise provided in subsection 5, the approved methods of testing for which a laboratory may obtain certification are set forth in:
(a) Title 40 C.F.R. § 136.3 and Appendices A, C and D to 40 C.F.R. Part 136;
(b) Title 40 C.F.R. § 260.11;
(c) Appendix I to 40 C.F.R. Part 261;
(d) Appendix IX to 40 C.F.R. Part 266;
(e) Appendices A and B to 40 C.F.R. Part 425;
(f) Title 40 C.F.R. § 434.64;
(g) Appendices 1 and 2 to 40 C.F.R. Part 435, Subpart A;
(h) Table 7 to 40 C.F.R. Part 455;
(i) Title 40 C.F.R. § 465.03(c);
(j) Title 40 C.F.R. § 503.8; and
(k) The publications specified in NAC 459.96952, paragraphs (h) to (r), inclusive, and (u) and (v) of subsection 1 of NAC 459.96948, NAC 459.9695 and subsections 1, 2 and 4 of NAC 459.96954.
5. A laboratory may obtain certification to use a performance-based measurement system or any other alternative method of testing if the laboratory:
(a) Complies with the provisions of subsection 5 of NAC 459.96962;
(b) Obtains approval for that method of testing from the Environmental Protection Agency pursuant to the provisions of 40 C.F.R. § 403.7(b)(2)(v), 403.12(b)(5)(vi) or 403.12(g)(4);
(c) Complies with the requirements for application set forth in 40 C.F.R. § 136.4; and
(d) Provides proof and evaluates the performance-based measurement system or other alternative method of testing in accordance with the provisions of:
(1) Appendix E of chapter 5 of the *Standards*;
(2) "Guidelines Establishing Test Procedures for the Analysis of Pollutants: Flexibility in Existing Test Procedures and Streamlined Approach for Approving New Test Methods," set forth in Volume 62 of the Federal Register at pages 14975 et seq., March 28, 1997; and
(3) "Performance Based Measurement System," set forth in Volume 62 of the Federal Register at pages 52098 et seq., October 6, 1997.
6. To be certified to conduct an analysis of an analyte using an approved method of testing specified in subsection 4, the analyte must be listed by the Division in the approved method of testing pursuant to that subsection.
(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.9696 Categories of analytes for which laboratory may be certified.(NRS 459.485**,** 459.500**)** For the purposes of charging and collecting fees and conducting performance evaluations pursuant to the provisions of NAC 459.96902 to 459.9699, inclusive, the Division shall classify each analyte for which a laboratory may be certified into the following categories:
1. Bulk asbestos analysis of hazardous waste.
2. Characteristics of hazardous waste.
3. Dioxin in hazardous waste.
4. Herbicides.
5. Immunoassay methods for hazardous waste.
6. Infrared analysis of hazardous waste.
7. Inorganic chemistry of hazardous waste.
8. Liquid chromatography for hazardous waste.
9. Microbiology.
10. Miscellaneous screening methods for hazardous waste.
11. Pesticides.

12. Physical properties of hazardous waste.
13. Polyaromatic hydrocarbons in hazardous waste.
14. Polychlorinated biphenyls in hazardous waste.
15. Radiochemistry of hazardous waste.
16. Semivolatile organic chemistry of hazardous waste.
17. Toxicity bioassay of hazardous waste.
18. Trace metals in hazardous waste.
19. Volatile organic chemistry of hazardous waste.
20. Any other individual contaminant.
21. Any other individual multicontaminant method.

(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96962 Requirements for certification. (NRS 459.485**,** 459.500**)**

1. To be certified to conduct laboratory testing, a laboratory must comply with the requirements set forth in sections 1.8.3, 4.1.1, 5.0, 5.1, 5.4 and 5.5 of the *Standards*.

2. To be certified in:

(a) Chemistry, a laboratory must comply with the requirements set forth in section 1.8.5 and Appendix D.1 of chapter 5 of the *Standards*;

(b) Microbiology, a laboratory must comply with the requirements set forth in section 1.8.7 and Appendix D.3 of chapter 5 of the *Standards*; or

(c) Radiochemistry, a laboratory must comply with the requirements set forth in section 1.8.8 and Appendix D.4 of chapter 5 of the *Standards*.

3. To be certified pursuant to the program specified in subsection 3 of NAC 459.96958, a laboratory must comply with:

(a) If the laboratory supports a solid waste disposal facility or a municipal solid waste landfill, the provisions concerning:

(1) The requirements for a groundwater monitoring program relating to sampling, preservation and transport, analysis, chain-of-custody, quality assurance and quality control set forth in 40 C.F.R. §§ 257.23(a) and 258.53(a); and

(2) The methodological requirements for the testing of solid waste to determine whether the waste is subject to the land disposal restrictions set forth in 40 C.F.R. §§ 268.7(a)(1), 268.7(b)(1) and 268.40(f).

(b) If the laboratory supports a hazardous waste facility, the provisions concerning:

(1) The requirements for a waste analysis plan relating to sampling, preservation and transport, analysis and chain-of-custody set forth in 40 C.F.R. §§ 264.13 and 265.13;

(2) The requirements for a groundwater monitoring plan set forth in 40 C.F.R. §§ 264.97(d),264.97(e) and 265.92(a); and

(3) If applicable to the laboratory, the requirements for soil and soil-pore liquid monitoring set forth in 40 C.F.R. § 264.278(e).

(c) If the laboratory performs the testing of waste to determine compliance with air emission standards from tanks, surface impoundments or containers, the requirements for sampling and analysis set forth in 40 C.F.R. § 265.1084.

(d) If the laboratory supports an underground injection control program for hazardous waste, the requirements relating to an approved waste analysis plan set forth in 40 C.F.R. § 146.68(a).

(e) If the laboratory performs testing to determine compliance with air emission standards for process vents and equipment leaks, the methodological requirements set forth in 40 C.F.R. §§ 264.1033(e)(1), 264.1034, 264.1063, 265.1033(e)(1), 265.1034 and 265.1063.

(f) If the laboratory performs the sampling and analysis of hazardous waste burned in a boiler or industrial furnace, the methodological requirements set forth in 40 C.F.R. §§ 266.100(c)(1)(ii), 266.100(f), 266.102(b), 266.104(e)(1), 266.106(g), 266.107(f) and 266.112(b).

(g) If the laboratory performs the analysis of waste for a hazardous waste permit and a trial burn plan for incinerators, boilers and industrial furnaces, the methodological requirements set forth in 40 C.F.R. §§ 270.19(c)(1)(iii), 270.22(a)(2)(ii)(B), 270.62(b)(2)(i)(C) and 270.66(c)(2)(i).

(h) If the laboratory supports the processing of used oil or a re-refining facility, the requirements to determine whether used oil is hazardous for representative sampling and the analytical methodological requirements set forth in 40 C.F.R. §§ 279.10(b)(1)(ii), 279.44(c), 279.53(c), 279.55 and 279.63(c).

4. To be certified for an approved method of testing, a laboratory must comply with the requirements for using that approved method of testing specified in subsection 4 of NAC 459.96958 and the *Standards*. If a conflict occurs between a provision specified in that subsection and the *Standards* concerning an approved method of testing, the *Standards* apply. If a manufacturer provides instructions for maintaining any equipment used for testing or for ensuring the performance of any test or demonstrating the performance of any system of measurement, the laboratory shall comply with those instructions. If a conflict occurs between a provision of those instructions and a provision specified in subsection 4 of NAC 459.96958 or the *Standards*, the provisions specified in that section or the *Standards* apply.

5. If a laboratory intends to use a performance-based measurement system or any other alternative method of testing, the laboratory shall, before the Division conducts an inspection of the laboratory pursuant to the provisions of NAC

459.96972, submit to the Division a written statement setting forth the performance-based measurement system or other alternative method of testing it intends to use. The Division may approve the performance-based measurement system or alternative method of testing if, as determined by the Division:

(a) The system or method is equivalent to or exceeds the approved method of testing for accuracy, precision, completeness and comparability relating to determining compliance with the regulatory concentration levels or system conditions;

(b) An approved method of testing is not available for use by the laboratory to determine the presence of an analyte for which the laboratory requests certification pursuant to the provisions of NAC 459.96902 to 459.9699, inclusive; or

(c) The laboratory obtains approval for the system or method from the Environmental Protection Agency.

6. To be certified to test for a specific analyte using an approved method of testing, a laboratory must comply with the requirements established by the Division for the approved method of testing and the standards for initial and continuing calibrations of test equipment and demonstrations by analysts of precision, accuracy, sensitivity and low system background for each analyte. If a conflict occurs between the requirements established by the Division and the *Standards*, the *Standards* apply.

7. As used in this section:

(a) "Limit of detection" means the smallest amount or concentration of an analyte that can be reliably detected in a given sample by a specific measurement process.

(b) "Low system background" means an analysis of a method blank that does not yield contamination at a concentration that is greater than the method detection limit or the limit of detection, whichever is applicable to the particular analyte.

(c) "Method blank" has the meaning ascribed to it in Appendix A of chapter 1 of the *Standards*.

(d) "Method detection limit" has the meaning ascribed to it in Appendix A of chapter 1 of the *Standards*.

(e) "Quality assurance" has the meaning ascribed to it in Appendix A of chapter 1 of the *Standards*.

(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96964 Certification by Division or pursuant to National Environmental Laboratory Accreditation Program. (NRS 459.485**,** 459.500**)**

1. A laboratory may apply for certification by the Division or certification pursuant to the National Environmental Laboratory Accreditation Program.

2. To obtain certification by the Division, a laboratory must comply with the provisions of NAC 459.96902 to 459.9699, inclusive.

3. A laboratory that is certified by the Division may provide analytical data for a waste sample originating in this State for each analyte for which the laboratory is certified.

4. To obtain certification pursuant to the National Environmental Laboratory Accreditation Program, a laboratory must:

(a) Comply with the provisions of NAC 459.96902 to 459.9699, inclusive;

(b) Before obtaining certification pursuant to the Program and every 2 years after obtaining that certification, submit to an assessment of the laboratory conducted at the laboratory under the direction of a person who is approved pursuant to the Program; and

(c) Specify in its application for certification at least one approved method of testing an analyte pursuant to the provisions of subsections 4 and 6 of NAC 459.96958.

(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96966 Application for certification. (NRS 459.485**,** 459.500**)**

1. To apply for certification pursuant to the provisions of NAC 459.96902 to 459.9699, inclusive, the director of the laboratory for which certification is requested must submit an application to the Division on a form approved by the Division. The application must be accompanied by the fees prescribed in NAC 459.96986 and include the information specified in sections 4.1.7 and 4.1.9 of the *Standards*.

2. The provisions of this section do not require an application and certificate for each building or other portion of a certified laboratory that:

(a) Is operated by the same management, quality manual and quality assurance officer as the certified laboratory;

(b) Uses only methods for which the laboratory is certified;

(c) Does not issue reports directly but forwards data to the certified laboratory for reporting purposes; and

(d) The Division determines is used to analyze the same waste samples as the certified laboratory.

➥ As used in this subsection, "quality assurance officer" means the quality assurance officer specified in section 5.4.2 of the *Standards*.

3. The Division shall not consider an application for certification submitted pursuant to this section to be complete unless:

(a) The laboratory specifies in the application the approved methods of testing in accordance with the provisions of NAC 459.96958;

(b) The laboratory satisfactorily analyzes proficiency test samples in accordance with the provisions of NAC 459.96968;

(c) The laboratory adopts a quality manual and submits the manual to the Division pursuant to the provisions of NAC 459.9697;

(d) Except for a laboratory that complies with the provisions of NAC 459.96988, the Division conducts an inspection of the laboratory for the approved methods of testing analytes for which the laboratory requests certification pursuant to the provisions of NAC 459.96972;

(e) If the report of an inspection of the laboratory conducted by the Division includes any deficiency that must be corrected, the laboratory submits to the Division a written plan to correct the deficiency in accordance with the provisions of subsection 7 of NAC 459.96972;

(f) The director of the laboratory is qualified for that position pursuant to the provisions of subsection 4.1 of chapter 4 of the *Standards*; and

(g) The applicable fees prescribed in NAC 459.96986 have been paid.

4. An application for certification shall be deemed withdrawn by the applicant if it is not completed pursuant to the provisions of this section within 1 year after the Division receives the application. The Division may extend the period in which an application must be completed pursuant to this subsection if the applicant submits to the Division a written request for an extension setting forth the reasons for the request.

(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96968 Participation in proficiency testing program. (NRS 459.485, 459.500)

1. Each laboratory for which an application for certification is submitted and each certified laboratory must participate in a proficiency testing program. The laboratory must:

(a) Obtain single-blind proficiency test samples from a provider approved by a Proficiency Testing Oversight Body/Proficiency Testing Provider Accreditor;

(b) Analyze the proficiency test samples, if available, for each category of certification and analyte that is included in the program; and

(c) Report the results of the analysis to the provider specified in paragraph (a).

➥ If the laboratory is a certified laboratory and if a test will be conducted for each category of certification and analyte for which the laboratory is certified, the certified laboratory must analyze a proficiency test sample pursuant to the program not less than once every 6 months.

2. Each laboratory specified in subsection 1 shall pay the costs of subscribing to a program specified in that subsection.

3. Each laboratory specified in subsection 1 must satisfactorily analyze each analyte that is included in the program specified in subsection 3 of NAC 459.96958 on two of the most recent three rounds of testing. Each laboratory shall, before obtaining a proficiency test sample pursuant to paragraph (a) of subsection 1, authorize the provider of the proficiency test sample to submit to the Division the results of any test taken pursuant to the provisions of this section. If the laboratory fails to provide that authorization, the Division may refuse to consider the results of any test taken pursuant to those provisions.

4. The Division shall consider the results of any test taken pursuant to this section to be satisfactory if the results are within the limits of acceptance established by the provider of the proficiency test samples in accordance with the provisions of Appendix C of chapter 2 of the *Standards*.

5. If the Division determines that the results of a test are satisfactory, the laboratory may be certified to use any approved method of testing for each analyte that is satisfactorily analyzed by the laboratory if, as determined by the Division, data sufficient to validate the use of that method of testing on an annual basis are available. If such data are not available, the Division shall deny or revoke certification for that method of testing. As used in this subsection, "data sufficient to validate" means performance of an initial demonstration of capability as defined in section 7.2.8 of the manual specified in paragraph (e) of subsection 1 of NAC 459.96948.

6. If a certified laboratory fails:

(a) Two rounds of testing pursuant to subsection 3, the Division shall suspend the certification of that laboratory for each analyte the laboratory failed to analyze during those rounds; or

(b) Three rounds of testing pursuant to that subsection, the Division shall revoke the certification of that laboratory for each analyte the laboratory failed to analyze during those rounds.

7. If the Division suspends the certification of a certified laboratory pursuant to subsection 6 because the laboratory failed two nonconsecutive rounds of testing, the Division shall reinstate the certification of that laboratory for the method of testing an analyte for which the certification was suspended if the certified laboratory satisfactorily analyzes the analyte in a proficiency test sample that is approved by the Division.

8. If the Division suspends the certification of a certified laboratory pursuant to subsection 6 because the laboratory failed to analyze an analyte on two consecutive rounds of testing, the laboratory must satisfactorily analyze the analyte during each of two consecutive rounds of testing conducted after the Division suspends the certification.

9. If the Division revokes the certification of a certified laboratory pursuant to subsection 6, the laboratory must:

(a) Analyze satisfactorily the analyte for which the certification was revoked during each of two consecutive rounds of testing conducted after the Division revoked the certification; and

(b) Reapply for certification and pay the applicable fees pursuant to the provisions of NAC 459.96902 to 459.9699, inclusive.

➥ If a certified laboratory complies with the provisions of this subsection and is otherwise qualified for certification pursuant to the provisions of NAC 459.96902 to 459.9699, inclusive, the Division shall reinstate the certification of the laboratory for each method of testing and analyte for which the laboratory was certified.

10. Each certified laboratory must comply with the requirements concerning enrollment, testing, conduct and participation in the program specified in subsection 1 pursuant to the provisions of sections 2.4, 2.5 and 2.7 of the *Standards*.

11. As used in this section, "Proficiency Testing Oversight Body/Proficiency Testing Provider Accreditor" has the meaning ascribed to it in Appendix A of chapter 1 of the *Standards*.

(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.9697 Adoption of quality manual by laboratory; contents. (NRS 459.485, 459.500)

1. Each laboratory that applies for certification pursuant to NAC 459.96902 to 459.9699, inclusive, shall adopt a quality manual and comply with the provisions of that manual. The director of the laboratory shall submit the manual to the Division before the Division conducts an inspection of the laboratory.

2. Each quality manual specified in subsection 1 must be adopted in accordance with the provisions of section 5.5 of the *Standards* and include, without limitation:

(a) A statement setting forth the requirements of the laboratory for sensitivity, precision and accuracy for each method of testing or analyte for which the laboratory requests certification;

(b) The policy of the laboratory concerning any unauthorized use of data or fraudulent activity that occurs at the laboratory; and

(c) The policy of the laboratory concerning the collection of samples for the purpose of determining compliance with the Federal Act. The policy must provide that:

(1) A person taking a sample shall sign and date an attestation indicating the validity and authenticity of the sample; and

(2) Tampering with or intentionally mislabeling the location, date, time or collection of a sample may be considered grounds for the denial of an application for certification or the revocation, suspension or limitation of certification pursuant to the provisions of NAC 459.96974.

(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96972 Inspection of laboratory by Division. (NRS 459.485, 459.500)

1. Unless a laboratory satisfies the provisions of paragraph (c) of subsection 2 of NAC 459.96988, the Division shall conduct an inspection of the premises and operation of each certified laboratory or laboratory for which an application for certification is submitted pursuant to the provisions of NAC 459.96966. An inspection conducted pursuant to this section must be conducted in accordance with the provisions of sections 3.4 to 3.7, inclusive, of the *Standards*. If a certified laboratory conducts analyses of waste samples, the laboratory must be inspected in accordance with the manual adopted by reference pursuant to the provisions of paragraph (e) of subsection 1 of NAC 459.96948. A certified laboratory shall analyze a quality control sample for each method of testing an analyte for which it is certified:

(a) At least once every 3 months; and

(b) Each time a new calibration curve is generated.

2. The Division shall conduct an inspection specified in subsection 1:

(a) Not less than once every 2 years, if the laboratory is a certified laboratory; or

(b) If the laboratory submits an application for certification pursuant to the provisions of NAC 459.96966, not more than 30 days after the Division determines that the laboratory has complied with the provisions of paragraphs (a), (b) and (c) of subsection 3 of that section.

3. The Division may conduct an inspection of a laboratory more than once every 2 years pursuant to this section if:

(a) The Division receives a complaint concerning the quality of the laboratory from a member of the general public or any public agency;

(b) The Division has reasonable cause to believe the laboratory is engaging in fraudulent activity;

(c) The Division identifies deficiencies in the operation of the laboratory after conducting an inspection of the laboratory pursuant to this section;

(d) The laboratory notifies the Division pursuant to the provisions of NAC 459.96982 of any changes specified in that section; or

(e) Any circumstance specified in section 3.3 of the *Standards* occurs.

4. An inspection conducted pursuant to the provisions of this section may include, without limitation:

(a) Requiring the laboratory to conduct an analysis of a proficiency test sample; and

(b) Photocopying, photographing or videotaping:

(1) Any part of the laboratory that is used for analyzing waste samples pursuant to the Federal Act;

(2) Any equipment, activity, waste sample, records or results of any test relating to the analysis of a waste sample pursuant to the Federal Act;

(3) Any data concerning the control of the quality of any analysis conducted by the laboratory pursuant to the Federal Act; or

(4) Any other information required by the Division to ensure compliance with the provisions of NAC 459.96902 to

459.9699, inclusive.

5. Except as otherwise provided in this subsection, the Division shall announce each inspection conducted pursuant to the provisions of this section. The Division may conduct an unannounced inspection of a laboratory if the Division determines that such an inspection is required to ensure compliance by the laboratory with the provisions of NAC 459.96902 to 459.9699, inclusive. In determining whether to conduct an unannounced inspection, the Division shall consider:

(a) The laboratory's record of compliance with the provisions of NAC 459.96902 to 459.9699, inclusive;

(b) The results of any proficiency test taken by the laboratory;

(c) The performance of any analyst or other employee of the laboratory in conducting an analysis of a waste sample pursuant to the provisions of NAC 459.96902 to 459.9699, inclusive;

(d) Any complaints concerning the laboratory that the Division has received from members of the general public or any public agency; and

(e) The performance of the laboratory in conducting analyses pursuant to the provisions of NAC 459.96902 to 459.9699, inclusive.

6. If the Division conducts an inspection of a laboratory pursuant to the provisions of this section, the laboratory shall:

(a) Ensure that any record or other information which relates to compliance by the laboratory with the Federal Act or NAC 459.96902 to 459.9699, inclusive, and which is required by the Division to conduct the inspection is available for review, including, without limitation:

(1) The quality manual adopted pursuant to the provisions of NAC 459.9697;

(2) Any information concerning the methods of testing used by the laboratory;

(3) Any data concerning the control of the quality of an analysis conducted by the laboratory; and

(4) Any information concerning any proficiency test taken by the laboratory; and

(b) Allow the Division to:

(1) Examine any records of the laboratory concerning the operation or certification of the laboratory that relate to compliance by the laboratory with the Federal Act or NAC 459.96902 to 459.9699, inclusive;

(2) Observe the operation, facilities and equipment of the laboratory that relate to compliance with the Federal Act or NAC 459.96902 to 459.9699, inclusive;

(3) Interview any employee of the laboratory who performs duties relating to compliance by the laboratory with the Federal Act or NAC 459.96902 to 459.9699, inclusive; and

(4) Engage in any activity which is necessary and appropriate for determining compliance by the laboratory with the Federal Act or NAC 459.96902 to 459.9699, inclusive, and which is required by the Division.

7. If the Division conducts an inspection of a laboratory, it shall, within 30 days after it conducts the inspection, provide to the laboratory a copy of the report of the inspection. The report must include any deficiency the Division discovers during its inspection of the laboratory. The laboratory shall prepare a plan to correct the deficiency specified in the report. The plan must:

(a) Be submitted to the Division not more than 30 days after the laboratory receives the report from the Division;

(b) Be submitted on a form approved by the Division; and

(c) Include, without limitation:

(1) The signature of the person who prepared the plan; and

(2) The proposed date by which the laboratory will correct the deficiency.

8. If, after reviewing the plan submitted pursuant to subsection 7, the Division determines that the plan is insufficient to correct the deficiency, the Division shall notify the laboratory of that fact in writing. Upon receipt of the written notice, the laboratory shall, not more than 30 days after receiving the notice, submit a revised plan to the Division. If, after reviewing the revised plan, the Division determines that the revised plan is insufficient to correct the deficiency, or if the Division conducts an inspection of the laboratory and determines that the deficiency has not been corrected, the Division shall deny the laboratory's application for certification or revoke its certification.

(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96974 Grounds for denial of application for certification, or revocation, suspension or limitation of certification. (NRS 459.485, 459.500)

1. The Division may deny an application for certification of a laboratory or revoke, suspend or limit the certification of a certified laboratory if the laboratory:

(a) Makes a false statement in:

(1) An application for certification;

(2) A report concerning the analysis of a waste sample; or

(3) Any other document relating to certification in violation of the provisions of NAC 459.96902 to 459.9699, inclusive;

(b) Falsifies any results of laboratory testing or misrepresents any information obtained from laboratory testing in violation of the provisions of NAC 459.96962 or 459.96984;

(c) Fails to maintain the facilities or equipment of the laboratory in accordance with the quality manual or quality system of the laboratory;

(d) Fails to participate satisfactorily in a proficiency testing program, if the program is available, in violation of the

provisions of NAC 459.96968;

(e) Falsely claims certification for a method of testing or an analyte for which the laboratory is not certified in violation of the provisions of NAC 459.96984;

(f) Fails to prepare a plan of correction or to correct any deficiency specified by the Division within the period specified in the plan in violation of the provisions of NAC 459.96972;

(g) Fails to pay any fees or expenses of the Division in violation of the provisions of NAC 459.96986;

(h) Fails to notify the Division of any changes specified in NAC 459.96982;

(i) Authorizes a person who is not qualified to perform an analysis in violation of the provisions of NAC 459.96962;

(j) Communicates with or receives a communication concerning the results of a proficiency test sample from a laboratory on or before the date established for submitting the results of that sample to the provider of the sample pursuant to the provisions of NAC 459.96968;

(k) Knowingly receives a proficiency test sample from a laboratory or provides a proficiency test sample to a laboratory on or before the date specified in paragraph (j);

(l) Prohibits an employee of the Division from conducting an inspection of the laboratory in violation of the provisions of NAC 459.96972;

(m) Fails to provide to the Division any information required by the Division to determine whether a laboratory is operated in compliance with the provisions of NAC 459.96902 to 459.9699, inclusive;

(n) Misrepresents any material fact to obtain or maintain certification pursuant to the provisions of NAC 459.96902 to 459.9699, inclusive;

(o) Engages in any activity that is a ground for the denial of an application for certification or for the suspension or revocation of the certification of a laboratory set forth in section 4.1.4(d) or 4.4 of the *Standards*; or

(p) Knowingly employs, directly or indirectly, a person who has violated a provision of NRS 459.400 to 459.600, inclusive, 459.610 to 459.658, inclusive, 459.800 to 459.856, inclusive, or NAC 459.96902 to 459.9699, inclusive.

2. In determining whether to deny an application for certification or to revoke, suspend or limit the certification of a laboratory pursuant to this section, the Division shall consider:

(a) The gravity of the violation;

(b) The harm to the health and safety of the members of the general public;

(c) The intent of the person who committed the violation;

(d) The extent of the violation; and

(e) Any proposed correction of the violation.

3. As used in this section, "quality system" has the meaning ascribed to it in Appendix A of chapter 1 of the *Standards*.

(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96976 Reapplication after denial of application or revocation of certification. (NRS 459.485**,** 459.500**)** If the Division denies an application for certification submitted by a laboratory or revokes the certification of a certified laboratory, the laboratory may, after the period specified in section 4.4 of the *Standards* expires, reapply for certification in the manner prescribed in NAC 459.96966.

(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96978 Renewal of certification. (NRS 459.485**,** 459.500**)**

1. The Division may renew the certificate of a certified laboratory if:

(a) The laboratory pays the applicable fee to renew the certificate;

(b) The laboratory submits a statement on a form approved by the Division indicating that it is in compliance with the provisions of NAC 459.96902 to 459.9699, inclusive, concerning each category of testing, method of testing and analyte for which it is certified;

(c) The laboratory submits a report to the Division indicating that it has received satisfactory proficiency test results for each category of testing and analyte for which it is certified; and

(d) The Division determines that the laboratory is in compliance with the provisions of NAC 459.96902 to 459.9699, inclusive.

2. A certificate issued to a laboratory pursuant to the provisions of NAC 459.96902 to 459.9699, inclusive, expires on July 31 of each year. If the certificate of a certified laboratory expires, the laboratory may apply for certification in the manner prescribed in NAC 459.96966.

3. The Division shall make available to each certified laboratory a notice for the renewal of the certificate and a form to provide a statement of compliance specified in paragraph (b) of subsection 1.

4. Each certified laboratory shall maintain any record specified in section 4.3.3 of the *Standards* in accordance with the provisions of that section.

(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.9698 Display of certificate; conditions for surrender of certificate; issuance of document.(NRS 459.485**,** 459.500**)**

1. The director of the laboratory shall display the certificate issued by the Division in a conspicuous place in the

laboratory to which the members of the general public have access.

2. The certificate is the property of the Division and must be surrendered to the Division if:

(a) The Division revokes the certificate;

(b) The laboratory for which the certificate is issued ceases to conduct analyses of waste samples for which a certificate is required; or

(c) The Division ceases to be an accrediting authority approved by the Environmental Protection Agency. As used in this paragraph, "accrediting authority" has the meaning ascribed to it in Appendix A of chapter 1 of the *Standards*.

3. In addition to issuing a certificate to each certified laboratory, the Division shall provide to each certified laboratory a document which indicates each category of testing an analyte for which the laboratory is certified. If, after the Division provides the document to the laboratory, the Division certifies the laboratory for an additional analyte or the Division revokes, suspends or limits the certification of the laboratory for a category of testing or analyte, the Division shall revise the document to include the additional analyte for which the laboratory is certified or the category of testing or analyte that is revoked, suspended or limited by the Division.

(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96982 Notification of Division of certain changes concerning certified laboratory. (NRS 459.485**,** 459.500**)** If, as determined by the Division, a change concerning a certified laboratory occurs that substantially affects the ability of the laboratory to perform any analysis for which the laboratory is certified, the director of the laboratory shall, not more than 30 days after the change occurs, notify the Division of the change in writing. For the purposes of this section, a change includes, without limitation, a change in the name, ownership, location or personnel of a laboratory or any other change specified in sections 4.1.8 and 4.3.2 of the *Standards*.

(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96984 Contractual agreements, records and reports. (NRS 459.485**,** 459.500**)**

1. A certified laboratory shall ensure that each analysis it performs complies with the provisions of Appendix D of chapter 5 of the *Standards*.

2. A certified laboratory shall maintain any document or other information required by the provisions of section 4.3.3 of the *Standards* in accordance with the provisions of that section.

3. If a certified laboratory prepares a report of any test conducted pursuant to the provisions of this section, the report must be prepared in accordance with the provisions of section 5.13 of the *Standards*.

4. If a certified laboratory is not certified to conduct a test in a category of testing or to use a method of testing or test for an analyte pursuant to the provisions of NAC 459.96902 to 459.9699, inclusive, the director of the laboratory may contract with a certified laboratory to perform that test if:

(a) Before entering into the contract, the director notifies in writing the person for whom the test will be conducted of his intent to enter into the contract; and

(b) The laboratory complies with the requirements specified in section 5.14 of the *Standards*.

5. If a certified laboratory contracts with another certified laboratory pursuant to the provisions of this section, the director of the certified laboratory shall ensure that the certified laboratory that will conduct the test is certified pursuant to the provisions of NAC 459.96902 to 459.9699, inclusive. If the certified laboratory that offered the contract maintains any record of the contract or of any test conducted pursuant to the contract, it shall include in that record:

(a) Any report submitted by the certified laboratory that conducted the test concerning the results of the test; and

(b) The certification number of the certified laboratory that conducted the test.

6. If the certified laboratory that offered the contract prepares a report concerning the results of any test conducted pursuant to the contract, it shall specify in the report that the results of that test were obtained by contract pursuant to the provisions of this section.

(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

Miscellaneous Provisions

NAC 459.96986 Fees for certification. (NRS 459.485**,** 459.500**)**

1. Except as otherwise provided in subsection 2, a laboratory must submit an annual fee of $500 with each application for certification.

2. A laboratory which only performs analysis for microbiology is not required to pay the fee provided pursuant to subsection 1.

3. In addition to the fee required pursuant to the provisions of subsections 1 and 4, a laboratory must submit an annual certification fee for each category of contaminant for which certification is requested. The categories of contaminants and annual fees are:

CATEGORY OF CONTAMINANT	ANNUAL FEE
Bulk asbestos analysis of hazardous waste.....	$400

Characteristics of hazardous waste	
Dioxin in hazardous waste	400
Herbicides	545
Immunoassay methods for hazardous waste	545
Infrared analysis of hazardous waste	545
Inorganic chemistry of hazardous waste	545
Liquid chromatography for hazardous waste	545
Microbiology	400
	400
Miscellaneous screening methods for hazardous waste	per method
Pesticides	545
Physical properties of hazardous waste	350
Polyaromatic hydrocarbons in hazardous waste	545
Polychlorinated biphenyls in hazardous waste	545
Radiochemistry of hazardous waste	545
Semivolatile organic chemistry of hazardous waste	545
Toxicity bioassay of hazardous waste	400
Trace metals in hazardous waste	545
Volatile organic chemistry of hazardous waste	545
Any other individual contaminant	200
Any other individual multicontaminant method	400

4. In addition to the fees required pursuant to the provisions of subsections 1 and 3, if a laboratory applies for certification for a contaminant in more than two of the approved methods of testing for that contaminant, the laboratory must submit a fee of $200 for each additional approved method of testing.

5. If a laboratory applies for certification for additional contaminants after the laboratory has been issued a certification for an annual period of certification, the fee for certification for each additional contaminant is the fee provided for that contaminant pursuant to the provisions of subsection 3. The fee must be prorated pursuant to subsection 6 if the provisions of that subsection otherwise apply. If the Division conducts an evaluation for certification at the laboratory, the laboratory must pay, at the rate provided for state officers and employees generally, the actual travel and per diem expenses of the Division. If the laboratory is located outside of this State, the expenses must be paid pursuant to the provisions of subsection 7.

6. The fees are effective for 12 months beginning on August 1 of each year. If an application for certification to test for an analyte is submitted during that period, the fees for that certification must be prorated using the following formula:

Fee X .083 X the number of months remaining in the period of certification.

For the purpose of prorating fees, an application for certification to test for an analyte shall be deemed to have been submitted at the beginning of a month regardless of the date of the application. The prorated fee must be rounded to the next highest dollar. The fee provided pursuant to the provisions of subsection 1 must not be prorated.

7. If an evaluation for certification of a laboratory that is located outside of this State is conducted, the laboratory must pay the actual travel and per diem expenses of the employee of the Division who conducts the evaluation.

8. The fee for certification to test for a specific analyte must be paid before a certificate for that analyte may be issued.

9. Any fee paid pursuant to the provisions of this section is nonrefundable.

(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.96988 Acceptance of analyses conducted by laboratory located outside State. (NRS 459.485**,** 459.500**)** The Division shall accept data relating to the analysis of contaminants regulated pursuant to NRS 459.400 to 459.600, inclusive, 459.610 to 459.658, inclusive, and 459.800 to 459.856, inclusive, that are submitted from a laboratory located outside of this State if:

1. The laboratory has otherwise complied with the requirements set forth in NAC 459.96902 to 459.9699, inclusive;

2. The:

(a) Laboratory is certified by the United States Environmental Protection Agency;

(b) Division determines that the state where the laboratory is located:

(1) Has adopted a program for certifying laboratories for the analysis of water that is equivalent to the program for certifying those laboratories adopted by the Division; and

(2) Accepts the results of evaluations conducted pursuant to the program adopted by the Division; or

(c) Laboratory:

(1) Is located in a state that has established an agreement with this State concerning certification of laboratories by reciprocity; or

(2) Is certified pursuant to the National Environmental Laboratory Accreditation Program; and

3. The laboratory submits to the Division a copy of an acceptable report relating to the most recent evaluation conducted at the laboratory by:

(a) The state where the laboratory is certified;

(b) An independent organization that is approved by the Division to certify laboratories for the analysis of waste samples; or

(c) The United States Environmental Protection Agency.

➥ The evaluation to which the report relates must be conducted within the 2 years immediately preceding the date of the application of the laboratory for certification.

(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

NAC 459.9699 Review by Commission of publications adopted by reference. (NRS 459.485**,** 459.500**)** If any publication adopted by reference pursuant to the provisions of NAC 459.96902 to 459.9699, inclusive, is revised, the Commission may review the revision to determine its suitability for this State. If the Commission determines that the revision is not suitable for this State, it will hold a public hearing to review its determination and give notice of that hearing within 6 months after the date of the publication of the revision. If, after the hearing, the Commission does not revise its determination, the Commission will give notice that the revision is not suitable for this State within 30 days after the hearing. If the Commission does not give such notice, the revision becomes part of the publication adopted by reference pursuant to the provisions of NAC 459.96902 to 459.9699, inclusive.

(Added to NAC by Environmental Comm'n by R061-04, eff. 10-7-2004)

CERTIFICATION OF CERTAIN CONSULTANTS AND CONTRACTORS

NAC 459.970 Definitions. (NRS 459.485**,** 459.500**)** As used in NAC 459.970 to 459.9729, inclusive, unless the context otherwise requires, the words and terms defined in NAC 459.9701 to 459.9716, inclusive, have the meanings ascribed to them in those sections.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.9701 "Consultant" defined. (NRS 459.485**,** 459.500**)** "Consultant" means a person who provides information, opinion or advice for a fee or in conjunction with other services for which a fee is charged.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.9702 "Division" defined. (NRS 459.485**,** 459.500**)** "Division" means the Division of Environmental Protection of the State Department of Conservation and Natural Resources.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.9703 "Employee" defined. (NRS 459.485**,** 459.500**)** "Employee" includes:

1. Any officer of a corporation;
2. Any natural person whose activities are subject to a right of control by the person paying for his services; and
3. Any other natural person who would be considered an employee under any common-law definition of employee.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.9704 "Environmental manager" defined. (NRS 459.485**,** 459.500**)** "Environmental manager" means a natural person who is certified by the Division pursuant to NAC 459.972 or 459.9724 to act as a consultant relating to:

1. The management of hazardous waste;
2. The investigation of a site to determine the release or potential release of a hazardous substance;
3. The sampling of air, soil, surface water or groundwater to determine the release of a hazardous substance;
4. The response to a release of a hazardous substance;
5. The cleanup of a release of a hazardous substance; or
6. The remediation of water or soil contaminated by a hazardous substance.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.9705 "Handler of underground storage tanks" defined. (NRS 459.485**,** 459.500**)** "Handler of underground storage tanks" means a natural person who is certified by the Division pursuant to NAC 459.9722 or 459.9724 to install, repair, upgrade or close underground storage tanks pursuant to 40 C.F.R. Part 280, as that part existed on June 12, 1990.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.9706 "Hazardous material" defined. (NRS 459.485**,** 459.500**)** "Hazardous material" has the meaning ascribed to it in NRS 459.428.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.9707 "Hazardous substance" defined. (NRS 459.485**,** 459.500**)** "Hazardous substance" means:

1. Any hazardous material;
2. Any hazardous waste; or
3. Any regulated substance.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.9708 "Hazardous waste" defined. (NRS 459.485**,** 459.500**)** "Hazardous waste" has the meaning ascribed to it in NRS 459.430 and NAC 444.843.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.9709 "Management of hazardous waste" defined. (NRS 459.485**,** 459.500**)** "Management of hazardous waste" means services relating to the identification, sampling, handling, packaging, storage, labeling, treatment, reduction, recycling, permitting, recordkeeping, manifesting, transportation or disposal of hazardous waste.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.971 "Person" defined. (NRS 459.485**,** 459.500**)** "Person" has the meaning ascribed to it in NRS 0.039.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.9711 "Regulated substance" defined. (NRS 459.485**,** 459.500**)** "Regulated substance" has the meaning ascribed to it in NRS 459.448.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.9712 "Release of a hazardous substance" defined. (NRS 459.485**,** 459.500**)** "Release of a hazardous substance" means the discharge, deposit, injection, dumping, spilling, emitting, leaking, escaping, leaching, pumping, pouring, emptying, disposing or placing of a hazardous substance into the air or on land or the waters of the State. The term does not include a release of a hazardous substance:

1. Specifically allowed by a permit issued pursuant to state or federal law; or
2. For which a permit is not required by state or federal law.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.9713 "Response" defined. (NRS 459.485**,** 459.500**)** "Response" means the provision of remedial services to protect the public health, safety, welfare or environment from a release of a hazardous substance, including, but not limited to, the digging, cleanup, removal, abatement, containment, control, absorbance, treatment or remediation of soil or water contaminated with a hazardous substance.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.9714 "Specialist in the management of hazardous waste" defined. (NRS 459.485**,** 459.500**)** "Specialist in the management of hazardous waste" means a natural person who is certified by the Division pursuant to NAC 459.9721 or 459.9724 to act as a consultant relating to the management of hazardous waste.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.9715 "Tester of underground storage tanks" defined. (NRS 459.485**,** 459.500**)** "Tester of underground storage tanks" means a natural person who is certified by the Division pursuant to NAC 459.9723 or 459.9724 to test the tightness of underground storage tanks pursuant to 40 C.F.R. Section 280.43(c), as that section existed on June 12, 1990.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.9716 "Underground storage tank" defined. (NRS 459.485**,** 459.500**)** "Underground storage tank" has the meaning ascribed to it in 40 C.F.R. Section 280.12, as that section existed on June 12, 1990.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.9717 Intent of provisions. (NRS 459.485**,** 459.500**)** The intent of NAC 459.970 to 459.9729, inclusive, is to carry out the provisions of NRS 459.500 to protect persons who employ consultants concerning hazardous materials and wastes.

(Added to NAC by Environmental Comm'n, eff. 3-6-91; A 5-3-96)

NAC 459.9718 Applicability of provisions. (NRS 459.485**,** 459.500**)** The provisions of NAC 459.970 to 459.9729, inclusive, do not apply to:

1. Services provided by an employee of a business or public agency relative to the hazardous waste management, release investigation or response or underground storage tank management responsibilities of his employer, exclusively,

while acting in the course of that employment.

2. Services provided by an employee of a public agency with the responsibility of regulatory enforcement, emergency response, or protection of public health, welfare or the environment, while acting in the course of that employment.

3. Services provided by a person who is a transporter of hazardous waste that are:

(a) Designated as the specific responsibility of the transporter of hazardous waste under the applicable state or federal regulations; and

(b) Necessary to perform the service of transportation of hazardous waste in accordance with the applicable state or federal regulations.

4. Services provided by a person under contract at a federal facility, while acting within the scope of that contract.

5. Services provided by a person that are requested by a state agency or political subdivision of the State if fees are not charged for those services.

6. Services provided by a public utility to its customers if incidental to the services ordinarily provided by the utility.

(Added to NAC by Environmental Comm'n, eff. 3-6-91; A 10-29-93)

NAC 459.9719 Services for which certification is required. (NRS 459.485**,** 459.500**)**

1. A person shall not provide services as:

(a) An environmental manager;

(b) A specialist in the management of hazardous waste;

(c) A handler of underground storage tanks; or

(d) A tester of underground storage tanks,

➥ for a fee or in conjunction with other services for which a fee is charged, unless those services are performed under the direction and responsible control of a natural person who has obtained certification from the Division.

2. The provisions of this section do not prohibit the engagement of an apprentice or assistant if a natural person who is certified by the Division pursuant to the provisions of NAC 459.970 to 459.9729, inclusive, supervises that apprentice or assistant and maintains responsibility for the work of that apprentice or assistant.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.972 Certification as environmental manager. (NRS 459.485**,** 459.500**)** An applicant for certification as an environmental manager must:

1. Be of good character and reputation as determined by the Division upon review of the applicant's references, record of violations of environmental laws and regulations and such other considerations as the Division deems necessary and proper. Certification must be denied if such a review indicates that the applicant fails to meet the applicable standards.

2. Submit to the Division:

(a) An application on a form provided by the Division;

(b) A nonrefundable fee of $100 for the review of the application;

(c) A color photograph of the applicant which is approximately 2 inches by 2 inches;

(d) A statement signed by the applicant under penalty of perjury declaring the details of all pleas of guilty or nolo contendere in any criminal proceeding and all convictions of any crimes; and

(e) Three letters of reference from natural persons with experience in the services of that classification attesting to the applicant's moral character and competence in that classification.

3. Demonstrate to the Division that he meets one of the following qualifications:

(a) A bachelor's or advanced degree from an accredited college or university in an area relating to the environment including, but not limited to, environmental science, engineering, geology, hydrology, hydrogeology, biology, toxicology, environmental health, physics, industrial hygiene or chemistry and at least 3 years of relevant environmental experience within the 5 years immediately preceding the date of the application;

(b) A relevant professional registration or certification recognized by the Division and at least 3 years of relevant environmental experience within the 5 years immediately preceding the date of the application; or

(c) An equivalent combination of appropriate education or experience, or both, as determined by the Division.

4. Pass an examination pursuant to NAC 459.9726.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.9721 Certification as specialist in the management of hazardous waste. (NRS 459.485**,** 459.500**)** An applicant for certification as a specialist in the management of hazardous waste must:

1. Be of good character and reputation as determined by the Division upon review of the applicant's references, record of violations of environmental laws and regulations and such other considerations as the Division deems necessary and proper. Certification must be denied if such a review indicates that the applicant fails to meet the applicable standards.

2. Submit to the Division:

(a) An application on a form provided by the Division;

(b) A nonrefundable fee of $100 for the review of the application;

(c) A color photograph of the applicant which is approximately 2 inches by 2 inches;

(d) A statement signed by the applicant under penalty of perjury declaring the details of all pleas of guilty or nolo contendere in any criminal proceeding and all convictions of any crimes; and

(e) Three letters of reference from natural persons with experience in the services of that classification attesting to the applicant's moral character and competence in that classification.

3. Demonstrate to the Division that he meets one of the following qualifications:

(a) A bachelor's or advanced degree from an accredited college or university in an area relating to the environment, including, but not limited to, environmental science, engineering, geology, hydrology, hydrogeology, biology, toxicology, environmental health, physics, or industrial hygiene or chemistry and at least 2 years of relevant hazardous waste experience within the 3 years immediately preceding the date of the application;

(b) A relevant professional registration or certification recognized by the Division and at least 2 years of relevant hazardous waste experience within the 3 years immediately preceding the date of the application;

(c) A high school diploma or general equivalency diploma and at least 6 years of relevant hazardous waste experience within the 8 years immediately preceding the date of the application; or

(d) An equivalent combination of appropriate education and experience as determined by the Division.

4. Pass an examination pursuant to NAC 459.9726.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.9722 Certification as handler of underground storage tanks. (NRS 459.485**,** 459.500**)** An applicant for certification as a handler of underground storage tanks must:

1. Be of good character and reputation as determined by the Division upon review of the applicant's references, record of violations of environmental laws and regulations and such other considerations as the Division deems necessary and proper. Certification must be denied if such a review indicates that the applicant fails to meet the applicable standards.

2. Submit to the Division:

(a) An application on a form provided by the Division;

(b) A nonrefundable fee of $100 for the review of the application;

(c) A color photograph of the applicant which is approximately 2 inches by 2 inches;

(d) A specific record of at least 2 years' experience and the direct participation in at least 10 projects relating to the handling of underground storage tanks;

(e) A copy of an appropriate license issued by the State Contractors' Board pursuant to chapter 624 of NRS;

(f) Proof of completion of a course approved by the Division concerning the safe handling of underground storage tanks;

(g) A statement signed by the applicant under penalty of perjury declaring the details of all pleas of guilty or nolo contendere in any criminal proceeding and all convictions of any crimes; and

(h) Three letters of reference from natural persons with experience in the services of that classification attesting to the applicant's moral character and competence in that classification.

3. Pass an examination pursuant to NAC 459.9726.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.9723 Certification as tester of underground storage tanks. (NRS 459.485**,** 459.500**)** An applicant for certification as a tester of underground storage tanks must:

1. Be of good character and reputation as determined by the Division upon review of the applicant's references, record of violations of environmental laws and regulations and such other considerations as the Division deems necessary and proper. Certification must be denied if such a review indicates that the applicant fails to meet the applicable standards.

2. Submit to the Division:

(a) An application on a form provided by the Division;

(b) A nonrefundable fee of $100 for the review of the application;

(c) A color photograph of the applicant which is approximately 2 inches by 2 inches;

(d) A specific record of direct participation in at least 50 tests of underground storage tanks;

(e) A specific record of at least 1 year of experience in the testing of underground storage tanks;

(f) Proof of training provided by the manufacturer of the equipment which is used for testing;

(g) Proof of completion of a course approved by the Division concerning the safe handling of underground storage tanks;

(h) A statement signed by the applicant under penalty of perjury declaring the details of all pleas of guilty or nolo contendere in any criminal proceeding and all convictions of any crimes; and

(i) Three letters of reference from natural persons with experience in the services of that classification attesting to the applicant's moral character and competence in that classification.

3. Pass an examination pursuant to NAC 459.9726.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.9724 Certification of person certified by another state or recognized organization. (NRS 459.485**,** 459.500**)**

1. Except as otherwise provided in this section, a natural person who is certified as:

(a) An environmental manager;

(b) A specialist in the management of hazardous waste;

(c) A handler of underground storage tanks; or
(d) A tester of underground storage tanks,
➥ by another state or an organization recognized by the Division, may be certified by the Division if he complies with the requirements set forth in subsection 2.

2. A natural person who applies for certification pursuant to this section must submit to the Division:
(a) An application on a form provided by the Division;
(b) A nonrefundable fee of $100 for the review of the application;
(c) A color photograph of the applicant which is approximately 2 inches by 2 inches; and
(d) Proof of certification by another state or an organization recognized by the Division in the classification for which he is applying for certification in this State.

3. The Division may not issue a certificate to a natural person who is certified by another state or organization if the requirements for certification by that state or organization are not substantially equivalent to the requirements for certification in this State.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.9725 Waiver of requirements for training. (NRS 459.485**,** 459.500**)** The Division may waive any requirements for training for a certificate if that training is not available.
(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.9726 Action on applications; examinations for certification. (NRS 459.485**,** 459.500**)**

1. The Division will review each application and send each applicant written notice within 6 weeks of receipt of all required materials whether his application has been approved or rejected.
2. An applicant whose application is approved by the Division and who wishes to take the examination must submit to the Division a nonrefundable examination fee set by the Division, not to exceed $150, at least 30 days before the examination is given.
3. The Division shall determine the content of the examinations.
4. A score of 70 is a passing score on an examination for certification.
5. An examination for each classification will be given at least once each year.
6. The examinations are the property of the Division and must remain confidential.
7. An applicant who fails the examination may apply for a reexamination. The nonrefundable fee for reexamination must be set by the Division not to exceed $150.
8. Each application for certification will remain on file with the Division for 2 years after the date that all required materials are received by the Division. If the applicant does not pass an examination for certification or request reexamination within the 2-year period, the applicant must file with the Division a new application for certification.

(Added to NAC by Environmental Comm'n, eff. 3-6-91; A 1-24-92)

NAC 459.9727 Contents and duration of certificate. (NRS 459.485**,** 459.500**)**

1. Each certificate issued by the Division to an applicant must bear:
(a) The name of the applicant;
(b) The number of the certificate;
(c) The date of expiration of the certificate; and
(d) The specific classification of certification.
2. Each certificate is valid for 2 years after the date the Division issues the certificate.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.9728 Renewal of certificate. (NRS 459.485**,** 459.500**)** A holder of a certificate who wishes to renew his certificate must:

1. Demonstrate to the Division that he continues to meet all qualifications and performance requirements of NAC 459.970 to 459.9729, inclusive;
2. Submit an application for renewal of the certificate to the Division on a form provided by the Division;
3. Submit a nonrefundable fee set by the Division not to exceed $100; and
4. Complete an examination for renewal if the Division has determined that such a renewal examination is appropriate.

(Added to NAC by Environmental Comm'n, eff. 3-6-91)

NAC 459.97285 Contents of document relating to service for which certification is required. (NRS 459.485**,** 459.500**)** A holder of a certificate who is responsible for a service requiring certification shall ensure that each document relating to the service includes:

1. The following language:

> I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current

standards of the profession and to the best of my knowledge comply with all applicable federal, and local statutes, regulations and ordinances.

2. A description of the services provided.
3. The signature of the holder of the certificate and the date on which the document was signed.
4. The number of the certificate.
5. The date of expiration of the certificate.

(Added to NAC by Environmental Comm'n, eff. 5-3-96)

NAC 459.9729 Standards of practice. (NRS 459.485**,** 459.500**)**

1. Each holder of a certificate issued by the Division pursuant to the provisions of NAC 459.970 to 459.9729, inclusive:

(a) Shall provide services which are ethical, meet the current standards of the profession and which comply with federal, state and local regulations concerning hazardous substances or underground storage tanks.

(b) Is responsible for the work of other persons he employs or supervises.

(c) Shall have a copy of his certificate at the location where he is supervising work. Upon the request of the Division, client or potential client, a holder of a certificate shall present his certificate for inspection.

(d) Shall make a written report to the facility owner or operator, within 24 hours, upon the discovery of a release of a hazardous substance or the existence of an unregistered underground storage tank and advise that facility owner or operator of any applicable reporting requirements.

(e) Shall report to the Division the discovery of a release of a hazardous substance which presents an imminent and substantial hazard to human health, public safety or the environment as soon as possible after he has knowledge of a release.

(f) Shall secure the services of a qualified person to perform any part of his job which requires a level of service or skill which he is not qualified to provide.

(g) Shall make complete prior disclosures to his clients or potential clients of potential conflicts of interest or other circumstances which could influence his judgment or the quality of the services he provides.

(h) Shall not falsify or misrepresent his education or experience, the degree of responsibility for prior assignments or the complexity of prior employment or business, relevant factors concerning employers, employees, associates or joint ventures or past accomplishments.

(i) Shall maintain a written record of each project requiring certification for 3 years after the project is completed. The Division may inspect those records during normal business hours and will establish requirements concerning the information which must be included in the records.

2. Certification may be suspended, revoked or denied for renewal if the Division determines that the certificate holder has not performed in accordance with these standards.

(Added to NAC by Environmental Comm'n, eff. 3-6-91; A by R021-99, 9-27-99)

PARTICIPATION IN PROGRAM FOR VOLUNTARY CLEANUP OF HAZARDOUS SUBSTANCES AND RELIEF FROM LIABILITY

NAC 459.973 Definitions. (NRS 459.656**)** As used in NAC 459.973 to 459.9743, inclusive, unless the context otherwise requires, the words and terms defined in NAC 459.9731 to 459.9736, inclusive, have the meanings ascribed to them in those sections.

(Added to NAC by Environmental Comm'n by R054-00, eff. 5-26-2000)

NAC 459.9731 "Administrator" defined. (NRS 459.656**)** "Administrator" means the Administrator of the Division.

(Added to NAC by Environmental Comm'n by R054-00, eff. 5-26-2000)

NAC 459.9732 "Division" defined. (NRS 459.656**)** "Division" means the Division of Environmental Protection of the State Department of Conservation and Natural Resources.

(Added to NAC by Environmental Comm'n by R054-00, eff. 5-26-2000)

NAC 459.9733 "Eligible property" defined. (NRS 459.656**)** "Eligible property" has the meaning ascribed to it in NRS 459.618.

(Added to NAC by Environmental Comm'n by R054-00, eff. 5-26-2000)

NAC 459.9734 "Participant" defined. (NRS 459.656**)** "Participant" has the meaning ascribed to it in NRS 459.622.

(Added to NAC by Environmental Comm'n by R054-00, eff. 5-26-2000)

NAC 459.9735 "Program" defined. (NRS 459.656**)** "Program" has the meaning ascribed to it in NRS 459.624.

(Added to NAC by Environmental Comm'n by R054-00, eff. 5-26-2000)

NAC 459.9736 "Responsible party" defined. (NRS 459.656**)** "Responsible party" has the meaning ascribed to it in

NRS 459.630.
(Added to NAC by Environmental Comm'n by R054-00, eff. 5-26-2000)

NAC 459.9737 Signature requirement. (NRS 459.656) Any application, remedial agreement, certification to the Administrator or information submitted to the Division pursuant to NAC 459.973 to 459.9743, inclusive, must be signed by a consultant or contractor who is certified pursuant to NAC 459.970 to 459.9729, inclusive, in the area that is appropriate for the type of cleanup that is the subject of such documents or information.
(Added to NAC by Environmental Comm'n by R054-00, eff. 5-26-2000)

NAC 459.9738 Application; environmental assessment; additional information. (NRS 459.634, 459.656)
1. A person who desires to apply for participation in the program pursuant to NRS 459.634 must apply on the application form prescribed by the Administrator.
2. An environmental assessment of the eligible property required pursuant to NRS 459.634 may be conducted pursuant to the Standard Practice for Environmental Site Assessments described in E1527-97 and E1528-96 of the American Society for Testing and Materials or pursuant to a similar method that is approved by the Administrator. Such an assessment must include:
(a) Information regarding the site, including property ownership, current property use, proposed property use and all written communications with regulatory agencies that relate to the environmental condition of the property;
(b) A legal description of the property;
(c) A description of the physical characteristics of the property;
(d) To the extent known by the applicant, the operational history of the site;
(e) To the extent known by the applicant, information concerning the nature and extent of any contamination or release at the eligible property or at property that is contiguous to the eligible property; and
(f) To the extent known by the applicant, relevant information concerning the potential for human and environmental exposure to contamination at the property.
3. In addition to the requirements of NRS 459.634, an applicant:
(a) Must submit any additional information specific to the eligible property that is requested by the Administrator; and
(b) May submit any additional information specific to the eligible property that the applicant deems appropriate.
(Added to NAC by Environmental Comm'n by R054-00, eff. 5-26-2000)

NAC 459.9739 Application fees. (NRS 459.634, 459.656) A person who submits an application for participation in the program must submit to the Division one of the following nonrefundable application fees, as applicable:

Residential	$400
Commercial	
Less than 1 acre	500
1 to 25 acres	1,000
26 to 100 acres	1,600
More than 100 acres	2,000

(Added to NAC by Environmental Comm'n by R054-00, eff. 5-26-2000)

NAC 459.974 Remedial agreement: Submission; contents; approval. (NRS 459.636, 459.656)
1. A participant must submit a remedial agreement to the Administrator within 1 year after the date on which his application was approved by the Administrator. In addition to the requirements of NRS 459.636, a remedial agreement must include:
(a) A cost estimate and information regarding the financial ability of the participant to perform the voluntary cleanup as set forth in NAC 459.9741;
(b) A phase II environmental assessment using the Standard Practice for Environmental Site Assessments of the American Society for Testing and Materials or any equivalent method that is approved by the Administrator;
(c) A corrective action plan that identifies the substances to be removed or remediated, the proposed removal or remediation methods and appropriate remediation standards, consistent with NAC 445A.226 to 445A.22755, inclusive; and
(d) A description of the intended use of the property.
2. A participant may not initiate any removal or remediation that is described in a remedial agreement until the

remedial agreement has been approved by the Administrator.

(Added to NAC by Environmental Comm'n by R054-00, eff. 5-26-2000; A by R189-08, 8-25-2009)

NAC 459.9741 Cost estimate. (NRS 459.636**,** 459.656**)**

1. A participant must submit a detailed cost estimate to restore the property to the condition to which it would be restored if the Division caused action to be taken pursuant to NRS 459.537. The cost estimate must account for the costs of all activities described in the remedial agreement.

2. Through the cost estimate, the participant must demonstrate to the satisfaction of the Administrator that the participant is financially capable of completing the remedial agreement.

(Added to NAC by Environmental Comm'n by R054-00, eff. 5-26-2000)

NAC 459.9742 Recovery of costs. (NRS 459.636**,** 459.656**)**

1. The provisions of the remedial agreement that provide for the recovery of costs by the Division must include, without limitation, the costs the Division incurred for:

(a) Reviewing the remedial agreement;

(b) Overseeing and supervising the actions specified in the remedial agreement; and

(c) Issuing a certificate of completion.

2. After the participant submits a remedial agreement to the Division, the Division shall begin billing the participant on a quarterly basis or on such other schedule as agreed upon by the Division and the participant.

3. The participant and the Administrator may negotiate a prepayment schedule for the estimated costs for the activities specified in subsection 1. Actual costs must be deducted from the prepaid amount according to the billing schedule established pursuant to subsection 2. If the estimated amount of the prepayment is insufficient to cover all the costs of the Division described in subsection 1, the participant and the Administrator shall negotiate additional prepayments sufficient to cover the costs of the Division. After the Division issues a certificate of completion, the Division shall return all excess money prepaid by the participant.

(Added to NAC by Environmental Comm'n by R054-00, eff. 5-26-2000)

NAC 459.9743 Report of completion; certificate of partial completion. (NRS 459.638**,** 459.656**)**

1. To certify that all the activities in the remedial agreement have been completed pursuant to NRS 459.638, the participant shall submit a report to the Administrator which shows that each activity in the agreement has been completed in accordance with the terms of the agreement.

2. The Administrator may issue a certificate of partial completion for a portion of an eligible property that is distinct if such a portion of the eligible property satisfies all the requirements of NRS 459.610 to 459.658, inclusive, and NAC 459.973 to 459.9743, inclusive.

(Added to NAC by Environmental Comm'n by R054-00, eff. 5-26-2000)

TRANSPORTATION OF HAZARDOUS MATERIALS ON PUBLIC HIGHWAYS

NAC 459.975 Definitions. (NRS 459.721**,** 459.725**)** As used in NAC 459.975 to 459.991, inclusive, unless the context otherwise requires, the words and terms defined in NAC 459.97515 to 459.9758, inclusive, have the meanings ascribed to them in those sections.

(Added to NAC by Dep't of Motor Veh. & Pub. Safety, 9-30-88, eff. 1-1-89; A 11-16-89, eff. 1-1-90; 9-13-94, eff. 6-30-95; 1-4-96; A by Dep't of Pub. Safety by R168-03, 12-16-2003)

NAC 459.97515 "Director" defined. (NRS 459.721**,** 459.725**)** "Director" means the Director of the Department of Public Safety.

(Added to NAC by Dep't of Motor Veh. & Pub. Safety, eff. 1-4-96)

NAC 459.9752 "Division" defined. (NRS 459.721**,** 459.725**)** "Division" means the Nevada Highway Patrol Division of the Department of Public Safety.

(Added to NAC by Dep't of Motor Veh. & Pub. Safety, eff. 1-4-96)

NAC 459.97525 "Hazardous material" defined. (NRS 459.721**,** 459.725**)** "Hazardous material" has the meaning ascribed to it in NRS 459.7024.

(Added to NAC by Dep't of Motor Veh. & Pub. Safety, eff. 1-4-96; A by Dep't of Pub. Safety by R168-03, 12-16-2003)

NAC 459.9753 "Motor carrier" defined. (NRS 459.721**,** 459.725**)** "Motor carrier" means a person who owns or operates one or more motor vehicles used to transport hazardous material.

(Added to NAC by Dep't of Motor Veh. & Pub. Safety, eff. 1-4-96)

NAC 459.97535 "Motor vehicle" defined. (NRS 459.721**,** 459.725**)** "Motor vehicle" has the meaning ascribed to it in

NRS 706.096.
(Added to NAC by Dep't of Motor Veh. & Pub. Safety, eff. 1-4-96)

NAC 459.9754 "Participating state" defined. (NRS 459.721, 459.725) "Participating state" means a state that has entered into a reciprocal agreement with this State to participate in the uniform program.
(Added to NAC by Dep't of Motor Veh. & Pub. Safety, eff. 1-4-96; A by Dep't of Pub. Safety by R168-03, 12-16-2003)

NAC 459.97543 "Permit Section" defined. (NRS 459.721, 459.725) "Permit Section" means the Permit Section of the Division.
(Added to NAC by Dep't of Motor Veh. & Pub. Safety, eff. 1-4-96; A by Dep't of Pub. Safety by R168-03, 12-16-2003)—(Substituted in revision for NAC 459.9756)

NAC 459.97545 "Person" defined. (NRS 459.721, 459.725) "Person" means a natural person, any agency of the Federal Government, any agency or political subdivision of this State, any form of business or social organization, and any other legal entity, including, but not limited to, a corporation, partnership, association, trust, or unincorporated organization.
(Added to NAC by Dep't of Motor Veh. & Pub. Safety, eff. 1-4-96)

NAC 459.9755 "Principal place of business" defined. (NRS 459.721, 459.725) "Principal place of business" means the place where a person maintains his central records relating to the transportation of hazardous material.
(Added to NAC by Dep't of Motor Veh. & Pub. Safety, eff. 1-4-96)

NAC 459.97555 "Reciprocal agreement" defined. (NRS 459.721, 459.725) "Reciprocal agreement" means an agreement entered into by this State and another state to:
1. Participate in a program for the reciprocal registration and permitting of persons who transport hazardous material; and
2. Appoint a governing board to assist in the administration of the agreement and the interpretation of its terms.
(Added to NAC by Dep't of Motor Veh. & Pub. Safety, eff. 1-4-96)

NAC 459.97565 "Single-trip permit" defined. (NRS 459.721, 459.725) "Single-trip permit" means a permit for the transportation of hazardous material which is issued pursuant to NAC 459.984 and valid only in the State of Nevada.
(Added to NAC by Dep't of Motor Veh. & Pub. Safety, eff. 1-4-96)

NAC 459.9757 "Transport" and "transportation" defined. (NRS 459.721, 459.725) "Transport" or "transportation" means the movement of property on any public highway.
(Added to NAC by Dep't of Motor Veh. & Pub. Safety, eff. 1-4-96)

NAC 459.97573 "Uniform application" defined. (NRS 459.721, 459.725) "Uniform application" has the meaning ascribed to it in NRS 459.703.
(Added to NAC by Dep't of Pub. Safety by R168-03, eff. 12-16-2003)

NAC 459.97575 "Uniform permit" defined. (NRS 459.721, 459.725) "Uniform permit" means a permit for the transportation of hazardous material established pursuant to 49 U.S.C. § 5119 to regulate the transportation of hazardous materials and issued pursuant to NAC 459.9805 or the corresponding statute or regulation of a participating state.
(Added to NAC by Dep't of Motor Veh. & Pub. Safety, eff. 1-4-96; A by Dep't of Pub. Safety by R168-03, 12-16-2003)

NAC 459.97577 "Uniform program" defined. (NRS 459.721, 459.725) "Uniform program" has the meaning ascribed to it in NRS 459.7032.
(Added to NAC by Dep't of Pub. Safety by R168-03, eff. 12-3-2003)

NAC 459.9758 "Vehicle" defined. (NRS 459.721, 459.725) "Vehicle" has the meaning ascribed to it in NRS 706.146.
(Added to NAC by Dep't of Motor Veh. & Pub. Safety, eff. 1-4-96)

NAC 459.976 Applicability. (NRS 459.721, 459.725) Except as otherwise provided in this section, the provisions of NAC 459.975 to 459.991, inclusive, apply to any person who transports hazardous material in this State. Except as otherwise provided by federal law, the provisions of NAC 459.975 to 459.991, inclusive, do not apply to the transportation of a hazardous material by any vehicle that is owned and operated by the Federal Government, this State or any political subdivision of this State.
(Added to NAC by Dep't of Motor Veh. & Pub. Safety, 9-30-88, eff. 1-1-89; A 11-16-89, eff. 1-1-90; 9-13-94; eff. 6-

30-95; 1-4-96; A by Dep't of Pub. Safety by R168-03, 12-16-2003; R203-05, 2-23-2006)

NAC 459.977 Adoption of and compliance with certain provisions of Code of Federal Regulations. (NRS 459.721**,** 459.725**)**

1. The provisions of 49 C.F.R. Parts 40, 100 to 180, inclusive, and 325 to 399, inclusive, are hereby adopted by reference as they existed on August 1, 2009. Each motor vehicle used for the transportation of hazardous materials in this State must, and each driver of such a vehicle shall, comply with those provisions.

2. A copy of the publications which contain these parts may be obtained:

(a) By mail from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 979050, St. Louis, Missouri 63197-9000, or by toll-free telephone at (866) 512-1800. The price is:

(1) For Part 40..... $63

(2) For the volume containing Parts 100 to 180, inclusive..... 67

(3) For the volume containing Parts 325 to 399, inclusive..... 35

(b) At the Internet address **http://www.gpoaccess.gov/cfr/index.html**, free of charge.

(Added to NAC by Dep't of Motor Veh. & Pub. Safety, 9-30-88, eff. 1-1-89; A 9-13-94; eff. 6-30-95; 1-4-96; A by Dep't of Pub. Safety by R168-03, 12-16-2003; R203-05, 2-23-2006; R056-09, 1-28-2010)

NAC 459.978 Address for communications and payments. (NRS 459.721**,** 459.725**)** Any written communication with or payment made to the Permit Section pursuant to NAC 459.975 to 459.991, inclusive, must be mailed to the Nevada Highway Patrol, Permit Section, 555 Wright Way, Carson City, Nevada 89711-0590.

(Added to NAC by Dep't of Motor Veh. & Pub. Safety, 9-30-88, eff. 1-1-89; A 11-16-89, eff. 1-1-90; 9-13-94; eff. 6-30-95; 1-4-96; A by Dep't of Pub. Safety by R168-03, 12-16-2003)

NAC 459.9785 Prerequisites to transportation of hazardous materials for which federal safety permit required. (NRS 459.721**,** 459.725**)** A motor carrier shall not transport upon a public highway of this State any hazardous material set forth in 49 C.F.R. § 385.403, in the quantity indicated for each, unless the motor carrier:

1. Holds a uniform permit and a safety permit issued by the Federal Motor Carrier Safety Administration of the United States Department of Transportation;

2. Has a "Satisfactory" safety rating assigned by the Federal Motor Carrier Safety Administration as required by 49 C.F.R. § 385.407(a);

3. Certifies that it has a satisfactory security program as required by 49 C.F.R. § 385.407(b), including:

(a) A written route plan that meets the requirements of 49 C.F.R. § 397.101; and

(b) A communication plan that allows for contact between the operator of a motor vehicle used to transport such hazardous material and the motor carrier, to meet the periodic contact requirements set forth in 49 C.F.R. § 385.415(c)(1);

4. Does not have a crash rate in the top 30 percent of the national average, as indicated in the Motor Carrier Management Information System of the Federal Motor Carrier Safety Administration;

5. Does not have a driver, vehicle, hazardous materials or a total out-of-service rate in the top 30 percent of the national average, as indicated in the Motor Carrier Management Information System of the Federal Motor Carrier Safety Administration;

6. Requires all of its hazardous materials employees to complete successfully the security training required by 49 C.F.R. § 172.704(a)(4) and (a)(5); and

7. Registers with the Research and Special Programs Administration of the United States Department of Transportation in accordance with 49 C.F.R. Part 107, Subpart G.

(Added to NAC by Dep't of Pub. Safety by R203-05, eff. 2-23-2006)

NAC 459.979 Registration and uniform permit required. (NRS 459.7052**,** 459.721**,** 459.725**)** Except as otherwise provided in NAC 459.980 and 459.984, any person who transports hazardous materials in a vehicle upon a public highway in this State shall register with and obtain a uniform permit from:

1. The Division, if:

(a) The person's principal place of business is located in this State; or

(b) The person's principal place of business is located in a state other than this State or a participating state, and the mileage over which the person transported hazardous material during the preceding year is higher in this State than any participating state;

2. The participating state in which:

(a) The person's principal place of business is located; or

(b) The mileage over which the person transported hazardous material during the preceding year is the highest, if:

(1) The person's principal place of business is located in a state other than Nevada or a participating state; and

(2) The mileage over which the person transported hazardous material during the preceding year is higher in the participating state than in Nevada; or

3. Any state designated by a governing board appointed pursuant to the uniform program if:

(a) The person petitions the governing board for such a designation; and

(b) The entity from whom the petitioner would otherwise be required to obtain a uniform permit pursuant to this

section agrees that the designation:

(1) Furthers the administration of the reciprocal agreement; and

(2) Does not allow the petitioner to evade any pending action by that entity.

(Added to NAC by Dep't of Motor Veh. & Pub. Safety, 9-30-88, eff. 1-1-89; A 11-16-89, eff. 1-1-90; 9-13-94, eff. 6-30-95; 1-4-96; A by Dep't of Pub. Safety by R168-03, 12-16-2003)

NAC 459.980 Use of vehicle under lease. (NRS 459.721, 459.725)

1. A vehicle which is the subject of a lease agreement may be used to transport hazardous materials in this State if:

(a) The lessee or lessor of the vehicle has obtained a uniform permit from the entity prescribed in NAC 459.979;

(b) The uniform permit has not expired or been suspended; and

(c) A legible copy of the lease agreement and uniform permit are carried in the driver's compartment of the vehicle.

2. If a leased vehicle is used for the transportation of hazardous material pursuant to this section otherwise than under the authority of a uniform permit issued to the lessee of the vehicle, the lessor of the vehicle is liable for the operation of the vehicle and actions of its drivers, including liability for any failure by the vehicle and its drivers to comply with:

(a) Any terms, conditions, or certifications set forth in the uniform permit of the lessor; and

(b) Any state or federal statutes or regulations regarding the transportation of hazardous material,

➥ to the same extent as if the vehicle was owned and operated by the lessor and its drivers were employed by the lessor.

(Added to NAC by Dep't of Motor Veh. & Pub. Safety, 9-30-88, eff. 1-1-89; A 11-16-89, eff. 1-1-90; 9-13-94, eff. 6-30-95; 1-4-96; A by Dep't of Pub. Safety by R168-03, 12-16-2003)

NAC 459.9805 Uniform permit: Uniform application for issuance or renewal; fees; expiration. (NRS 459.721, 459.725)

1. A person seeking to obtain a uniform permit from the Division, or to renew a uniform permit issued by the Division, must submit to the Permit Section:

(a) A completed uniform application for the issuance or renewal of a uniform permit, on the form prescribed by the Division;

(b) A general processing fee of $125;

(c) The apportioned registration fee:

(1) For this State, as prescribed by subsection 2; and

(2) For each participating state in which the person transports hazardous material;

(d) A permit review fee of $500 to be paid once every 3 years; and

(e) A reasonable fee to cover the administrative expenses of any costs incurred pursuant to NAC 459.98055.

➥ A uniform permit will not be issued or renewed pursuant to this section until the required uniform application and fees have been received by the Permit Section.

2. Except as otherwise provided in this subsection, the apportioned registration fee for this State is the amount obtained by multiplying $125 by the product of:

(a) The total number of power units used by the applicant for the transportation of all his shipments during the preceding year;

(b) The applicant's total mileage for the transportation of all his shipments in this State during the preceding year divided by the applicant's total mileage for the transportation of all his shipments in all states and countries during the preceding year; and

(c) If the applicant's shipments of hazardous material are by:

(1) Full loads only, the total number of his shipments of hazardous material in this State during the preceding year divided by the total number of all his shipments in this State during the preceding year;

(2) Partial loads only, the total weight of his shipments containing hazardous material in this State during the preceding year divided by the total weight of all his shipments in this State during the preceding year, calculated exactly or to the number midway between the two deciles closest to the person's estimate of that amount; or

(3) Both full and partial loads, the sum obtained by adding:

(I) The percentage of his total shipments of hazardous material in this State during the preceding year which were by full loads times the number obtained by performing the calculation set forth in subparagraph (1) as if all his shipments of hazardous material in this State during the preceding year were by full loads; and

(II) The percentage of his total shipments of hazardous material in this State during the preceding year which were by partial loads times the number obtained by performing the calculation set forth in subparagraph (2) as if all his shipments of hazardous material in this State during the preceding year were by partial loads,

➥ calculated exactly or to the number midway between the two deciles closest to the person's estimate of that amount.

3. A uniform permit issued pursuant to this section expires on:

(a) December 31 of the year in which the uniform permit was issued if the uniform permit was issued by the Division for a calendar year; or

(b) June 30 of the year in which the uniform permit was issued if the uniform permit was issued by the Division for a fiscal year.

4. Except as otherwise provided in subsection 5, a motor carrier who transports hazardous waste in this State shall complete all parts of the uniform application except part III.

5. A motor carrier shall complete all sections of the uniform application if he transports:
(a) Radioactive waste in this State; or
(b) Hazardous waste in a participating state that requires completion of part III of the uniform application.
6. If a motor carrier is required by subsection 5 to complete all sections of the uniform application, the motor carrier shall pay a fee:
(a) For the performance of a background investigation required pursuant to the uniform program. The fee for the background investigation is the actual cost of the investigation. The Permit Section shall inform the applicant of the estimated cost of the investigation, and the Permit Section must receive a fee in that amount before an investigation will begin. Any unexpended portion of the fee will be refunded to the applicant, regardless of the outcome of the investigation.
(b) For on-site investigations by the Division.
(Added to NAC by Dep't of Motor Veh. & Pub. Safety, eff. 1-4-96; A by Dep't of Pub. Safety by R168-03, 12-16-2003)

NAC 459.98055 Authority of Division to require fingerprints from principal officers of applicant. (NRS 459.721**,** 459.725**)**
1. In addition to any other information required by law, the Division may require the principal officers of an applicant to submit a fingerprint card with its uniform application. Fingerprints must be taken by a recognized law enforcement agency.
2. For the purposes of this section, principal officer means any person having responsibility, control, or influence over the environmental, waste management or transportation operations of the applicant.
(Added to NAC by Dep't of Motor Veh. & Pub. Safety, eff. 1-4-96; A by Dep't of Pub. Safety by R168-03, 12-16-2003)

NAC 459.982 Uniform permit: Notice of change in information in uniform application. (NRS 459.721**,** 459.725**)** If there is any change in the information contained in a uniform application to the Division for the issuance or renewal of a uniform permit, the holder of the uniform permit shall, within 1 year after the change occurs, give written notice of the change to the Permit Section.
(Added to NAC by Dep't of Motor Veh. & Pub. Safety, 9-30-88, eff. 1-1-89; A 9-13-94, eff. 6-30-95; 1-4-96; A by Dep't of Pub. Safety by R168-03, 12-16-2003)

NAC 459.983 Uniform permit: Maintenance at place of business; inspection; copy required in vehicle during transportation. (NRS 459.721**,** 459.725**)**
1. The original of any uniform permit must be:
(a) Maintained by the holder at his principal place of business, as listed in his uniform application or as stated pursuant to NAC 459.982; and
(b) Made available for inspection upon request by any peace officer.
2. A legible copy of the uniform permit must be carried in the driver's compartment of the vehicle at all times while the vehicle is being used to transport hazardous materials.
(Added to NAC by Dep't of Motor Veh. & Pub. Safety, 9-30-88, eff. 1-1-89; A 11-16-89, eff. 1-1-90; 9-13-94, 6-30-95; 1-4-96; A by Dep't of Pub. Safety by R168-03, 12-16-2003)

NAC 459.984 Single-trip permit: Obtainment; use; expiration; fee. (NRS 459.721**,** 459.725**)**
1. A person may, not more than once during any period of 3 consecutive months, obtain a single-trip permit in lieu of a uniform permit, from any authorized vendor before or at the time of entry into this State.
2. A single-trip permit:
(a) Is valid for only a single vehicle and shipment of hazardous material within or through this State.
(b) Must be carried in the driver's compartment of the vehicle for which it is issued, and must not be duplicated.
(c) Expires 72 hours after its issuance.
3. The fee for a single-trip permit is $125.
4. A single-trip permit must not be used to transport any hazardous material set forth in 49 C.F.R. § 385.403, unless the motor carrier holds a safety permit issued by the Federal Motor Carrier Safety Administration of the United States Department of Transportation.
(Added to NAC by Dep't of Motor Veh. & Pub. Safety, 9-30-88, eff. 1-1-89; A 11-16-89, eff. 1-1-90; 9-13-94, eff. 6-30-95; 1-4-96; A by Dep't of Pub. Safety by R168-03, 12-16-2003; R203-05, 2-23-2006)

NAC 459.986 Inspection of vehicles; verification of drivers' qualifications. (NRS 459.712**,** 459.721**,** 459.725**)**
1. Any vehicle used to transport hazardous materials in this State is subject to inspection.
2. The qualifications of the driver of a vehicle used to transport hazardous materials in this State are subject to verification.
3. Any such inspection will be conducted by employees of the Division, in conformity with the national uniform inspection procedure and vehicle and driver out-of-service standards adopted by the Commercial Vehicle Safety Alliance and by the Division.

(Added to NAC by Dep't of Motor Veh. & Pub. Safety, 9-30-88, eff. 1-1-89; A 11-16-89, eff. 1-1-90)

NAC 459.9865 Provision of notice before transportation of radioactive waste. (NRS 459.709**,** 459.721**,** 459.725**)** A person who transports radioactive waste shall notify the Division not less than 4 hours nor more than 48 hours before he begins to transport the waste in this State. As used in this section, "radioactive waste" includes low-level waste as defined in NRS 459.007.

(Added to NAC by Dep't of Motor Veh. & Pub. Safety, 11-16-89, eff. 1-1-90)

NAC 459.987 Reporting certain accidents and incidents. (NRS 459.718**,** 459.721**,** 459.725**)**

1. Any accident or incident involving hazardous materials must be reported to the Division in the manner provided by NRS 459.718.

2. Any such report must be submitted on a form prescribed by the Division or on the form prescribed for the hazardous material incident report by the United States Department of Transportation (Form No. 5800.1).

(Added to NAC by Dep't of Motor Veh. & Pub. Safety, 9-30-88, eff. 1-1-89; A by Dep't of Pub. Safety by R168-03, 12-16-2003)

NAC 459.988 Reimbursement of expenses for response to spill or accident. (NRS 459.721**,** 459.725**)** If an incident occurs involving hazardous materials, the expenses for which reimbursement may be sought pursuant to NRS 459.760 and 459.770:

1. Include any expenses incurred for immediate action taken to prevent injury to persons or property.
2. Are the obligation, jointly and severally, of:

(a) The holder of the uniform permit, or of the single-trip permit, pursuant to which the hazardous materials are being transported or, if the materials are transported without a uniform permit, or a single-trip permit, the person who is required to obtain the uniform permit, or the single-trip permit, pursuant to the provisions of NAC 459.979 or 459.984; and

(b) Each agent or employee of the person described in paragraph (a).

(Added to NAC by Dep't of Motor Veh. & Pub. Safety, 9-30-88, eff. 1-1-89; A 9-13-94, eff. 6-30-95; 1-4-96; A by Dep't of Pub. Safety by R168-03, 12-16-2003)

NAC 459.989 Disciplinary action: Grounds; imposition of sanctions. (NRS 459.721**,** 459.725**)** In addition to the provisions set forth in NRS 459.7058, the Division may deny, refuse to renew or suspend a uniform permit if, in connection with the transportation of hazardous materials, the applicant or holder:

1. Violates any out-of-service regulation of the United States Department of Transportation, compliance with which is his responsibility;
2. Violates any provision of NRS 459.700 to 459.780, inclusive, or NAC 459.975 to 459.991, inclusive;
3. Knowingly provides false or misleading information in his application for a uniform permit;
4. Knowingly uses a forged uniform permit or a uniform permit which has been altered;
5. Except as otherwise provided by NAC 459.980, allows the uniform permit to be used by a person who is not his agent or employee;
6. Is found to be an unsatisfactory carrier as the result of a safety review or safety management audit conducted by the United States Department of Transportation, Federal Motor Carrier Safety Administration or by the Department of Public Safety;
7. Fails to submit a renewal application and the appropriate fees as required by NAC 459.9805;
8. Fails to comply with any applicable requirement of or any order issued pursuant to:

(a) The Federal Motor Carrier Safety Regulations of the United States Department of Transportation;

(b) The Hazardous Materials Regulations set forth in 49 C.F.R. Parts 171 to 180, inclusive; or

(c) Any statute or regulation of this State governing the transportation of hazardous materials, in a manner showing that the motor carrier is not fit to transport hazardous materials; or

9. Loses its right to operate or has its registration suspended in accordance with 49 C.F.R. § 386.83 or386.84 for failure to pay a civil penalty or abide by a payment plan.

➥ In any case it deems appropriate, the Division may impose a sanction greater than that otherwise prescribed by this section.

(Added to NAC by Dep't of Motor Veh. & Pub. Safety, 9-30-88, eff. 1-1-89; A 11-16-89, eff. 1-1-90; 9-13-94, eff. 6-30-95; 1-4-96; A by Dep't of Pub. Safety by R168-03, 12-16-2003; R203-05, 2-23-2006)

NAC 459.990 Disciplinary action: Notice of intended action; request for hearing; time and place of hearing. (NRS 459.721**,** 459.725**)**

1. Not less than 15 days before it denies, refuses to renew, or suspends a uniform permit pursuant to NAC 459.989, the Division will give notice of its intended action to the applicant or holder by certified mail sent to his principal place of business.

2. Any holder or applicant who receives a notice pursuant to subsection 1 and who is aggrieved by the intended action of the Division may make a written request for a hearing on the matter before the Director or his designee. Any such request must be made by certified mail and must be postmarked not later than 10 days after the date the holder or

applicant receives the notice mailed pursuant to subsection 1.

3. If a request for a hearing is made pursuant to subsection 2, the Division will schedule the hearing for a date not later than 30 days after the date it receives the request. Any hearing held pursuant to this section must be held in Carson City.

(Added to NAC by Dep't of Motor Veh. & Pub. Safety, 9-30-88, eff. 1-1-89; A 9-13-94, eff. 6-30-95; 1-4-96; A by Dep't of Pub. Safety by R168-03, 12-16-2003)

NAC 459.991 Disciplinary action: Reinstatement of uniform permit. (NRS 459.721**,** 459.725**)**

1. The Division may reinstate a uniform permit which has previously been suspended pursuant to NAC 459.989 if the holder corrects the violation and otherwise complies with the provisions of NRS 459.700 to 459.780, inclusive, and NAC 459.975 to 459.991, inclusive.

2. In such a case, upon the request of the holder, the Division will give written notice to the holder by certified mail of the conditions of reinstatement and any deadline for compliance with those conditions.

(Added to NAC by Dep't of Motor Veh. & Pub. Safety, 9-30-88, eff. 1-1-89; A 11-16-89, eff. 1-1-90; 9-13-94; eff. 6-30-95; 1-4-96; A by Dep't of Pub. Safety by R168-03, 12-16-2003)

PLANNING FOR AND RESPONDING TO DISCHARGE OF HAZARDOUS MATERIAL

General Provisions

NAC 459.9912 Definitions. (NRS 459.740**)** As used in NAC 459.9912 to 459.99189, inclusive, unless the context otherwise requires, the words and terms defined in NAC 459.99121 to 459.99128, inclusive, have the meanings ascribed to them in those sections.

(Added to NAC by St. Emergency Response Comm'n by R034-00, eff. 6-20-2000; A by R133-03, 3-26-2004; R177-05, 6-1-2006)

NAC 459.99121 "Bylaws Committee" defined. (NRS 459.740**)** "Bylaws Committee" means the committee established by the Commission to review annually the bylaws of a local emergency planning committee.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004)

NAC 459.99122 "Commission" defined. (NRS 459.740**)** "Commission" means the State Emergency Response Commission.

(Added to NAC by St. Emergency Response Comm'n by R034-00, eff. 6-20-2000)—(Substituted in revision for NAC 459.9913)

NAC 459.99123 "Emergency plan" defined. (NRS 459.740**)** "Emergency plan" means an emergency plan established by a local emergency planning committee pursuant to NAC 459.99133 to respond to an emergency caused by the release of a hazardous material.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004)

NAC 459.99124 "Extremely hazardous material" defined. (NRS 459.740**)** "Extremely hazardous material" has the meaning ascribed to it in NRS 459.7022.

(Added to NAC by St. Emergency Response Comm'n by R034-00, eff. 6-20-2000)—(Substituted in revision for NAC 459.9914)

NAC 459.99125 "Facility" defined. (NRS 459.740**)** "Facility" includes any group of activities which are involved in the storage, use or manufacture of extremely hazardous materials, are located on one or more contiguous properties and are owned, operated or controlled by the same person.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004)

NAC 459.99126 "Funding Committee" defined. (NRS 459.740**)** "Funding Committee" means the committee established by the Commission to assist the Commission in matters concerning funding.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004)

NAC 459.991265 "Local emergency planning committee" defined. (NRS 459.740**)** "Local emergency planning committee" means the committee appointed by the Commission pursuant to 42 U.S.C. § 11001.

(Added to NAC by St. Emergency Response Comm'n by R177-05, eff. 6-1-2006)

NAC 459.99127 "Person" defined. (NRS 459.740**)** "Person" includes any agency or political subdivision of this State.

(Added to NAC by St. Emergency Response Comm'n, eff. 8-25-92; A by R03400, 6-20-2000)—(Substituted in revision for NAC 459.9915)

NAC 459.99128 "Planning and Training Subcommittee" defined. (NRS 459.740) "Planning and Training Subcommittee" means the subcommittee appointed by the Funding Committee to assist the Committee in matters concerning planning and training for emergency response.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004)

Emergency Planning

NAC 459.99131 Powers and duties of Commission. (NRS 459.740) In accordance with the requirements of 42 U.S.C. §§ 11001 et seq., the Commission will:

1. Designate emergency planning districts in this State to facilitate the preparation and implementation of emergency plans. The Commission may revise the designation of an emergency planning district at its discretion.
2. Designate the facilities that are within the jurisdiction of each emergency planning district.
3. Within 30 days after the designation of an emergency planning district, establish a local emergency planning committee for the emergency planning district and appoint the members to serve on the local emergency planning committee. The Commission may, at its discretion, revise the appointment of any member to a local emergency planning committee. An interested person may petition the Commission for a modification of the membership of a local emergency planning committee.
4. Supervise and coordinate the activities of each local emergency planning committee.
5. Through the Planning and Training Subcommittee, annually review the emergency plan of each local emergency planning committee and approve the emergency plan if it complies with the guidelines for emergency plans published by the National Response Team established pursuant to the National Contingency Plan set forth in 42 U.S.C. § 9605. The Commission may make recommendations to a local emergency planning committee for revisions of the emergency plan to ensure coordination of the emergency plan with the emergency plan established by any other local emergency planning committee.
6. Through the Bylaws Committee, annually review the bylaws of each local emergency planning committee to ensure compliance with federal and state laws and regulations.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004)

NAC 459.99132 Local emergency planning committees: Administrative duties. (NRS 459.740) Each local emergency planning committee shall:

1. Appoint a chairman;
2. Adopt rules for the performance of its duties and functions;
3. Annually submit to the Bylaws Committee a copy of its bylaws and a list of the members of the local emergency planning committee;
4. Hold quarterly meetings;
5. Submit to the Commission a copy of the agenda and minutes of every meeting;
6. Annually publish a notice in local newspapers that the emergency response plan, material safety data sheets, inventory forms and any follow-up notices are available for public review pursuant to 42 U.S.C. § 11044;
7. Submit to the Commission an affidavit of publication stating that the local emergency planning committee has complied with the requirement of subsection 6; and
8. Submit to the Commission a Compliance Certification Form indicating that the local emergency planning committee has complied with administrative requirements.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R177-05, 6-1-2006)

NAC 459.99133 Emergency plans: Establishment, review and approval; correction of deficiencies; failure to comply. (NRS 459.740)

1. Each local emergency planning committee shall:
   (a) In compliance with the guidelines for emergency plans published by the National Response Team established pursuant to the National Contingency Plan set forth in 42 U.S.C. § 9605, establish an emergency plan;
   (b) Annually review the emergency plan; and
   (c) On or before January 31 of each year, submit the emergency plan to the Planning and Training Subcommittee for review and approval.
2. If the Planning and Training Subcommittee identifies any deficiency in the emergency plan submitted by the local emergency planning committee and notifies the local emergency planning committee of the deficiency, the local emergency planning committee shall, within 45 days after receipt of notification by the Planning and Training Subcommittee:
   (a) Revise the emergency plan to correct the deficiency; and
   (b) Submit the revised emergency plan to the Planning and Training Subcommittee for approval.
3. If a local emergency planning committee fails to submit an emergency plan on or before January 31 of each year pursuant to subsection 1 or fails to submit a revised emergency plan within 45 days after receipt of notification of any deficiency pursuant to subsection 2, the local emergency planning committee is ineligible for any funding available from the Commission until the Planning and Training Subcommittee reviews and approves the emergency plan in February of

the following year.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R177-05, 6-1-2006)

NAC 459.99134 Emergency plans: Implementation; report; failure to comply. (NRS 459.740)

1. Each local emergency planning committee shall:

(a) Annually implement the emergency plan required pursuant to NAC 459.99133 by exercise, drill or response to a real event; and

(b) Submit to the Commission a report of the exercise, drill or response to a real event.

2. If a local emergency planning committee fails to meet the requirements of this section, the Commission may suspend the current unencumbered funds of the local emergency planning committee and deem the local emergency planning committee ineligible for any future grants until the requirements of this section are met.

(Added to NAC by St. Emergency Response Comm'n by R177-05, eff. 6-1-2006)

Funding for Local Emergency Planning Committees

NAC 459.99135 Authority of Commission: Grants of money from Contingency Account for Hazardous Materials. (NRS 459.735, 459.740) Pursuant to NRS 459.742 and in accordance with the provisions set forth in NAC 459.99138 to 459.99146, inclusive, the Commission may:

1. Use the fees collected by the Commission pursuant to NAC 459.9918 to 459.991825, inclusive, and deposited in the Contingency Account for Hazardous Materials to issue grants to local emergency planning committees for the operating, planning, training and equipment needs of the local emergency planning committees to carry out the emergency plans of the local emergency planning committees;

2. Use the fees collected pursuant to subsection 4 of NRS 482.379365 and deposited in the Contingency Account for Hazardous Materials to issue grants to local emergency planning committees for the planning, training, supply and equipment needs of the local emergency planning committees to support preparedness to combat terrorism; and

3. Use any money awarded to the Commission by the Federal Government pursuant to 42 U.S.C. § 11005 and deposited in the Contingency Account for Hazardous Materials to issue grants to local emergency planning committees for the planning and training needs of the local emergency planning committees to carry out the emergency plans of the local emergency planning committees.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R177-05, 6-1-2006; R120-08, 12-17-2008)

NAC 459.99136 Requests for funding: Submission; approval of amount; scope. (NRS 459.735, 459.740)

1. A local emergency planning committee or an authorized representative acting on behalf of a local emergency planning committee may submit an application for a grant pursuant to the provisions of NAC 459.99138 to 459.99146, inclusive. The Commission may approve the application for the grant but will not provide funding for the grant unless the local emergency planning committee has met and approved the amount of funding requested in the application.

2. In submitting an application for a grant pursuant to NAC 459.99138 to 459.99146, inclusive, a local emergency planning committee may request funding to provide planning, training and equipment to certain persons and entities, including, without limitation:

(a) State and local entities;

(b) Private companies;

(c) Nonprofit corporations;

(d) Public utilities owned and operated by political subdivisions of the State; and

(e) General improvement districts involved in preventing and responding to incidents involving hazardous materials or mitigating such incidents.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R120-08, 12-17-2008)

NAC 459.99137 Dissemination of application forms for grants. (NRS 459.735, 459.740) The Commission will send application forms for grants to each local emergency planning committee not later than 6 weeks before the deadline for submission of an application for a grant to the Commission by the local emergency planning committees.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004)

NAC 459.99138 Provision of money from proceeds of certain fees to pay for operating costs. (NRS 459.735, 459.740) If a local emergency planning committee is in compliance with all applicable provisions of the Nevada Revised Statutes and the Nevada Administrative Code relating to local emergency planning committees and the official policies of the Commission, the Commission may provide a portion of the money from fees collected by the Commission pursuant to NAC 459.9918 to 459.991825, inclusive, to the local emergency planning committee for reasonable and appropriate operating costs of the local emergency planning committee, as determined by the Commission, including, without limitation, office supplies, overhead expenses and costs related to meetings of the local emergency planning committee.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R177-05, 6-1-2006; R120-08, 12-17-2008)

NAC 459.99139 Requests for money from proceeds of certain fees to pay for planning. (NRS 459.735**,** 459.740**)** A local emergency planning committee may, in its application for a grant from the Commission, request grant money from the fees collected by the Commission pursuant to NAC 459.9918 to 459.991825, inclusive, for planning that is necessary to carry out the emergency plan of the local emergency planning committee or pursuant to subsection 4 of NRS 482.379365 for planning to support preparedness to combat terrorism.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R177-05, 6-1-2006; R120-08, 12-17-2008)

NAC 459.99141 Requests for money from proceeds of certain fees to pay for training. (NRS 459.735**,** 459.740**)**

1. Except as otherwise provided in subsection 2, a local emergency planning committee may, in its application for a grant from the Commission, request grant money from the fees collected by the Commission pursuant to NAC 459.9918 to 459.991825, inclusive, for training that is necessary to carry out the emergency plan of the local emergency planning committee or pursuant to subsection 4 of NRS 482.379365 for training to support preparedness to combat terrorism.

2. Except for grant money to attend a training conference, a local emergency planning committee may not request grant money from the Commission pursuant to subsection 1:

(a) To pay for training that is necessary to carry out the emergency plan of the local emergency planning committee unless the local emergency planning committee previously submitted a request to the State Fire Marshal to participate in a training program provided by the State Fire Marshal pursuant to NRS 477.039 and the State Fire Marshal declined to provide such training.

(b) To pay for training to support preparedness to combat terrorism unless the local emergency planning committee previously submitted a request to the Division of Emergency Management of the Department of Public Safety to participate in a training program provided by the Division and the Division declined to provide such training.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R177-05, 6-1-2006; R120-08, 12-17-2008)

NAC 459.99142 Requests for money from proceeds of certain fees to pay for services of consultant or contractor. (NRS 459.735**,** 459.740**)**

1. A local emergency planning committee may, in its application for a grant from the Commission for planning or training, request grant money from the fees collected by the Commission pursuant to NAC 459.9918 to 459.991825, inclusive, for services to be provided by a consultant or contractor which relate to planning or training to carry out the emergency plan of the local emergency planning committee or pursuant to subsection 4 of NRS 482.379365 for planning or training to support preparedness to combat terrorism.

2. A request made pursuant to subsection 1 must include, without limitation:

(a) Two or more competitive bids that were submitted to the local emergency planning committee by consultants or contractors;

(b) An itemized list of the scope of the services to be provided by the consultant or contractor who was selected by the local emergency planning committee; and

(c) An itemized quote for the costs of the services to be provided by the consultant or contractor.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R177-05, 6-1-2006; R120-08, 12-17-2008)

NAC 459.99143 Requests for money from proceeds of certain fees to pay for equipment. (NRS 459.735**,** 459.740**)**

1. A local emergency planning committee may, in its application for a grant from the Commission, request grant money from the fees collected by the Commission pursuant to NAC 459.9918 to 459.991825, inclusive, for equipment that is necessary to carry out the emergency plan of the local emergency planning committee or pursuant to subsection 4 of NRS 482.379365 for equipment to support preparedness to combat terrorism.

2. Except as otherwise provided in this subsection, the request for equipment must be for equipment designated on the list of appropriate equipment for matters relating to emergency response of hazardous materials or to support preparedness to combat terrorism that is provided by the Commission. The local emergency planning committee may include a request for equipment not designated on the list provided by the Commission if the local emergency planning committee includes a quote for the cost of the equipment in the application.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R177-05, 6-1-2006; R120-08, 12-17-2008)

NAC 459.99144 Requests for money from federal funding to pay for planning. (NRS 459.735**,** 459.740**)** A local emergency planning committee may, in its application for a grant from the Commission, request grant money from the money awarded to the Commission by the Federal Government pursuant to 42 U.S.C. § 11005 for planning that is necessary to carry out the emergency plan of the local emergency planning committee.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004)

NAC 459.99145 Requests for money from federal funding to pay for training. (NRS 459.735**,** 459.740**)**

1. Except as otherwise provided in subsection 2, a local emergency planning committee may, in its application for a grant from the Commission, request grant money from the money awarded to the Commission by the Federal Government pursuant to 42 U.S.C. § 11005 for training that is necessary to carry out the emergency plan of the local emergency planning committee.

2. Except for money to attend a training conference, a local emergency planning committee may not request grant money from the Commission pursuant to subsection 1 to pay for training unless the local emergency planning committee previously submitted a request to the State Fire Marshal to participate in a training program provided by the State Fire Marshal pursuant to NRS 477.039 and the State Fire Marshal declined to provide such training.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R120-08, 12-17-2008)

NAC 459.99146 Requests for money from federal funding to pay for services of consultant or contractor. (NRS 459.735**,** 459.740**)**

1. A local emergency planning committee may, in its application for a grant from the Commission for planning or training, request grant money from the money awarded to the Commission by the Federal Government pursuant to 42 U.S.C. § 11005 for services to be provided by a consultant or contractor which relate to planning or training to carry out the emergency plan of the local emergency planning committee.

2. A request made pursuant to subsection 1 must include, without limitation:

(a) Two or more competitive bids that were submitted to the local emergency planning committee by consultants or contractors;

(b) An itemized list of the scope of the services to be provided by the consultant or contractor who was selected by the local emergency planning committee; and

(c) An itemized quote for the costs of the services of the consultant or contractor.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R120-08, 12-17-2008)

NAC 459.99147 Review of applications and award of money. (NRS 459.735**,** 459.740**)** The Commission may:

1. Place each application for grant money that is submitted to the Commission on an agenda for consideration at a future meeting of the Commission;

2. Review each application for grant money that is submitted by a local emergency planning committee; and

3. Award grant money to a local emergency planning committee based on the following factors:

(a) The availability of money for grants in the Contingency Account for Hazardous Materials;

(b) Whether the application for grant money satisfies the conditions set forth in NAC 459.99138 to 459.99146, inclusive; and

(c) Whether the local emergency planning committee has complied with all applicable statutes, regulations and policies.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R177-05, 6-1-2006)

NAC 459.99148 Documentation of awards of money. (NRS 459.735**,** 459.740**)** Upon the determination of the Commission to award a grant to a local emergency planning committee, the Commission will prepare documentation of the award and keep such documentation on file with the Commission.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004)

NAC 459.99149 Completion and submission of certain forms. (NRS 459.735**,** 459.740**)** Before any grant money may be distributed by the Commission to a local emergency planning committee, the local emergency planning committee must complete and submit to the Commission the following forms provided by the Commission:

1. The Certified Assurances Form indicating that the local emergency planning committee agrees to comply with the rules and regulations governing the grant money awarded in the grant. The form must be signed by the chairman of the local emergency planning committee and a designee of the appropriate governmental entity for which the grant has been awarded.

2. The Compliance Certification Form indicating that the local emergency planning committee has complied with the administrative requirements for a grant.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R177-05, 6-1-2006)

NAC 459.99151 Reimbursement of expenditures: Requirements for disbursement of money. (NRS 459.735**,** 459.740**)**

1. Except as otherwise provided in NAC 459.99152, the grant money awarded to a local emergency planning committee by the Commission will be disbursed on the basis of reimbursement for expenditures authorized in the grant.

2. If a local emergency planning committee seeks to be reimbursed for an expenditure authorized in the grant, the local emergency planning committee must submit a request for reimbursement to the Commission not later than 30 days after the last day of the quarter or 45 days after the end of the award period.

3. A request for reimbursement must include a financial report, on a form approved by the Commission, consisting of an accounting of the expenditure, the invoice for the expenditure and proof of payment by the local emergency planning committee.

4. Within 5 working days after receiving a request for reimbursement, the Commission will conduct an audit of the financial report submitted to the Commission to ensure that the expenditure for which the local emergency planning committee is requesting reimbursement is authorized in the grant. If the Commission approves the request, the Commission will process the payment within 1 working day after approval of the request.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R177-05, 6-1-2006)

NAC 459.99152 Advance funding for expected expenditures exceeding $2,000. (NRS 459.735**,** 459.740**)**

1. If a local emergency planning committee has an expected expenditure exceeding $2,000, the local emergency planning committee may submit a request to the Commission for advance funding.

2. The request for advance funding must include a financial report, on a form approved by the Commission, consisting of a copy of the purchase order indicating the date of processing for the purchase and the cost of the purchase.

3. Within 5 working days after receiving a request for advance funding, the Commission will verify that the expenditure for which the local emergency planning committee is requesting advance funding is authorized in the grant. If the Commission approves the request, the Commission will process the payment to the local emergency planning committee.

4. Within 30 days after a check for advance funding is issued to a local emergency planning committee, the local emergency planning committee shall submit to the Commission a financial report, on a form approved by the Commission, that includes any invoices for the expenditure and proof of payment.

5. If the expenditure is not made within 30 days after a check for advance funding is issued to a local emergency planning committee, the local emergency planning committee must return to the Commission the amount of the advance funding within 45 days after the issuance of the check for advance funding.

6. If a check for advance funding issued to a local emergency planning committee is in excess of the actual expenditure, the local emergency planning committee must return to the Commission the amount of the advance funding that is in excess of the actual expenditure within 45 days after the date of issuance of the check for advance funding.

7. If a local emergency planning committee fails to return an amount of advance funding as required pursuant to this section, the Commission may withhold funding from the local emergency planning committee in the future.

8. As used in this section, "advance funding" means an advance of the grant money awarded to pay for any expenditures.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004)

NAC 459.99153 Quarterly financial reports. (NRS 459.735**,** 459.740**)** Unless a financial report is submitted pursuant to NAC 459.99151 or 459.99152, a local emergency planning committee must submit to the Commission a quarterly financial report. The quarterly financial report must be submitted on a form approved by the Commission not later than 30 days after the last day of the quarter indicating that no expenditures were made during that quarter.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004)

NAC 459.99154 Past due financial reports. (NRS 459.735**,** 459.740**)** If a financial report required to be submitted pursuant to NAC 459.99151, 459.99152 or 459.99153:

1. Is at least 30 days past due but less than 45 days past due, the Commission will notify the chairman of the local emergency planning committee required to submit the financial report.

2. Is at least 45 days past due but less than 60 days past due, the Commission will notify the designee of the appropriate governmental entity for which the grant has been awarded.

3. Is at least 60 days past due, the Commission may in the future withhold funding from the local emergency planning committee required to submit the financial report.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004)

NAC 459.99156 Request to revise use of money after award of grant. (NRS 459.735**,** 459.740**)**

1. If circumstances pertaining to the use of grant money change after the award of a grant to a local emergency planning committee, the local emergency planning committee shall submit to the Commission a request, on a form approved by the Commission, to revise the use of the grant money for another purpose.

2. If the request to revise the use of grant money constitutes a change of 10 percent or more of the total amount of the grant or constitutes a significant change to the scope of the intent of the original grant application, before the local emergency planning committee may carry out the change, the request must be:

(a) Approved by the Chairman of the Funding Committee; and

(b) If required by the Chairman of the Funding Committee, reviewed and approved by the Funding Committee on the record at a meeting of the Funding Committee.

3. The Chairman of the Funding Committee will approve or deny a request described in subsection 2 within 5 working days after receiving the request. If applicable, the Funding Committee will, within 5 working days, schedule a meeting to review the request. The local emergency planning committee will be notified of any action taken concerning the request within 5 working days after the action is taken.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R120-08, 12-17-2008)

Funding for State Agencies

NAC 459.99161 Authority of Commission: Allocation of money from Contingency Account for Hazardous Materials. (NRS 459.735**,** 459.740**)** Pursuant to paragraph (d) of subsection 2 of NRS 459.735 and in accordance with the provisions set forth in NAC 459.99163 to 459.99167, inclusive, the Commission may:

1. Allocate the fees collected by the Commission pursuant to NAC 459.9918 to 459.991825, inclusive, and deposited in the Contingency Account for Hazardous Materials to state agencies for training and equipping state and local personnel to respond to accidents and incidents involving hazardous materials;

2. Allocate the fees collected pursuant to subsection 4 of NRS 482.379365 and deposited in the Contingency Account for Hazardous Materials to state agencies for the planning, training, supply and equipment needs of state and local personnel to support preparedness to combat terrorism; and

3. Allocate any money awarded to the Commission by the Federal Government pursuant to 42 U.S.C. § 11005 and deposited in the Contingency Account for Hazardous Materials to state agencies for training and equipping state and local personnel to respond to accidents and incidents involving hazardous materials.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R177-05, 6-1-2006; R120-08, 12-17-2008)

NAC 459.99162 Application for allocation of money; determination and approval of amount to request. (NRS 459.735**,** 459.740**)** In accordance with the provisions set forth in NAC 459.99163 to 459.99167, inclusive, a state agency which wishes to provide training or equipment to state and local personnel to respond to accidents and incidents involving hazardous materials may submit an application to the Commission for an allocation of money for such training or equipment from the Contingency Account for Hazardous Materials on a form approved by the Commission. Before such a state agency may submit an application for an allocation of money pursuant to the provisions of NAC 459.99163 to 459.99167, inclusive, the head of the state agency must determine and approve, based upon the needs of the state agency, the amount of funding the state agency will request in the application.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004)

NAC 459.99163 Requests for money from proceeds of certain fees to pay for training. (NRS 459.735**,** 459.740**)**

1. Except as otherwise provided in subsection 2, a state agency may, in its application for an allocation of money from the Commission submitted pursuant to NAC 459.99162, request money from the fees collected by the Commission pursuant to NAC 459.9918 to 459.991825, inclusive, for training state and local personnel to respond to accidents and incidents involving hazardous materials or pursuant to subsection 4 of NRS 482.379365 for training to support preparedness to combat terrorism.

2. Except for an allocation of money to attend a training conference, a state agency may not request money from the Commission pursuant to subsection 1:

(a) To pay for training state and local personnel to respond to accidents and incidents involving hazardous materials unless the state agency previously submitted a request to the State Fire Marshal to participate in a training program provided by the State Fire Marshal pursuant to NRS 477.039 and the State Fire Marshal declined to provide such training.

(b) To pay for training to support preparedness to combat terrorism unless the state agency previously submitted a request to the Division of Emergency Management of the Department of Public Safety to participate in a training program provided by the Division and the Division declined to provide such training.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R177-05, 6-1-2006; R120-08, 12-17-2008)

NAC 459.99164 Requests for money from proceeds of certain fees to pay for services of consultant or contractor. (NRS 459.735**,** 459.740**)**

1. A state agency may, in its application for an allocation of money from the Commission submitted pursuant to NAC 459.99162, request money from the fees collected by the Commission pursuant to NAC 459.9918 to 459.991825, inclusive, for services to be provided by a consultant or contractor which relate to the training of state and local personnel to respond to accidents and incidents involving hazardous materials or pursuant to subsection 4 of NRS 482.379365 for training to support preparedness to combat terrorism.

2. A request made pursuant to subsection 1 must include, without limitation:

(a) Two or more competitive bids that were submitted to the state agency by consultants or contractors;

(b) An itemized list of the scope of the services to be provided by the consultant or contractor who was selected by the state agency; and

(c) An itemized quote for the costs of the services to be provided by the consultant or contractor.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R177-05, 6-1-2006; R120-08, 12-17-2008)

NAC 459.99165 Requests for money from proceeds of certain fees to pay for equipment. (NRS 459.735, 459.740**)**

1. A state agency may, in its application for an allocation of money from the Commission submitted pursuant to NAC 459.99162, request money from the fees collected by the Commission pursuant to NAC 459.9918 to 459.991825,

inclusive, for equipping state and local personnel to respond to accidents and incidents involving hazardous materials or pursuant to subsection 4 of NRS 482.379365 for equipment to support preparedness to combat terrorism.

2. Except as otherwise provided in this subsection, the request for equipment must be for equipment designated on the list of appropriate equipment for matters relating to emergency response of hazardous materials or to support preparedness to combat terrorism that is provided by the Commission. The state agency may include a request for equipment not designated on the list provided by the Commission if the state agency includes a quote for the cost of the equipment in the application.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R177-05, 6-1-2006; R120-08, 12-17-2008)

NAC 459.99166 Requests for money from federal funding to pay for training. (NRS 459.735**,** 459.740**)**

1. Except as otherwise provided in subsection 2, a state agency may, in its application for an allocation of money from the Commission submitted pursuant to NAC 459.99162, request an allocation from the money awarded to the Commission by the Federal Government pursuant to 42 U.S.C. § 11005 for training state and local personnel to respond to accidents or incidents involving hazardous materials.

2. Except for grant money to attend a training conference, a state agency may not request money from the Commission pursuant to subsection 1 to pay for training unless the state agency previously submitted a request to the State Fire Marshal to participate in a training program provided by the State Fire Marshal pursuant to NRS 477.039 and the State Fire Marshal declined to provide such training.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R120-08, 12-17-2008)

NAC 459.99167 Requests for money from federal funding to pay for services of consultant or contractor. (NRS 459.735**,** 459.740**)**

1. A state agency may, in its application for an allocation of money from the Commission submitted pursuant to NAC 459.99162, request an allocation from the money awarded to the Commission by the Federal Government pursuant to 42 U.S.C. § 11005 for services to be provided by a consultant or contractor which relate to planning or training state and local personnel to respond to accidents and incidents involving hazardous materials.

2. A request made pursuant to subsection 1 must include, without limitation:

(a) Two or more competitive bids that were submitted to the state agency by consultants or contractors;

(b) An itemized list of the scope of the services to be provided by the consultant or contractor who was selected by the state agency; and

(c) An itemized quote for the costs of the services to be provided by the consultant or contractor.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R120-08, 12-17-2008)

NAC 459.99168 Review of applications and allocation of money. (NRS 459.735**,** 459.740**)** The Commission may:

1. Place each application for an allocation of money from the Contingency Account for Hazardous Materials that is submitted to the Commission by a state agency for training and equipping state and local personnel to respond to accidents and incidents involving hazardous materials on an agenda for consideration at a future meeting of the Commission;

2. Review each application for an allocation of money that is submitted by a state agency; and

3. Allocate money to a state agency:

(a) Based on the availability of money in the Contingency Account for Hazardous Materials; and

(b) If the application for an allocation of money satisfies the conditions set forth in NAC 459.99163 to 459.99167, inclusive.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004)

NAC 459.99169 Documentation of allocations of money. (NRS 459.735**,** 459.740**)** Upon the determination of the Commission to allocate money to a state agency for training and equipping state and local personnel to respond to accidents and incidents involving hazardous materials, the Commission will prepare documentation of the allocation of money and keep such documentation on file with the Commission.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004)

NAC 459.99171 Completion and submission of certain forms. (NRS 459.735**,** 459.740**)** Before any money may be distributed by the Commission to a state agency for training and equipping state and local personnel to respond to accidents and incidents involving hazardous materials or to support preparedness to combat terrorism, the state agency must complete and submit to the Commission the following forms provided by the Commission:

1. The Certified Assurances Form indicating that the state agency agrees to comply with the rules and regulations governing the allocation of money by the Commission. The form must be signed by the head of the state agency or his designee.

2. The Compliance Certification Form indicating that the state agency has complied with the administrative requirements for an allocation of money from the Contingency Account for Hazardous Materials.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R177-05, 6-1-2006; R120-08,

12-17-2008)

NAC 459.99172 Reimbursement of expenditures: Requirements for disbursement of money. (NRS 459.735**,** 459.740**)**

1. Except as otherwise provided in NAC 459.99173, the money allocated to a state agency for training and equipping state and local personnel to respond to accidents and incidents involving hazardous materials by the Commission from the Contingency Account for Hazardous Materials will be disbursed on the basis of reimbursement for expenditures authorized in the allocation of money.

2. If the state agency seeks to be reimbursed for an expenditure authorized in the allocation of money, the state agency must submit a request for reimbursement to the Commission not later than 30 days after the last day of the quarter or 45 days after the end of the award period.

3. A request for reimbursement must include a financial report, on a form approved by the Commission, consisting of an accounting of the expenditure, the invoice for the expenditure and proof of payment by the state agency.

4. Within 5 working days after receiving a request for reimbursement, the Commission will conduct an audit of the financial report submitted to the Commission to ensure that the expenditure for which the state agency is requesting reimbursement is authorized in the allocation of money. If the Commission approves the request, the Commission will process the payment within 1 working day after approval of the request.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R177-05, 6-1-2006)

NAC 459.99173 Advance funding for expected expenditures exceeding $2,000. (NRS 459.735**,** 459.740**)**

1. A state agency which receives an allocation of money from the Commission for training or equipping state and local personnel to respond to accidents and incidents involving hazardous materials and which has an expected expenditure exceeding $2,000 may submit a request to the Commission for advance funding.

2. The request for advance funding must include a financial report, on a form approved by the Commission, consisting of a copy of the purchase order indicating the date of processing for the purchase and the cost of the purchase.

3. Within 5 working days after receiving a request for advance funding, the Commission will verify that the expenditure for which the state agency is requesting advance funding is authorized in the documentation of the allocation of money. If the Commission approves the request, the Commission will process the payment to the state agency.

4. Within 30 days after a check for advance funding is issued to the state agency, the state agency shall submit to the Commission a financial report, on a form approved by the Commission, that includes any invoices for the expenditure and proof of payment.

5. If the expenditure is not made within 30 days after a check for advance funding is issued to the state agency, the state agency must return to the Commission the amount of the advance funding within 45 days after the issuance of the check for advance funding.

6. If a check for advance funding issued to the state agency is in excess of the actual expenditure, the state agency must return to the Commission the amount of the advance funding that is in excess of the actual expenditure within 45 days after the date of issuance of the check for advance funding.

7. If the state agency fails to return an amount of advance funding as required pursuant to this section, the Commission may withhold funding from the state agency in the future.

8. As used in this section, "advance funding" means an advance of the money allocated to pay for any expenditures.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004)

NAC 459.99174 Quarterly financial reports. (NRS 459.735**,** 459.740**)** Unless a financial report is submitted pursuant to NAC 459.99172 or 459.99173, a state agency which receives an allocation of money from the Commission for training or equipping state and local personnel to respond to accidents and incidents involving hazardous materials must submit to the Commission a quarterly financial report. The quarterly financial report must be submitted on a form approved by the Commission not later than 30 days after the last day of the quarter indicating that no expenditures were made during that quarter.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004)

NAC 459.99175 Past due financial reports. (NRS 459.735**,** 459.740**)** If a financial report required to be submitted pursuant to NAC 459.99172, 459.99173 or 459.99174:

1. Is at least 30 days past due but less than 45 days past due, the Commission will notify the state agency required to submit the financial report.

2. Is at least 45 days past due but less than 60 days past due, the Commission will notify the head of the state agency required to submit the financial report.

3. Is at least 60 days past due, the Commission may in the future withhold funding from the state agency required to submit the financial report.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004)

NAC 459.99177 Request to revise use of money after allocation. (NRS 459.735**,** 459.740**)**

1. If circumstances pertaining to the use of money change after the Commission approves the allocation of money to a

state agency, the state agency shall submit to the Commission a request, on a form approved by the Commis to revise the use of the money for another purpose.

2. If the request to revise the use of money constitutes a change of 10 percent or more of the total amount of the money allocated or constitutes a significant change to the scope of the intent of the original application, before the state agency may carry out the change, the request must be:

(a) Approved by the Chairman of the Funding Committee; and

(b) If required by the Chairman of the Funding Committee, reviewed and approved by the Funding Committee on the record at a meeting of the Funding Committee.

3. The Chairman of the Funding Committee will approve or deny a request described in subsection 2 within 5 working days after receiving the request. If applicable, the Funding Committee will, within 5 working days, schedule a meeting to review the request. The state agency will be notified of any action taken concerning the request within 5 working days after the action is taken.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R120-08, 12-17-2008)

Imposition and Payment of Fees

NAC 459.9918 Fees for certain services and regulatory activities of Commission. (NRS 459.740**,** 459.744**)** The Commission will charge a person for whom it performs a service or regulatory activity the fees set forth in the following schedule:

1. For processing a report filed with the Commission pursuant to 40 C.F.R. Part 370, Subpart B, except for a report of an extremely hazardous material pursuant to NAC 459.99181..... $100

2. For each hour or fraction thereof that an employee, agent, contractor or other designee of the Commission spends in responding to a request for information, except for a request for information made pursuant to 40 C.F.R. Part 370, Subpart C..... $50

(Added to NAC by St. Emergency Response Comm'n by R034-00, eff. 6-20-2000; A by R133-03, 3-26-2004)—(Substituted in revision for NAC 459.9916)

NAC 459.99181 Fees for storage of extremely hazardous materials. (NRS 459.704**,** 459.740**,** 459.744**)**

1. The filing fee required pursuant to paragraph (a) of subsection 2 of NRS 459.744 is $100 for each facility in which extremely hazardous material is stored.

2. The surcharge required pursuant to paragraph (b) of subsection 2 of NRS 459.744 is $100 per ton for each ton of material stored in excess of 1 ton.

(Added to NAC by St. Emergency Response Comm'n, eff. 8-25-92; A by R077-98, 9-25-98; R034-00, 6-20-2000; R133-03, 3-26-2004; R177-05, 6-1-2006)

NAC 459.99182 Fees for manufacture for transport of extremely hazardous material. (NRS 459.704**,** 459.740**,** 459.744**)**

1. The filing fee required pursuant to paragraph (a) of subsection 3 of NRS 459.744 is $100.

2. The surcharge required pursuant to paragraph (b) of subsection 3 of NRS 459.744 is $100 for each ton of material which is manufactured for transport in this State.

3. In accordance with subsection 3 of NRS 459.744, the Commission will not require any person to pay more than $2,000 in fees imposed pursuant to this section for any calendar year.

(Added to NAC by St. Emergency Response Comm'n, eff. 8-25-92; A by R077-98, 9-25-98; R034-00, 6-20-2000; R133-03, 3-26-2004)—(Substituted in revision for NAC 459.9919)

NAC 459.991825 Reporting fee for submission of toxic chemical release form. (NRS 459.704**,** 459.740**,** 459.744**)** The reporting fee required pursuant to subsection 4 of NRS 459.744 is $500 for each person who is required to submit a toxic chemical release form pursuant to 42 U.S.C. §§ 11001 et seq.

(Added to NAC by St. Emergency Response Comm'n by R177-05, eff. 6-1-2006)

NAC 459.99183 Failure to pay required fee when due. (NRS 459.704**,** 459.740**)**

1. If a person fails to pay a fee required pursuant to NAC 459.9918, 459.99181, 459.99182 or 459.991825 on or before the applicable due date, the Commission will send a written notice to the person stating that the fee has not been paid and notifying the person of the provisions of subsection 2.

2. If a person fails to pay a fee required pursuant to NAC 459.9918, 459.99181, 459.99182 or 459.991825 within 90 days after receiving written notification of failure to pay pursuant to subsection 1, the Commission will submit the matter to the Attorney General to initiate proceedings against the person.

(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R177-05, 6-1-2006)

NAC 459.991835 Limitation on amount of certain fees. (NRS 459.704**,** 459.740**,** 459.744**)** The Commission will not require any person to pay more than $7,500 in fees imposed pursuant to subsection 1 of NAC 459.9918, NAC 459.99181

or 459.991825 for any calendar year.
(Added to NAC by St. Emergency Response Comm'n by R177-05, eff. 6-1-2006)

NAC 459.99184 Overpayment of required fee. (NRS 459.704**,** 459.740**)** If a person has overpaid a fee required pursuant to NAC 459.9918, 459.99181, 459.99182 or 459.991825, the Commission will:
1. Send a written notice to the person indicating the amount of the overpayment; and
2. Unless the person submits a request for a refund of the amount of the overpayment, credit the account of the person in the amount of the overpayment to be applied toward future fees imposed upon the person pursuant to NAC 459.9918, 459.99181, 459.99182 or 459.991825.
(Added to NAC by St. Emergency Response Comm'n by R133-03, eff. 3-26-2004; A by R177-05, 6-1-2006)

Appeals

NAC 459.99189 Appeal of decision of Commission or staff member of Commission. (NRS 459.740**)**
1. If a local emergency planning committee or a state agency is not satisfied with a decision by the Commission or by a staff member of the Commission, the local emergency planning committee or state agency may file an appeal with the Executive Director of the Commission. The appeal must be filed in writing, including the grounds for the appeal and any supporting documentation, within 35 days after the receipt of notice by the local emergency planning committee or state agency of the original decision.
2. Except as otherwise provided in this subsection, after the receipt of an appeal pursuant to this section, the Executive Director or his designee shall present a report to the Commission at its next meeting. If an appeal is received after the deadline for placing items on the agenda for the next meeting of the Commission, the Executive Director or his designee shall present the report to the Commission at its next following meeting. The report presented to the Commission will include the grounds for the appeal, supporting documentation, information concerning the claim and recommendations for action by the Commission.
3. Not later than 10 days before the date of the meeting in which an appeal will be heard, the Executive Director or his designee shall notify the local emergency planning committee or state agency in writing of the date, time and place of the meeting.
4. The local emergency planning committee or state agency may appear in person to present the reason for appeal.
5. The Commission may render a decision on the claim at the time of the meeting or may defer action to a future meeting if additional information is required for review.
6. The Executive Director or his designee shall mail to the participant by first-class mail notice of the decision of the Commission within 15 days after the decision is rendered.
7. A decision by the Commission regarding an appeal is final.
(Added to NAC by St. Emergency Response Comm'n by R177-05, eff. 6-1-2006; A by R120-08, 12-17-2008)

STORAGE TANKS

NAC 459.9921 Definitions. (NRS 459.826**)** As used in NAC 459.9921 to 459.999, inclusive, unless the context otherwise requires, the words and terms defined in NAC 459.9922 to 459.9929, inclusive, have the meanings ascribed to them in those sections.
(Added to NAC by Environmental Comm'n, eff. 10-9-90; A by R083-05, 10-31-2005; R004-08 & R005-08, 4-17-2008; R189-08, 8-25-2009)

NAC 459.9922 "Assessment" defined. (NRS 459.826**)** "Assessment" means a test for the presence of a regulated substance.
(Added to NAC by Environmental Comm'n, eff. 10-9-90)

NAC 459.9924 "Corrective action" defined. (NRS 459.826**)** "Corrective action" means a permanent remedy that is taken if a regulated substance is released to prevent the substance from migrating and causing danger to the present or future health of the public or to the environment.
(Added to NAC by Environmental Comm'n, eff. 10-9-90)

NAC 459.9925 "Department" defined. (NRS 459.826**)** "Department" means the State Department of Conservation and Natural Resources.
(Added to NAC by Environmental Comm'n, eff. 10-9-90)

NAC 459.9927 "Division" defined. (NRS 459.826**)** "Division" means the Division of Environmental Protection of the Department.
(Added to NAC by Environmental Comm'n, eff. 10-9-90)

NAC 459.9928 "Groundwater" defined. (NRS 459.826**)** "Groundwater" has the meaning ascribed to it in NAC

444.579.
(Added to NAC by Environmental Comm'n, eff. 10-9-90; A 1-23-96)

NAC 459.99283 "Listed" defined. (NRS 459.826**)** "Listed" has the meaning ascribed to it in section 202 of the *International Fire Code*, 2003 edition.
(Added to NAC by Environmental Comm'n by R083-05, eff. 10-31-2005)

NAC 459.99285 "Marina storage tank" defined. (NRS 459.826**)** "Marina storage tank" means a petroleum storage tank used to provide fuel to water vessels, at least 90 percent of which is either above ground level or in or over water and which has a capacity of at least 110 gallons but not more than 12,000 gallons. The term includes all piping connected to the tank, except piping, valves, hoses, filters and nozzles associated with the fuel dispenser.
(Added to NAC by Environmental Comm'n by R083-05, eff. 10-31-2005)

NAC 459.99286 "Motor fuel" defined. (NRS 459.826**)** "Motor fuel" means petroleum or a petroleum-based substance in the form of motor gasoline, aviation gasoline, No. 1 or No. 2 diesel fuel, or any grade of gasohol that is typically used in the operation of a motor engine.
(Added to NAC by Environmental Comm'n by R005-08, eff. 4-17-2008)

NAC 459.99287 "Petroleum" defined. (NRS 459.826**)** "Petroleum" has the meaning ascribed to it in NRS 590.790.
(Added to NAC by Environmental Comm'n by R083-05, eff. 10-31-2005)

NAC 459.99288 "Red tag" defined. (NRS 459.826**)** "Red tag" means a unique identification device, tag or other mechanism of a design approved by the Division that is placed on the fill pipe of an underground storage tank to indicate that the underground storage tank is ineligible to receive a delivery of a regulated substance.
(Added to NAC by Environmental Comm'n by R004-08, eff. 4-17-2008)

NAC 459.992885 "Secondary containment system" defined. (NRS 459.826**)** "Secondary containment system" means a system of release prevention and detection consisting of a separate inner and outer barrier designed to contain a regulated substance together with a means of monitoring the interstitial space.
(Added to NAC by Environmental Comm'n by R005-08, eff. 4-17-2008)

NAC 459.99289 "Under-dispenser container" defined. (NRS 459.826**)** "Under-dispenser container" means a container that is installed under a motor fuel dispenser which is used in connection with an underground storage tank and is designed to prevent dispenser leaks from reaching soil or groundwater.
(Added to NAC by Environmental Comm'n by R005-08, eff. 4-17-2008)

NAC 459.9929 "Underground storage tank" defined. (NRS 459.826**)** "Underground storage tank" has the meaning ascribed to it in 40 C.F.R. § 280.12.
(Added to NAC by Environmental Comm'n, eff. 10-9-90; A by R083-05, 10-31-2005)

NAC 459.993 Federal regulations: Adoption by reference of certain provisions regarding underground storage tanks; compliance required. (NRS 459.826, 459.830**)**
1. The State Environmental Commission hereby adopts by reference the provisions of 40 C.F.R. §§ 280.10 to 280.116, inclusive, as they existed on July 1, 1995. A copy of the volume containing these provisions may be obtained at a cost of $50 by mail from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 979050, St. Louis, Missouri 63197-9000, or by toll-free telephone at (866) 512-1800.
2. Each owner and operator of an underground storage tank shall comply with the requirements of 40 C.F.R. §§ 280.10 to 280.116, inclusive.
3. For the purposes of this section, any reference to "implementing agency" in 40 C.F.R. §§ 280.10 to280.116, inclusive, shall be deemed to mean the Division.
(Added to NAC by Environmental Comm'n, eff. 6-11-90; A 1-23-96; R083-05, 10-31-2005)

NAC 459.9931 Adoption by reference of certain chapters of *International Fire Code*. (NRS 459.826, 459.830**)** The State Environmental Commission hereby adopts by reference chapters 2, 22 and 34 of the *International Fire Code*, 2003 edition. A copy of the volume containing these provisions may be obtained at the cost of $70 from the International Code Council at the Internet address http://www.iccsafe.org.
(Added to NAC by Environmental Comm'n by R083-05, eff. 10-31-2005)

NAC 459.9933 Marina storage tanks: Registration; fee; date for compliance. (NRS 459.826**)**
1. On or before January 31, 2006, and each year thereafter, the owner or operator of a marina storage tank shall register each marina storage tank compartment with the Division on a prescribed form and pay a fee of $50 for each

marina storage tank compartment.

2. Marina storage tanks must be in compliance with this chapter not later than September 30, 2006. The Division may require compliance before September 30, 2006, for any part of an existing system that poses a current threat to nearby property, human health or the environment.

(Added to NAC by Environmental Comm'n by R083-05, eff. 10-31-2005)

NAC 459.9934 Marina storage tanks: Construction, design, location and overfill prevention. (NRS 459.826**,** 459.830**)**

1. A marina storage tank must meet the requirements of chapters 2, 22 and 34 of the *International Fire Code*, 2003 edition, with regard to construction, design, location and overfill prevention.

2. A marina storage tank that supplies marina service stations and pumps not integral to the dispensing device must be onshore, except that a double-walled tank not exceeding a capacity of 1,100 gallons may be located on a pier of the solid-fill type if spacing, containment and piping comply with the provisions of chapters 2, 22 and 34 of the *International Fire Code*, 2003 edition.

3. Any metallic portion of a marina storage tank or its piping system that is in contact with the soil or water and is subject to corrosion must be protected from corrosion by a continuously operating cathodic protection system that is properly engineered, installed and maintained in accordance with 40 C.F.R. § 280.20(b)(2). A metal tank sitting on a concrete slab will be considered in contact with the soil unless it is insulated from the concrete by a dielectric material. Anchoring hardware is not considered part of the tank.

(Added to NAC by Environmental Comm'n by R083-05, eff. 10-31-2005)

NAC 459.9935 Marina storage tanks: Secondary containment. (NRS 459.826**,** 459.830**)**

1. A marina storage tank must have a secondary containment area for the fuel stored in the tank.

2. Multiple products stored within the same containment area must be compatible with each other.

3. If the secondary containment area is open to precipitation, it must be capable of containing 110 percent of the capacity of the largest tank plus the volume displaced by the other tanks within the containment area.

4. The secondary containment area must be made of concrete or steel and be compatible with and impermeable to the products stored in the tank.

5. Liquid discharges to the environment from the secondary containment area are prohibited if contamination of the liquid by a regulated substance is suspected or detected.

6. The secondary containment area must not include any uncapped drain that extends outside of the containment area.

7. A double-walled tank does not require additional containment if:

(a) All piping connections to the tank are made above the normal maximum liquid level;

(b) A mechanism is provided to prevent the release of liquid from the tank by siphon flow;

(c) A mechanism, accessible to a delivery operator, is provided for determining the level of liquid in the tank;

(d) A mechanism which does not restrict or interfere with the proper functioning of the normal vent or emergency vent is provided to prevent overfilling by sounding an alarm when the liquid level in the tank reaches 90 percent of capacity and by automatically stopping the delivery of liquid to the tank when the level in the tank reaches 95 percent of capacity;

(e) The interstitial space is enclosed and the space has emergency venting; and

(f) A means is provided to verify the integrity of the double wall.

(Added to NAC by Environmental Comm'n by R083-05, eff. 10-31-2005)

NAC 459.9936 Marina storage tanks: Piping and valves. (NRS 459.826**,** 459.830**)**

1. If, on a marina storage tank:

(a) A submersible pump is used, a listed emergency shutoff valve must be installed at each dispensing device.

(b) A suction pump-type dispensing device is used, a listed vacuum-actuated shutoff valve with a shear section or equivalent-type valve must be installed directly under each dispensing device.

2. Piping and valves subject to pressure extremes caused by thermal expansion of the contents must be equipped with a pressure-relieving device that has secondary containment.

3. Aboveground piping runs must be enclosed in protective containment leading to a catch basin equipped with an operating automatic leak-detection audible alarm and shutoff device.

4. Except as otherwise provided in subsection 5, any new or replacement underground piping installed after October 31, 2005, must be:

(a) Constructed of nonmetallic components;

(b) Double-walled and integral with a listed leak sensor; and

(c) Installed with a tracer locator wire installed in all buried piping trenches.

5. Existing facilities which have metallic or single-walled nonmetallic piping and which are permanently relocated to a fuel island must install dispenser sumps with leak sensors. Any additions to the metallic piping must be nonmetallic single- or double-walled piping.

6. For piping used at floating marinas:

(a) Suitable lengths of oil-, weather- and UV-resistant flexible hose, UL-approved for use at marinas, must be used between the onshore piping and the piping on the floating structure.

(b) Piping at all hinge locations must be connected with UL-approved listed flexible piping.

(c) All docks and pier installations must have double-walled piping.

(d) A listed emergency breakaway device designed to retain liquid on both sides of the breakaway point must be installed in a spill containment box monitored with a leak sensor on each line serving the dock and anchored at the onshore end of the piping.

(Added to NAC by Environmental Comm'n by R083-05, eff. 10-31-2005)

NAC 459.9937 Marina storage tanks: Dispensing equipment. (NRS 459.826**,** 459.830**)**

1. A control must be installed that will permit the fuel delivery pump to operate only when a dispensing nozzle is removed from its bracket or normal position with respect to the dispensing device and only when the switch on the dispensing device is manually actuated. The control must also stop the pump when all nozzles have been returned either to their brackets or to the normal nondispensing position.

2. Dispensers not integral with the tank must have sumps with operating leak-monitoring sensors that automatically shut off the electricity to the pumping device.

3. Dispenser hoses must be checked and a record kept on a daily basis for evidence of blistering, carcass saturation or separation, for cuts, nicks or abrasions that expose reinforced material, and for slippage, misalignment or leaks at couplings. Defective hoses must be removed from service within 48 hours after evidence of failure.

4. At least once each month, each dispenser hose must be completely extended and inspected as follows:

(a) The hose couplings and the first 12 inches of hose adjacent to the couplings must be examined.

(b) The dispenser hose must be checked for structural weakness evidenced by soft spotsby pressing the hose in the area around its entire circumference. Any hose that shows evidence of soft spots must be removed from service.

5. Any dispensing nozzle used at a marina service station must be equipped with a nondrip check valve.

6. Daily and monthly inspections of dispenser hoses are not required when a marina is closed during the off-season.

(Added to NAC by Environmental Comm'n by R083-05, eff. 10-31-2005)

NAC 459.9938 Marina storage tanks: Filling equipment; monitoring; testing; daily inventory records. (NRS 459.826**,** 459.830**)**

1. Except for tanks not exceeding a capacity of 1,100 gallons or tanks not equipped to accept a tight-fill that are instead filled from a delivery nozzle on a delivery vehicle:

(a) All aboveground marina storage tanks must be filled through a liquid-tight connection enclosed in a grounded fill pipe spill-containment box that is located at least 3 feet above the ground and at least 20 feet away from a body of water and is capable of containing a minimum of 5 gallons.

(b) All marina storage tanks filled by means of remote piping must have installed in the piping at a point where connection and disconnection is made between the tank and a delivery vehicle either a check valve and shutoff valve with a quick-connect coupling or a check valve with a dry-break coupling. The check valve device must be protected from tampering and physical damage.

2. Except for double-walled, aboveground marina storage tanks which are exempt from weekly monitoring requirements and except as otherwise provided in subsection 4, aboveground marina storage tanks must be visually inspected weekly for leaks. The results of the weekly visual inspections must be dated and recorded.

3. Except as otherwise provided in subsection 4, aboveground marina storage tanks must be inspected monthly in accordance with the provisions of subsection 2 of NAC 590.740 and must be inspected for release detection in accordance with 40 C.F.R. § 280.43(a)-(d) and (g).

4. Weekly and monthly monitoring of an aboveground marina storage tank is not required when a marina is closed during the off-season if the tank contains only a de minimis quantity of fuel.

5. All underground or underwater piping that is not double-walled with interstitial leak sensors must be tightness-tested for leaks in accordance with the requirements of 40 C.F.R. § 280.41(b).

6. All electronic and mechanical equipment used for release detection, monitoring or warning must be tested for proper operation and calibration annually or pursuant to the manufacturer's recommendation, whichever is more frequent.

7. If, because of the nature of the aboveground marina storage tank or its secondary containment, visual inspections are not adequate for the purpose of determining whether a leak has occurred, an owner or operator of an aboveground storage tank shall keep daily inventory records. Daily inventory records for the most recent 3 years must be kept on the premises or made available for inspection upon 24 hours' notice. Daily inventory records are not required when a marina is closed during the off-season if the tank contains only a de minimis quantity of fuel.

(Added to NAC by Environmental Comm'n by R083-05, eff. 10-31-2005)

NAC 459.994 Underground storage tanks: Testing for tightness. (NRS 459.826**,** 459.830**)**

1. Except as otherwise provided in this section, each owner or operator of an underground storage tank shall perform or cause to be performed a test of the tank for tightness in accordance with the schedule contained in subsection (c) of 40 C.F.R. § 280.40.

2. The test must be performed by a contractor certified by the Division.

3. The owner or operator shall retain a certificate from the person performing the test showing that the test has been performed. The certificate must be made on a form approved by the Division.

4. In lieu of a test for tightness, each owner or operator may conduct any release detection methods prescribed in 40 C.F.R. §§ 280.43 and 280.44 as an acceptable means of release detection.

5. An operator of an underground storage tank that is not empty but is temporarily closed in accordance with 40 C.F.R. § 280.70 shall perform or cause to be performed a test of the storage tank for tightness in accordance with 40 C.F.R. §§ 280.40 to 280.45, inclusive.

6. Except as otherwise provided in this subsection, an abandoned storage tank must be tested for tightness in accordance with subsection (c) of 40 C.F.R. § 280.43 before it is returned to service. If a test of the abandoned storage tank will cause a threat to human health or the environment, as determined by the Division, the Division may waive the test for tightness or require any other method of testing in accordance with the provisions of subsection (h) of 40 C.F.R. 280.43 and subsection (c) of 40 C.F.R. 280.44. The allocation of costs pursuant to NRS 590.880 or 590.890 will be applied if there is a discharge from the storage tank.

7. A test for tightness is not required before an underground storage tank is closed pursuant to subsection (b) of 40 C.F.R. § 280.71 if the Division:

(a) Has no record of the storage tank being installed, operated or closed; and

(b) Is unable to locate the owner of the storage tank.

8. As used in subsection 6, "abandoned storage tank" means an underground storage tank that:

(a) Is not maintained and whose owner or operator has not provided the Division with a written statement of his intention to close the storage tank; or

(b) Is not in service and does not comply with 40 C.F.R. § 280.70 or 280.71.

(Added to NAC by Environmental Comm'n, eff. 6-11-90; A 3-26-92; 1-23-96; R083-05, 10-31-2005)

NAC 459.9941 Underground storage tanks: Ineligibility to receive delivery of regulated substance; placement of red tag. (NRS 459.826**,** 459.830**)** An underground storage tank is ineligible to receive a delivery of a regulated substance if:

1. The Division:

(a) Determines that any required component of the underground storage tank is not installed, including, without limitation, any equipment that is designed to:

(1) Prevent a spill or overfill;

(2) Detect a leak; or

(3) Protect the underground storage tank from corrosion; or

(b) Identifies a failure in the operation of any equipment specified in paragraph (a) and the failure is not corrected:

(1) Within 30 days after the failure is discovered; or

(2) Within any other reasonable period specified by the Division; and

2. The Division places, or causes to be placed, a red tag on the fill pipe of the underground storage tank.

(Added to NAC by Environmental Comm'n by R004-08, eff. 4-17-2008)

NAC 459.9942 Underground storage tanks: Notice of determination that tank is ineligible to receive delivery of regulated substance. (NRS 459.826**,** 459.830**)** If the Division determines that an underground storage tank located at a facility specified by the Division is ineligible to receive a delivery of a regulated substance, the Division shall provide a written notice of that determination to the owner or operator or an on-site employee of the facility. The notice must include, without limitation:

1. An identification of the underground storage tank;

2. The date the Division makes the determination of ineligibility;

3. The date of placement of the red tag by the Division or the date by which the red tag must be placed on the underground storage tank, if the Division orders the red tag to be placed by the owner or operator of the facility;

4. Instructions for placing the red tag on the fill pipe of the underground storage tank, if the Division orders the red tag to be placed by the owner or operator of the facility;

5. The criteria used by the Division to make the determination of ineligibility; and

6. The specific remedial actions which the owner or operator of the facility must take in order for the Division to reclassify the underground storage facility tank as eligible to receive a delivery of a regulated substance.

(Added to NAC by Environmental Comm'n by R004-08, eff. 4-17-2008)

NAC 459.9943 Underground storage tanks: Request for or acceptance of delivery of regulated substance to tank marked with red tag prohibited; deferral of prohibition. (NRS 459.826**,** 459.830**)**

1. Except as otherwise provided in subsection 2, an owner or operator of a facility specified by the Division at which an underground storage tank is located shall not request or accept a delivery of a regulated substance to the underground storage tank if the underground storage tank is marked with a red tag in accordance with the provisions of NAC 459.9941 and 459.9942.

2. The Division may authorize a single delivery, or multiple deliveries for not more than 180 days, to an underground storage tank that is marked with a red tag by providing a deferral in writing to the owner or operator of the facility, if the owner or operator demonstrates to the satisfaction of the Division that the delivery:

(a) Is required because of an emergency;

(b) Is for the purpose of testing or calibrating the underground storage tank to reestablish eligibili receive a delivery pursuant to NAC 459.9944; or

(c) Is required to maintain the availability of, or access to, motor vehicle fuel in any rural or remote area of this State specified by the Division.

(Added to NAC by Environmental Comm'n by R004-08, eff. 4-17-2008)

NAC 459.9944 Underground storage tanks: Reclassification of tank marked with red tag as eligible to receive delivery of regulated substance. (NRS 459.826**,** 459.830**)** If the Division determines that an underground storage tank is ineligible to receive a delivery of a regulated substance and the underground storage tank is marked with a red tag pursuant to NAC 459.9941 and 459.9942, the Division may reclassify the underground storage tank as eligible to receive such a delivery if:

1. The owner or operator of the facility at which the underground storage tank is located provides to the Division documentation setting forth the remedial actions taken to install any required equipment or to correct any operational failure of that equipment;

2. The Division reviews the documentation to determine the appropriateness of the remedial action taken:

(a) Except as otherwise provided in paragraph (b), within 7 days after the Division receives the documentation; or

(b) Within 14 days after the Division receives the documentation, if the Division determines that an inspection of the site of the underground storage tank is required; and

3. The Division removes the red tag or authorizes the owner or operator of the facility, in writing, to remove the red tag after determining that the remedial actions taken by the owner or operator are appropriate.

(Added to NAC by Environmental Comm'n by R004-08, eff. 4-17-2008)

NAC 459.9945 Underground storage tanks: Secondary containment system required on tank installed on or after July 1, 2008; exceptions. (NRS 459.826**,** 459.830**)**

1. Except as otherwise provided in subsection 2 and NAC 459.9949, a secondary containment system is required on all underground storage tanks installed on or after July 1, 2008.

2. The provisions of subsection 1 do not apply to underground storage tanks existing at a facility before July 1, 2008, which may be connected by piping or coupled through a manifold to the new underground storage tank.

(Added to NAC by Environmental Comm'n by R005-08, eff. 4-17-2008)

NAC 459.9946 Underground storage tanks: Secondary containment system required upon replacement of tank or piping; exceptions. (NRS 459.826**,** 459.830**)**

1. Except as otherwise provided in subsections 2 and 4 and NAC 459.9949, a secondary containment system is required for any existing underground storage tank which is replaced, including the replacement of any piping that constitutes a portion of the underground storage tank regardless of whether the piping is replaced in conjunction with or separately from other portions of the underground storage tank.

2. The provisions of subsection 1 apply solely to those portions of an underground storage tank that are replaced and not to any other portion that remains in place, including any other underground storage tank that is connected to the replaced tank by piping or coupled through a manifold.

3. Piping is not considered to be replaced for purposes of this section unless the entire amount of a run of piping from one component to another component of the underground storage tank is replaced, including, without limitation, a component consisting of an individual tank, dispenser or piece of ancillary equipment.

4. The provisions of subsection 1 do not apply to any repairs not involving replacement that are intended to restore an underground storage tank to operating condition.

(Added to NAC by Environmental Comm'n by R005-08, eff. 4-17-2008)

NAC 459.9947 Underground storage tanks: Duties of owner or operator required to implement secondary containment system. (NRS 459.826**,** 459.830**)** An owner or operator of an underground storage tank who is required to implement a secondary containment system for that underground storage tank pursuant to NAC 459.9945 and 459.9946 shall:

1. Ensure that the secondary containment system:

(a) Contains regulated substances that are released from the underground storage tank until they are detected and removed;

(b) Prevents the release of regulated substances into the environment at any time during the operational life of the underground storage tank; and

(c) Operates with interstitial monitoring that meets the requirements of 40 C.F.R. § 280.43(g);

2. Check, or cause to be checked, for evidence of a release from the underground storage tank at least every 30 days and maintain records of the operation of the secondary containment system for at least 1 year;

3. Notify the Division before the installation or replacement of an underground storage tank and provide to the Division the proposed method of secondary containment planned for use;

4. Maintain records of the installation, maintenance and monitoring of the secondary containment system in accordance with the following schedule:

(a) Records of 30-day release monitoring must be maintained for not less than 1 year;

(b) All written claims of performance, including any schedules of required maintenance or calibration for the secondary containment system and its monitoring system, must be maintained for not less than 5 years after the date of installation; and

(c) All calibration, maintenance and repair of release detection equipment permanently located on-site must be maintained for not less than 1 year; and

5. Upon request, make available for review by the Division records of the installation, maintenance and monitoring of the secondary containment system.

(Added to NAC by Environmental Comm'n by R005-08, eff. 4-17-2008)

NAC 459.9948 Underground storage tanks: Under-dispenser container required for certain motor fuel dispensers. (NRS 459.826**,** 459.830**)**

1. Except as otherwise provided in NAC 459.9949, an under-dispenser container is required for all motor fuel dispensers that are installed on or after July 1, 2008, at a location where there was no previous dispenser or at a location to replace an existing dispenser and the equipment used to connect the dispenser to the underground storage tank is replaced.

2. An under-dispenser container must:

(a) Be liquid-tight on its sides, bottom and at any penetrations;

(b) Be compatible with the substance conveyed by dispenser piping;

(c) Allow for monitoring or visual inspection and access to the components in the containment system; and

(d) At all times, be made available for inspection by the Division.

(Added to NAC by Environmental Comm'n by R005-08, eff. 4-17-2008)

NAC 459.9949 Underground storage tanks: Exemption from requirements to implement secondary containment system or install under-dispenser container. (NRS 459.826**,** 459.830**)**

1. An owner or operator is not required to implement a secondary containment system pursuant to NAC 459.9945 and 459.9946 or to install an under-dispenser container pursuant to NAC 459.9948 if the owner or operator submits to the Division a study approved by the Division which demonstrates that the newly installed or replaced portions of an underground storage tank or motor fuel dispenser is not within 1,000 feet of a public water system or a well containing potable water.

2. The distance required pursuant to subsection 1 must be measured from the closest part of the new or replaced underground storage tank or new motor fuel dispenser to the closest part of the nearest public water system or the wellhead of the nearest well containing potable water.

3. As used in this section:

(a) "Public water system" has the meaning ascribed to it in NRS 445A.235.

(b) "Well containing potable water" means any hole that is dug, driven, drilled or bored that extends into the earth until it meets groundwater which:

(1) Supplies water for a noncommunity public water system; or

(2) Otherwise supplies water for household use, including, without limitation, drinking, bathing and cooking.

(Added to NAC by Environmental Comm'n by R005-08, eff. 4-17-2008)

NAC 459.995 Financial responsibility of owners and operators. (NRS 459.826**,** 459.834**)**

1. If requested by the Division, each owner and operator of a registered storage tank shall submit to the Division evidence of his financial responsibility. As used in this subsection, "registered storage tank" means a storage tank operated by a person who is:

(a) Required to demonstrate financial responsibility pursuant to 40 C.F.R. § 280.93; or

(b) Required to or who elects to register the storage tank pursuant to NRS 590.850 or 590.920.

2. An owner or operator may demonstrate his financial responsibility pursuant to the provisions of 40 C.F.R. §§ 280.94 to 280.103, inclusive.

3. An owner or operator:

(a) Who operates a storage tank containing fuel for jet or turbine-powered aircraft; and

(b) Who does not elect to obtain coverage pursuant to subsection 2 of NRS 590.920,

➥ shall comply with the requirements for financial responsibility contained in 40 C.F.R. §§ 280.90 to 280.116, inclusive.

(Added to NAC by Environmental Comm'n, eff. 6-11-90; A 3-26-92; 1-23-96)

NAC 459.996 Releases: Reporting; protection of site; inspection by Division. (NRS 459.826**)**

1. The owner or operator of a storage tank shall report any release promptly in accordance with the requirements of NAC 445A.347 and 40 C.F.R. § 280.61 if the release from the storage tank is confirmed in accordance with the provisions of 40 C.F.R. § 280.52. The owner or operator shall submit the report regardless of the amount of the release for which the report is submitted.

2. The owner or operator of a facility where a storage tank is located shall, in accordance with the reportable quantities established in NAC 445A.347 and 40 C.F.R. § 280.53, report each spill or overfill and the discovery of any soil contaminated by any previous spill or overfill.

3. The owner or operator shall take all steps for initial response and abatement prescribed in 40 C.F.R. § 280.60, 280.61 and 280.62 to protect the site of the release from further damage.

4. The owner or operator shall permit the Division to inspect any property or records relating to the release or damage caused by the release.

5. As used in this section, "spill or overfill" means any release of a regulated substance that occurs:

(a) Above the surface of the ground at a facility where a storage tank is located;

(b) From a dispenser for motor fuel above the sheer valve for the dispenser; or

(c) From any ancillary equipment for the tank system that:

(1) Is not included in any system for the detection of a leak; and

(2) Is accessible to visual inspection.

(Added to NAC by Environmental Comm'n, eff. 6-11-90; A 1-23-96; R189-08, 8-25-2009)

NAC 459.9972 Assessment required before closure of tank; notice of contaminated soil or groundwater; removal of tank from ground. (NRS 459.826**,** 459.832**)**

1. The owner or operator of a storage tank shall provide an assessment to the Division before a storage tank is permanently closed.

2. The assessment must be conducted:

(a) Using analytical test method 8015 of the Environmental Protection Agency that is modified for petroleum hydrocarbons and other constituents as required by the Division; and

(b) On two soil samples that are obtained from native soil less than 2 feet below the bottom of the excavation, from opposite sides or ends of the excavation in an area where contamination is most likely to be present.

3. The analysis must be conducted by a laboratory that is approved by the Division.

4. The owner or operator of an underground storage tank shall notify the Director in the manner prescribed in NAC 445A.347 if, during an assessment conducted pursuant to this section, any contaminated soil or groundwater is discovered in an amount that exceeds an amount of a release for which a notice is required pursuant to that section.

5. The owner or operator of an underground storage tank that is removed from the ground shall:

(a) Dispose of or reuse the tank in accordance with the provisions of NRS 459.800 to 459.856, inclusive; and

(b) Maintain a record of the disposal or reuse.

(Added to NAC by Environmental Comm'n, eff. 10-9-90; A 1-23-96; R083-05, 10-31-2005; R189-08, 8-25-2009)

NAC 459.9985 No relief of responsibility to secure approval or permit. (NRS 459.826**)** NAC 459.9972 does not relieve the owner or operator of the responsibility for securing an approval or permit from other governmental or regulatory entities.

(Added to NAC by Environmental Comm'n, eff. 10-9-90; A by R189-08, 8-25-2009)

NAC 459.9988 Corrective action concerning soil or groundwater; assessment of contaminated soil or water. (NRS 459.826**,** 459.834**)**

1. An owner or operator of a storage tank who submits a report pursuant to NAC 459.996 or a notice pursuant to NAC 459.9972 shall comply with the provisions of NAC 445A.226 to 445A.22755, inclusive. The Division may allow the owner or operator to use any alternative technology approved by the Division when taking any corrective action concerning soil or groundwater pursuant to those provisions.

2. If the report or notice indicates that a regulated substance has been released, the Division may require the owner or operator to assess any soil or water contaminated by the release to determine whether the presence of any hazardous waste was created by the release.

3. As used in this section, "hazardous waste" has the meaning ascribed to it in NAC 445A.826.

(Added to NAC by Environmental Comm'n by R189-08, eff. 8-25-2009)

NAC 459.999 Severability. (NRS 459.826**)** If any provision of NAC 459.9921 to 459.999, inclusive, or the application of any such provision to any person, thing or circumstance is held invalid, it is intended that the invalidity not affect the remaining provisions, or their application, that can be given effect without the invalid provision or application.

(Added to NAC by Environmental Comm'n, eff. 6-11-90; A 10-9-90; R004-08 & R005-08, 4-17-2008; R189-08, 8-25-2009)

FUND FOR BROWNFIELD PROJECTS

General Provisions

NAC 459.9991 Definitions. (NRS 459.892**)** As used in NAC 459.9991 to 459.99939, inclusive, unless the context otherwise requires, the words and terms defined in NAC 459.99911 to 459.99923, inclusive, have the meanings ascribed to them in those sections.

(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

NAC 459.99911 "Applicant" defined. (NRS 459.892**)** "Applicant" means any person who has submitted an application to the Division for financial assistance from the Fund.
(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

NAC 459.99912 "Brownfield site" defined. (NRS 459.892**)** "Brownfield site" has the meaning ascribed to it in NRS 459.866.
(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

NAC 459.99913 "Corrective action" defined. (NRS 459.892**)** "Corrective action" means any action taken at a brownfield site pursuant to the requirements of NAC 445A.226 to 445A.22755, inclusive.
(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004; A by R189-08, 8-25-2009)

NAC 459.99914 "Disadvantaged business" defined. (NRS 459.892**)** "Disadvantaged business" means a business owned or controlled by women or members of a racial or ethnic minority group.
(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

NAC 459.99915 "Division" defined. (NRS 459.892**)** "Division" means the Division of Environmental Protection of the State Department of Conservation and Natural Resources.
(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

NAC 459.99916 "Eligible entity" defined. (NRS 459.892**)** "Eligible entity" has the meaning ascribed to it in 42 U.S.C. § 9604(k)(1), except that the term:
1. Includes a nonprofit organization; and
2. Does not include:
(a) A government entity created by a state legislature;
(b) An Alaska Native Regional Corporation or an Alaska Native Village Corporation, as defined in the Alaska Native Claims Settlement Act, 43 U.S.C. §§ 1601 et seq., or the Metlakatla Indian Community; or
(c) Any person who is otherwise ineligible to receive a loan from the Fund pursuant to NAC 459.99924.
(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

NAC 459.99917 "Financial assistance" defined. (NRS 459.892**)** "Financial assistance" means a loan or subgrant from the Fund.
(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

NAC 459.99918 "Fund" defined. (NRS 459.892**)** "Fund" means the Fund for Brownfield Projects created by NRS 459.878.
(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

NAC 459.99919 "Hazardous substance" defined. (NRS 459.892**)** "Hazardous substance" has the meaning ascribed to it in NRS 459.429.
(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

NAC 459.9992 "Person" defined. (NRS 459.892**)** "Person" includes a government, governmental agency or political subdivision of a government.
(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

NAC 459.99921 "Program for voluntary cleanup" defined. (NRS 459.892**)** "Program for voluntary cleanup" means the program established in NRS 459.610 to 459.658, inclusive.
(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

NAC 459.99922 "Property" defined. (NRS 459.892**)** "Property" means real property located in this State where a brownfield site is located.
(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

NAC 459.99923 "Recipient" defined. (NRS 459.892**)** "Recipient" means a person, including an eligible entity, who receives financial assistance from the Fund.
(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

Loans From Fund

NAC 459.99924 Eligibility for loan: Ineligible persons. (NRS 459.892**)** A person is ineligible to receive a loan from

the Fund with respect to a property if the person:

1. Is subject to a pending investigation or ongoing enforcement action of the Federal Government pursuant to the Resource Conservation and Recovery Act of 1976, 42 U.S.C. §§ 6901 et seq., or the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9601 et seq.;

2. Is subject to a pending investigation or ongoing enforcement action of the Division with respect to the property; or

3. Was an owner or operator of the property who caused or contributed to the release of the hazardous substance which would be the subject of the cleanup using a loan from the Fund.

(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

NAC 459.99925 Eligibility for loan: Requirements for site. (NRS 459.892)

1. Except as otherwise provided in this section, for an applicant to be eligible for a loan from the Fund with respect to a property, the property must contain the site of a release of a hazardous substance, pollutant or petroleum product and qualify as a brownfield site.

2. An applicant may be eligible for a loan from the Fund with respect to a disposal site only if the Division determines that:

(a) The disposal site poses a threat to human health or the environment because of the presence of a hazardous substance and presents a danger to human health beyond any physical hazards that may be present at the disposal site;

(b) The disposal site was closed before the enactment of the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. §§ 6901 et seq.; and

(c) Corrective action is not required by the Division pursuant to NAC 444.7481 to 444.7499, inclusive.

3. An applicant is not eligible for a loan from the Fund with respect to a property which is eligible for funding pursuant to NAC 590.700 to 590.790, inclusive, or is otherwise subject to NAC 459.9921 to 459.999, inclusive, unless:

(a) The loan will be used for corrective action on the property exclusively to address a hazardous substance which is distinct from, and not commingled with, petroleum contamination that is eligible for reimbursement pursuant to NAC 590.700 to 590.790, inclusive;

(b) The Division determines that the applicant is not eligible for funding pursuant to NAC 590.700 to 590.790, inclusive, for petroleum contamination on the property and:

(1) The applicant did not cause or contribute to the release of petroleum products; and

(2) The cleanup of the petroleum contamination would protect human health and the environment and result in the redevelopment of the site; or

(c) The loan will be used to continue the remediation of a hazardous substance commingled with petroleum contamination after the issues relating to the petroleum contamination have been mitigated.

4. As used in this section, "disposal site" has the meaning ascribed to it in NRS 444.460.

(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004; A by R004-08 & R005-08, 4-17-2008; R189-08, 8-25-2009)

NAC 459.99926 Application for loan: Submission; form and contents. (NRS 459.892)

1. A person may submit an application for a loan from the Fund at any time. The application must be submitted on a form prescribed by the Division.

2. An application for a loan from the Fund must include:

(a) An accurate description of the property;

(b) Documentation of a source of loan repayment;

(c) An agreement that the applicant or, if the applicant does not own the property, the owner of the property will, if required pursuant to NAC 459.99928, grant a security interest in the property to the Division to secure the financing necessary for the completion of the corrective action;

(d) Documentation that the planned future development of the property is consistent with the current and reasonably foreseeable future land uses in the area;

(e) An accounting of the total debt against the property;

(f) An appraisal of the estimated value of the property after all necessary corrective actions are complete;

(g) A copy of a phase I and phase II environmental assessment of the site which is performed in a manner consistent with the requirements established by the Division or ASTM International; and

(h) A detailed credit history of the applicant.

3. In addition to the original application, the applicant must provide two copies of the application for review by the Division.

(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

NAC 459.99927 Application for loan: Additional requirements for certain applicants. (NRS 459.892)

1. If an applicant for a loan from the Fund is not the property owner of the brownfield site, the applicant must submit with the application a copy of a written option that entitles the applicant to purchase the property.

2. If the applicant is a governmental entity, the applicant must demonstrate that it has the legal authority to enter into a legally binding obligation to repay the loan.

(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

NAC 459.99928 Application for loan: Provision of collateral. (NRS 459.892) The Division may require an applicant for a loan from the Fund to provide collateral in an amount that is equal to the amount of the loan. The required collateral may include, without limitation, the granting to the Division of a security interest in the property for which the loan is being sought.

(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

Subgrants From Fund

NAC 459.99929 Duties of Division; eligibility of applicant for subgrant. (NRS 459.892)

1. The Division may use not more than 40 percent of the money in the Fund to make subgrants to eligible entities. In determining whether to make a subgrant, the Division shall consider the benefit of promoting the long-term availability of money from the Fund for remediation at brownfield sites.

2. An applicant may be eligible for a subgrant from the Fund with respect to a property if:

(a) The property is owned or held in trust by the applicant; and

(b) The property is of a type described in NAC 459.99925 with respect to which an applicant may be eligible for a loan from the Fund.

(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

NAC 459.9993 Application for subgrant: Submission; form and contents; consideration for approval. (NRS 459.892)

1. An eligible entity may submit an application for a subgrant from the Fund with respect to a property at any time.

2. The application must be submitted on a form prescribed by the Division and include:

(a) A demonstration that the applicant is an eligible entity;

(b) A detailed description of the intended redevelopment of the property and its projected benefits; and

(c) A statement as to whether there is an intention to transfer ownership of the property after the corrective action is completed.

3. In determining whether to approve an application for a subgrant from the Fund, the Division shall consider:

(a) The extent to which the subgrant will facilitate the creation of, preservation of or addition to a park, greenway, undeveloped property, recreational property or other property used for nonprofit purposes;

(b) The extent to which the subgrant will meet the needs of a community that has an inability to draw on other sources of funding for environmental remediation and subsequent redevelopment of the area in which a brownfield site is located because of the small population or low income of the community; and

(c) The extent to which the subgrant will facilitate the use or reuse of existing infrastructure in the community.

4. In addition to the original application, the applicant must provide one copy of the application for review by the Division.

(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

NAC 459.99931 Duties of recipient upon completion of cleanup. (NRS 459.892) Upon completion of the cleanup of a brownfield site with respect to which a subgrant has been made, the eligible entity that received the subgrant shall close out the account for the subgrant in the manner required by the Division. The eligible entity shall promptly remit to the Division for deposit in the Fund all money from the subgrant which has not been expended or committed for expenditure for the cleanup of the brownfield site as of the date established by the Division for closing the account.

(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

Recipients of Financial Assistance

NAC 459.99932 Conditions for payment and repayment of financial assistance. (NRS 459.892)

1. As soon as an agreement for financial assistance between the Division and a recipient is signed and the money is available, the entire amount of the financial assistance will be paid to the recipient.

2. Conditions for the payment and any repayment of financial assistance from the Fund:

(a) Must be set forth in the agreement for financial assistance between the Division and the recipient; and

(b) Are subject to any requirements and limitations that may be imposed by the United States Environmental Protection Agency.

3. As a condition of receiving financial assistance from the Fund, a recipient must agree to provide matching money equal to at least 20 percent of the amount received as financial assistance from the Fund. The recipient must demonstrate through its project accounting that the requirement concerning matching money is being met.

(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

NAC 459.99933 Use of money received as financial assistance. (NRS 459.892)

1. A recipient may not use money received as financial assistance for the payment of:

(a) The application fee for the program for voluntary cleanup;

(b) The recovery by the Division of costs incurred by the Division under the program for voluntary cleanup;

(c) Costs for precleanup environmental response activities, such as site assessment, identification and characterization;

(d) Costs for activities related to site development and construction that are not corrective actions;

(e) Costs for monitoring and data collection that are necessary to apply for, or comply with, environmental permits required by other state or federal laws unless such a permit is a required component of the corrective action; or

(f) A penalty or fine.

2. A recipient may use money received as financial assistance for the preparation of a plan for corrective action pursuant to NAC 445A.2271 or 445A.2273 or a remedial agreement pursuant to NRS 459.636 if the characterization data needed to support such a plan or agreement was developed without the use of the financial assistance.

3. A recipient shall not use money received as financial assistance to pay any of its administrative costs related to the management of the financial assistance. An administrative cost for an activity that is determined by the Division to be an allowable cost may be used to meet the requirement of matching money set forth in subsection 3 NAC 459.99932. The Division shall determine an administrative cost to be an allowable cost if the administrative cost directly involves the design and monitoring of performance of a corrective action.

4. A recipient of a subgrant shall not use money from the subgrant to purchase any equipment which costs more than $5,000. Any such equipment which is necessary to conduct corrective actions at the property must be rented or leased by the recipient for the period necessary to complete the corrective actions.

(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

NAC 459.99934 Cleanup by recipient enrolled in program for voluntary cleanup. (NRS 459.892)

1. Any cleanup of a brownfield site financed with money from the Fund by a recipient who is enrolled in the program for voluntary cleanup must be done in compliance with NRS 459.610 to 459.658, inclusive, and NAC 459.973 to 459.9743, inclusive.

2. The Division may withdraw financial assistance paid to a recipient if the Division determines that the recipient is not complying with the requirements set forth in NRS 459.610 to 459.658, inclusive, and NAC 459.973 to 459.9743, inclusive.

(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

NAC 459.99935 Cleanup by recipient not enrolled in program for voluntary cleanup. (NRS 459.892)

1. Any cleanup of a brownfield site financed with money from the Fund by a recipient who is not enrolled in the program for voluntary cleanup must be done in compliance with NAC 445A.226 to 445A.22755, inclusive.

2. Before approving a plan and schedule for completing the corrective action that is submitted by the recipient pursuant to NAC 445A.2271 or 445A.2273, the Division must:

(a) Publish a notice and brief summary of the plan and schedule in a newspaper of general circulation in the county where the brownfield site is located;

(b) Make an electronic version of the entire plan and schedule available on its Internet website;

(c) Make reasonable efforts to provide personal notice to all owners and residents of property located within 500 yards of the outer boundary of the property on which the corrective action is to be performed; and

(d) Provide 30 days for the submission of written comments by the public.

3. The Division may withdraw financial assistance paid to a recipient if the Division determines that the recipient is not complying with the requirements set forth in NAC 445A.226 to 445A.22755, inclusive.

(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004; A by R189-08, 8-25-2009)

NAC 459.99936 Certification of compliance with federal requirements; maintenance of records and accounts; audit of financial records. (NRS 459.892)

1. Before a contract for financial assistance is transmitted to a recipient for signature, the recipient must certify that it has complied and will continue to comply with all requirements of federal law that apply to the operation of the Fund.

2. A recipient shall:

(a) Establish an official file that contains an adequate record of all significant actions relating to the brownfield site;

(b) Establish accounts that accurately and adequately show all amounts of money:

(1) Received as financial assistance from the Fund;

(2) Spent on the brownfield site; and

(3) Used to comply with requirements concerning matching money;

(c) Establish a system of accounting which ensures that the final total costs relating to the cleanup of the brownfield site, including all direct and indirect costs, are recorded accurately;

(d) Establish and maintain such other accounts and records as are required by the Division to comply with requirements for reporting established by the Federal Government; and

(e) Retain all records relating to the brownfield site for:

(1) At least 3 years after the final repayment of financial assistance or the date on which the account for the subgrant is closed out by the Division, as appropriate; or

(2) Such longer period as required by the Division.

3. All records of a recipient relating to the brownfield site must be made available at any reasonable time for inspection or copying by any authorized representative of the Division.

4. If an audit is required by federal law or by an agency of the Federal Government, or if the Division determines that an audit is necessary to ensure the integrity of the Fund, the Division may require an audit of the financial records of a recipient relating to a brownfield site. Such an audit must be performed at the expense of the recipient by a certified public accountant who is independent of the recipient. A report of the audit must be prepared by the auditor in the form prescribed by the Division.

(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

NAC 459.99937 Contracts for remedial services. (NRS 459.892**)** Before a recipient may contract for remedial services relating to a brownfield site which involves money from the Fund, the recipient must submit to the Division, in the form prescribed by the Division, a request for approval of the contract. The Division may approve the contract only if the contract is being awarded to the lowest responsive, responsible bidder. The Division shall review the request for approval to ensure that the recipient, its consultants and its contractors have complied with the requirements set forth in NAC 459.99938 relating to disadvantaged businesses. The Division shall not participate in the resolution of any dispute concerning bidding relating to the contract for remedial services. The resolution of any such dispute is the sole responsibility of the recipient. The Division shall not approve a request for the approval of a contract for remedial services until all such disputes have been resolved.

(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

NAC 459.99938 Compliance with certain labor laws; participation of disadvantaged businesses. (NRS 459.892**)**

1. A recipient shall comply with all applicable provisions of the Davis-Bacon Act, 40 U.S.C. §§ 3141 et seq., and NRS 338.010 to 338.090, inclusive. The Division shall review the final contract documents to verify that the proper determinations of wages pursuant to federal and state law have been included. The recipient is responsible for ensuring compliance with all applicable labor laws.

2. An applicant for and recipient of financial assistance shall comply with the requirements of federal law concerning the participation of disadvantaged businesses.

3. A recipient of financial assistance shall attempt to comply with the fair share percentages established annually for disadvantaged businesses by the Division and the United States Environmental Protection Agency. Any recipient who does not meet these goals shall submit evidence of compliance with the affirmative steps set forth in subsection 5.

4. A recipient of financial assistance shall submit with his request for approval of a contract for remedial services a report, in the form prescribed by the Division, of participation by disadvantaged businesses. If the low bidder on a contract for remedial services does not meet the fair share requirements for disadvantaged businesses, the recipient shall submit to the Division evidence of compliance by the bidder with the affirmative steps set forth in subsection 5.

5. If the recipient awards a contract for remedial services, the recipient shall take affirmative steps to ensure that disadvantaged businesses are used to the extent possible as sources of supplies, equipment, materials and services. These affirmative steps must include, without limitation:

(a) Including such businesses on solicitation lists;

(b) Ensuring that such businesses are solicited if they are potential sources; and

(c) Dividing total requirements, if economically feasible, into small tasks or quantities to permit maximum participation by disadvantaged businesses.

6. During the implementation of corrective actions or the monitoring of the corrective actions after they have been completed, the recipient shall permit any authorized representative of the Division to enter onto the site of the project at any reasonable time.

7. A copy of each executed change order relating to a contract for remedial services must be submitted to the Division.

8. A recipient shall comply with the requirements of NAC 459.970 to 459.9729, inclusive.

(Added to NAC by Environmental Comm'n by R084-04, eff. 10-8-2004)

Miscellaneous Provisions

NAC 459.99939 Liability of certain bona fide prospective purchasers or innocent purchasers for response actions or cleanup of site. (NRS 459.892**)**

1. A person who, as a bona fide prospective purchaser or an innocent purchaser, is not liable for response actions or cleanup of a site pursuant to NRS 459.930 does not become liable for response actions or cleanup at the site solely because the person applied for or received financial assistance from the Fund.

2. The Division may, pursuant to subsection 4 of NRS 459.930, seek to recover costs relating to a response action or cleanup that are incurred and unrecovered by the State of Nevada with respect to a brownfield site for which a subgrant has been made to a bona fide prospective purchaser of the brownfield site if:

(a) The bona fide prospective purchaser intends to dispose of the property for private development upon completion of the environmental cleanup; and

(b) The Division determines that the recovery of such costs is in the best interest of the continued operation of the Fund.

3. All money recovered pursuant to subsection 2 must be deposited in the Fund.

4. For the purposes of this section:
(a) “Bona fide prospective purchaser” has the meaning ascribed to it in NRS 459.930.
(b) “Innocent purchaser” has the meaning ascribed to it in NRS 459.930.
(Added to NAC by Environmental Comm’n by R084-04, eff. 10-8-2004)

PRACTICE BEFORE STATE ENVIRONMENTAL COMMISSION

NAC 459.9995 Appeal of final decision of State Department of Conservation and Natural Resources. (NRS 233B.050**)**

1. Any person who requests a hearing before the State Environmental Commission concerning a final decision of the State Department of Conservation and Natural Resources pursuant to chapter 459 of NRS may do so by filing a request, within 10 days after notice of the action of the Department, on form 3* with the State Environmental Commission, 901 South Stewart Street, Suite 4001, Carson City, Nevada 89701-5249.

2. The provisions of NAC 445B.875 to 445B.899, inclusive, apply to a hearing of the State Environmental Commission requested pursuant to subsection 1.

*(See adopting agency for form.)
(Added to NAC by Environmental Comm’n, eff. 10-29-93)

October 29, 2007

Karen Beckley, Supervisor
Bureau of Health Protection Services
Nevada State Health Division
1179 Fairview Drive, Suite 201
Carson City, NV 89701-5405

Dear Ms Beckley:

We have reviewed the final revision to the Nevada Regulations Administrative Code NAC 459, received by our office on August 21, 2007. These regulations were reviewed by comparison to the equivalent Nuclear Regulatory Commission (NRC) rules in 10 CFR Parts 20, 30, 31, 32, 34, 35, 36, 39, 40, 70 and the requirements of the eight amendments identified in the enclosed State Regulation Status (SRS) Data Sheet. We discussed our review of the regulations with you on October 25, 2007.

As a result of our review, we have ten comments that have been identified in the enclosure. Please note that we have limited our review to regulations required for compatibility and/or health and safety. We have determined that if these regulations are revised, incorporating our comments and without other significant change, they would meet the compatibility and health and safety categories established in the Office of Federal and State Materials and Environmental Management Programs (FSME) Procedure SA-200.

We request that when you revise your regulations to address our comments, a copy of the "as published" regulations be provided to us for review. As requested in FSME Procedure SA-201, "Review of State Regulatory Requirements," please highlight the location of any changes made by Nevada, in response to our comments and provide a copy to FSME.

The SRS Data Sheet summarizes our knowledge of the status of other Nevada regulations, as indicated. Please let us know if you note any inaccuracies, or have any comments on the information contained in the SRS Data Sheet. This letter, including the SRS Data Sheet, is posted on the FSME website: http://www.hsrd.ornl.gov/nrc/rulemaking.htm.

If you have any questions regarding the comments, the compatibility and health and safety categories, or any of the NRC regulations used in the review, please contact Kathleen Schneider, State Regulation Review Coordinator at (301) 415-2320 (email:kxs@nrc.gov) or Jenny Tobin at (301) 415-2328 (email: jct1@nrc.gov).

Sincerely,

\RA By ADWhite For

Robert J. Lewis, Deputy Director
Division of Materials Safety and State Agreements
Office of Federal and State Materials and
Environmental Management Programs

Enclosures: As stated

October 29, 2007

Karen Beckley, Supervisor
Bureau of Health Protection Services-Nevada State Health Division
1179 Fairview Drive, Suite 201
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Sincerely,

\RA By ADWhite For

Robert J. Lewis, Deputy Director
Division of Materials Safety and State Agreements
Office of Federal and State Materials and
Environmental Management Programs

Enclosures: As stated

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COMPATIBILITY COMMENTS ON NEVADA FINAL REGULATIONS

STATE SECTION		NRC SECTION	RATS ID	CATEGORY	SUBJECT and COMMENTS
1	n/a	20.1003	1999-3	B	**Definitions: Air-purifying respirator** Nevada did not include a definition of air-purifying respirator in their regulations. Nevada needs to add a definition for air-purifying respirator to NAC 459 to meet the Compatibility Category B designation assigned to this definition in 10 CFR 20.1003.
2	n/a	20.1003	1999-3	B	**Definitions: Disposable respirator** Nevada did not include a definition of disposable respirator in their regulations. Nevada needs to add a definition for disposable respirator to NAC 459 to meet the Compatibility Category B designation assigned to this definition in 10 CFR 20.1003.
3	n/a	20.1003	1999-3	B	**Definitions: Filtering facepiece** Nevada did not include a definition of filtering facepiece in their regulations. Nevada needs to add a definition for filtering facepiece to NAC 459 to meet the Compatibility Category B designation assigned to this definition in 10 CFR 20.1003.
4	n/a	20.1003	1999-3	B	**Definitions: Helmet** Nevada did not include a definition of helmet in their regulations. Nevada needs to add a definition for helmet to NAC 459 to meet the Compatibility Category B designation assigned to this definition in 10 CFR 20.1003.

STATE SECTION		NRC SECTION	RATS ID	CATEGORY	SUBJECT and COMMENTS
5	n/a	20.1003	1999-3	B	**Definitions: Hood** Nevada did not include a definition of hood in their regulations. Nevada needs to add a definition for hood to NAC 459 to meet the Compatibility Category B designation assigned to this definition in 10 CFR 20.1003.
6	n/a	20.1003	1999-3	B	**Definitions: Loose-fitting Facepiece** Nevada did not include a definition of loose-fitting facepiece in their regulations. Nevada needs to add a definition for loose-fitting facepiece to NAC 459 to meet the Compatibility Category B designation assigned to this definition in 10 CFR 20.1003.
7	NAC 459.218	31.6	2001-1	B	**Certain detecting, measuring, gauging, or controlling devices and certain devices for producing light or an ionized atmosphere** The State places a 30 day reporting requirement in their equivalent rule to 31.6. This requirement does not appear in 31.6(a)-(c). Nevada's rule has the essential elements of the NRC, but is more restrictive than the NRC's GL rule. As noted in the September 28, 2005 All Agreement States Letter FSME-07-087, the determination on this provision will be held in abeyance until such time that the NRC completes the GL device rulemaking initiated in August 2007.

STATE SECTION		NRC SECTION	RATS ID	CATEGORY	SUBJECT and COMMENTS
8	Sec. 62 NAC 459.300	32.72(b)(1) &(b)(2)(ii)	2002-2	B	**Manufacture, preparation, or transfer for commercial distribution of radioactive drugs containing byproduct material for medical use under Part 35** Nevada has omitted the requirements that allow an individual to prepare radioactive drugs under the supervision of an authorized nuclear pharmacist. Nevada needs to adopt this provision to Section 62 to meet the Compatibility Category B designation assigned to Sections 32.72(b)(1)&(b)(2)(ii).
9	Sec. 62 NAC 459.300	32.72(b)(2)(i)	2002-2	B	**Manufacture, preparation, or transfer for commercial distribution of radioactive drugs containing byproduct material for medical use under Part 35** Nevada does not allow a pharmacist, who may not be an authorized nuclear pharmacist but qualifies under 35.2 to work as an authorized nuclear pharmacist. Nevada needs to add these provisions to Section 62 to meet the Compatibility Category B designation assigned to Section 32.72(b)(2)(i)
10	Sec. 65 NAC 459.306	32.74(a)(3)	2002-2	B	**Manufacture and distribution of sources or devices containing byproduct material for medical use** Nevada incorrectly referenced 35.57 in Section 65 instead of 35.65. Nevada needs to change the reference to 35.65 to meet the Compatibility Category B designation assigned to Section 32.74.

STATE REGULATION STATUS

State: Nevada
(8 Amendments reviewed were identified by a ★ at the beginning of equivalent NRC regulation.)

Tracking Ticket Number: 7-67 & 7-68
Date: October 29, 2007

NRC Chronology Identification	FR Notice (Date Due For State Implementation)	RATS ID	Proposed (P) / Final (F)[1] Rule / License Condition (LC) ML #[5]	NRC Review / Y, N[2] / Date / ML #[5]	Final State Regulation[1] (Effective Date)
Safety Requirements for Radiographic Equipment-Part 34	55 FR 843; (1/10/94)	1991-1	F	N 9/21/94	12/8/93
ASNT Certification of Radiographers-Part 34	56 FR 11504; (none)	1991-2			Not required[3]
Standards for Protection Against Radiation-Part 20	56 FR 23360; 56 FR 61352; 57 FR 38588; 57 FR 57877; 58 FR 67657; 59 FR 41641; 60 FR 20183; (1/1/94)	1991-3	F	N 12/15/97	12/8/93
Notification of Incidents-Parts 20, 30, 31, 34, 39, 40, 70	56 FR 64980; (10/15/94)	1991-4	F	N 9/21/94	12/8/93
Quality Management Program and Misadministrations-Part 35	56 FR 34104; (1/27/95)	1992-1			Superceded by 2002-2
Eliminating the Recordkeeping Requirements for Departures from Manufacturer's Instructions-Parts 30,35	57 FR 45566; (none)	1992-2			Not required[3]
Decommissioning Recordkeeping and License Termination: Documentation Additions [Restricted areas and spill sites]-Parts 30, 40	58 FR 39628; (10/25/96)	1993-1	F ML050960361	Y 5/19/05 ML051390275	
Licensing and Radiation Safety Requirements for Irradiators-Part 36	58 FR 7715; (7/1/96)	1993-2			Not applicable SECY-95-112[4]
Definition of Land Disposal and Waste Site QA Program-Part 61	58 FR 33886; (7/22/96)	1993-3			Not applicable SECY-95-112[4]
Self-Guarantee as an Additional Financial Mechanism-Parts 30, 40, 70	58 FR 68726; 59 FR 1618 (none)	1994-1			Not required[3]
Uranium Mill Tailings Regulations: Conforming NRC Requirements to EPA Standards-Part 40	59 FR 28220; (7/1/97)	1994-2			Not applicable SECY-95-112[4]

NRC Chronology Identification	FR Notice (Date Due For State Implementation)	RATS ID	Proposed (P) / Final (F)[1] Rule / License Condition (LC) ML #[5]	NRC Review / Y, N[2] / Date / ML #[5]	Final State Regulation[1] (Effective Date)
Timeliness in Decommissioning Material Facilities-Parts 30, 40, 70	59 FR 36026; (8/15/97)	1994-3	F ML050960361	N 5/19/05 ML051390275	
Preparation, Transfer for Commercial Distribution, and Use of Byproduct Material for Medical Use-Parts 30, 32, 35	59 FR 61767; 59 FR 65243 60 FR 322; (1/1/98)	1995-1	P	Y 3/10/99	1/99
Frequency of Medical Examinations for Use of Respiratory Protection Equipment-Part 20	60 FR 7900; (3/13/98)	1995-2	P	N 3/10/99	1/99
Low-Level Waste Shipment Manifest Information and Reporting-Parts 20, 61	60 FR 15649; 60 FR 25983 (3/1/98)	1995-3	P	Y 3/10/99	1/99
Performance Requirements for Radiography Equipment-Part 34	60 FR 28323; (6/30/98)	1995-4	P	N 3/10/99	1/99
Radiation Protection Requirements: Amended Definitions and Criteria-Parts 19, 20	60 FR 36038; (8/14/98)	1995-5	P	N 3/10/99	1/99
Clarification of Decommissioning Funding Requirements-Parts 30, 40, 70	60 FR 38235; (11/24/98)	1995-6	P	N 3/10/99	1/99
Medical Administration of Radiation and Radioactive Materials-Parts 20, 35	60 FR 48623; (10/20/98)	1995-7	P	Y 3/10/99	1/99
10 CFR Part 71: Compatibility with the International Atomic Energy Agency-Part 71	60 FR 50248; 61 FR 28723 (4/1/99)	1996-1	P	Y 3/10/99	1/99
One Time Extension of Certain Byproduct, Source and Special Nuclear Materials Licenses-Parts 30, 40, 70	61 FR 1109; (none)	1996-2			Not required[3]
Termination or Transfer of Licensed Activities: Recordkeeping Requirements-Parts 20, 30, 40, 61, 70	61 FR 24669; (6/17/99)	1996-3	F ML033210100	N 12/23/03 ML033580078	
Resolution of Dual Regulation of Airborne Effluents of Radioactive Materials; Clean Air Act-Part 20	61 FR 65120; (1/9/00)	1997-1	F ML050960361	N 5/19/05 ML051390275	

NRC Chronology Identification	FR Notice (Date Due For State Implementation)	RATS ID	Proposed (P) / Final (F)[1] Rule / License Condition (LC) ML #[5]	NRC Review / Y, N[2] / Date / ML #[5]	Final State Regulation[1] (Effective Date)
Recognition of Agreement State Licenses in Areas Under Exclusive Federal Jurisdiction Within an Agreement State-Part 150	62 FR 1662; (2/27/00)	1997-2	F ML033210100	N 12/23/03 ML033580078	
Criteria for the Release of Individuals Administered Radioactive Material-Parts 20, 35	62 FR 4120; (5/29/00)	1997-3	F ML033210100	N 12/23/03 ML033580078	
Fissile Material Shipments and Exemptions-Part 71	62 FR 5907; (none)	1997-4			Not required[3]
Licenses for Industrial Radiography and Radiation Safety Requirements for Industrial Radiography Operations-Parts 30, 34, 71, 150	62 FR 28948; (6/27/00)	1997-5	F ML033210100	N 12/23/03 ML033580078	
Radiological Criteria for License Termination-Parts 20, 30, 40, 70	62 FR 39058; (8/20/00)	1997-6	F ML033210100	N 12/23/03 ML033580078	
Exempt Distribution of a Radioactive Drug Containing One Microcurie of Carbon-14 Urea-Part 30	62 FR 63634; (1/02/01)	1997-7	F ML033210100	N 12/23/03 ML033580078	
Deliberate Misconduct by Unlicensed Persons-Parts 30, 40, 61, 70, 71, 150	63 FR 1890; 63 FR 13773 (2/12/01)	1998-1	F ML033210100	N 12/23/03 ML033580078	
Self-Guarantee of Decommissioning Funding by Nonprofit and Non-Bond-Issuing Licensees-Parts 30, 40, 70	63 FR 29535; (none)	1998-2			Not required[3]
License Term for Medical Use Licenses-Part 35	63 FR 31604; (none)	1998-3			Not required[3]
Licenses for Industrial Radiography and Radiation Safety Requirements for Industrial Radiographic Operations-Part 34	63 FR 37059; (7/9/01)	1998-4	F ML033210100	N 12/23/03 ML033580078	
Minor Corrections, Clarifying Changes, and a Minor Policy Change-Parts 20, 35, 36	63 FR 39477; 63 FR 45393 (10/26/01)	1998-5	F ML033210100	N 12/23/03 ML033580078	
★Transfer for Disposal and Manifests: Minor Technical Conforming Amendment-Part 20	63 FR 50127; (11/20/01)	1998-6	F ML072490051	N 10/29/07 ML073020215	

NRC Chronology Identification	FR Notice (Date Due For State Implementation)	RATS ID	Proposed (P) / Final (F)[1] Rule / License Condition (LC) ML #[5]	NRC Review / Y, N[2] / Date / ML #[5]	Final State Regulation[1] (Effective Date)
Radiological Criteria for License Termination of Uranium Recovery Facilities-Part 40	64 FR 17506; (6/11/02)	1999-1			Not required[3]
Requirements for Those Who Possess Certain Industrial Devices Containing Byproduct Material to Provide Requested Information-Part 31	64 FR 42269; (none)	1999-2			Not required[3]
★Respiratory Protection and Controls to Restrict Internal Exposure-Part 20	64 FR 54543; 64 FR 55525 (2/2/03)	1999-3	F ML072490051	Y 10/29/07 ML073020215	
Energy Compensation Sources for Well Logging and Other Regulatory Clarifications-Part 39	65 FR 20337; (5/17/03)	2000-1	LC ML031970217	N 07/30/03 ML032120269	
★New Dosimetry Technology-Parts 34, 36, 39	65 FR 63749; (1/8/04)	2000-2	F ML072490051	N 10/29/07 ML073020215	
★Requirements for Certain Generally Licensed Industrial Devices Containing Byproduct Material - Parts 30, 31, 32	65 FR 79162; (2/16/04)	2001-1	F ML072490051	Y 10/29/07 ML073020215	
★Revision of the Skin Dose Limit -Part 20	67 FR 16298; (4/5/05)	2002-1	F ML072490051	N 10/29/07 ML073020215	
★Medical Use of Byproduct Material-Parts 20, 32, and 35	67 FR 20249; (4/24/05)	2002-2	F ML072490051	Y 10/29/07 ML073020215	
★Financial Assurance for Materials Licensees – Parts 30, 40, 70	68 FR 57327; (12/3/06)	2003-1	F ML072490051	N 10/29/07 ML073020215	
Compatibility With IAEA Transportation Safety Standards and Other Transportation Safety Amendments – Part 71.	69 FR 3697; (10/01/07)	2004-1			
★Security Requirements for Portable Gauges Containing Byproduct Material - Part 30	70 FR 2001; (7/11/08)	2005-1	F ML072490051	N 10/29/06 ML073020215	
Medical Use of Byproduct Material - Recognition of Specialty Boards - Part 35	70 FR 16336; 71 FR 1926 (4/29/08)	2005-2			
Increased Controls for Risk-Significant Radioactive Sources (NRC Order EA-05-090)[6]	70 FR 72128**;** (12/1/05)	2005-3	LC ML053130011	11/10/05 ML053180009	12/2/05

NRC Chronology Identification	FR Notice (Date Due For State Implementation)	RATS ID	Proposed (P) / Final (F)[1] Rule / License Condition (LC) ML #[5]	NRC Review / Y, N[2] / Date / ML #[5]	Final State Regulation[1] (Effective Date)
Minor Amendments - Parts 20, 30, 32, 35, 40, and 70	71 FR 15005 (3/27/09)	2006-1			
National Source Tracking System - Serialization Requirements - Part 32 with reference to Part 20 Appendix E	71 FR 65685 (2/6/07)	2006-2			
National Source Tracking System - Part 20	71 FR 65865 (11/15/07) & (11/30/07)	2006-3[7]			

1. Or other generic Legally Binding Requirements.

2. (Y/N) Y means "Yes," there are comments in the review letter that the State needs to address.
N means "No," there are no comments in the review letter.

3. Not required means these regulations are not required for purposes of compatibility.

4. A State need not adopt a specific regulation if the State has no licensees that would be subject to that regulation. See: "Final Policy Statement on Adequacy and Compatibility of Agreement State Programs," III.1. Time Frame for Adoption of Compatible State Regulations, p. 6, SECY-95-112, May 3, 1995.

5. ADAMS ML Number

6. By letter dated September 2, 2005, from Paul H. Lohaus, Director, Office of State and Tribal Programs, Agreement States were given 90 days to issue legally binding requirements satisfying the requirements of NRC Order EA-05-090.

7. RATS ID 2006-3 will not be considered under the Non-Common Performance Indicator "Compatibility Requirements" for IMPEP reviews until such time as the National Source Tracking System is ready for use Revisions in the implementation date for Agreement States will be provided to the States under separate correspondence and the SRS sheet will be revised as appropriate.

October 5, 2010

Karen Beckley, Supervisor
Bureau of Health Protection
Nevada State Health Division
1179 Fairview Drive, Suite 201
Carson City, NV 89701-5405

Dear Ms. Beckley:

Thank you for your letter dated September 1, 2010, in which you submitted clarification of certain comments in State Regulation Status (SRS) Data Sheet, dated July 14, 2010. You requested our review of the entries for RATS ID 1995-3, 1995-7, 1996-1, 2001-1, and 2002-2.

Attached is the comment resolution documenting the results of our review. We agree with your comments regarding the entries for RATS 1995-7 and 1996-1, as noted in items 2 and 3. The SRS data sheet has been revised to reflect this change and is attached. Our comments on the remaining three items are noted in the comment resolution. This letter, including the SRS Data Sheet, is posted on the FSME website: http://nrc-stp.ornl.gov/rulemaking.html.

If you have any questions regarding our review, please contact Kathleen Schneider, State Regulation Review Coordinator at 301-415-2320 (kathleen.schneider@nrc.gov) or Torre Taylor at 301-415-7900 (torre.taylor@nrc.gov).

Sincerely,

/RA/

Terrence Reis, Deputy Director
Division of Materials Safety and State Agreements
Office of Federal and State Materials and
Environmental Management Programs

Enclosures:
As stated

[Concurrence Page]

Enclosures: As stated

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COMMENT RESOLUTION ON SRS DATA SHEET

	RATS ID	TITLE	STATE COMMENT	STAFF RESPONSE
1	1995-3	Low-Level Waste Shipment Manifest Information and Reporting, 10 CFR 20, 61	Nevada states that this regulation addressed in (1) Section 76 of R185-08A, effective May 7, 2010, and in (2) Appendix G to 10 CFR Part 20, as on November 16, 2005, and has been adopted in its entirety in NAC 459.0196.	In our review of Nevada's comment, NRC staff is still unable to find the language that corresponds to Section 2006(a)(1). If Nevada sends the specific language for Section 2006(a)(1), NRC will conduct a formal review of that regulation under FSME Procedure SA-201, "Review of State Regulatory Requirements."
2	1995-7	Medical Administration of Radiation and Radioactive Materials 10 CFR 20, 35	Nevada states that it has adopted 10 CFR Part 35 as it existed on November 30, 2007, in Section 74 in R185-08A, which came into effect on May 7, 2010.	Nevada is correct in that the SRS data sheet for this RATS ID incorrectly states that there are comments. The SRS data sheet will be corrected to accurately reflect the status of Nevada's regulations for RATS 1995-7.
3	1996-1	10 CFR 71: Compatibility with the IAEA	Nevada states that 10 CFR Part 71, as it existed on November 14, 2007 has been adopted in Section 25 of R185-08A, effective May 7, 2010.	Nevada is correct in that RATS 1996-1 was superseded by RATS 2004-1. Nevada has addressed the requirements of RATS 2004-1 and was notified, by letter dated July 14, 2010, that there were no comments. The SRS data sheet will be corrected to accurately reflect that Nevada has adopted final regulations equivalent to RATS ID 2004-1.

RATS ID		TITLE	STATE COMMENT	STAFF RESPONSE
4	2001-1	Requirements for Certain Generally Licensed Industrial Devices Containing Byproduct Material 10 CFR 30, 31, 32	Nevada stated that it has adopted this regulation and is in full compliance. The only comment is that it is more restrictive than the NRC's.	As noted in All Agreement States letter FSME-07-087, dated September 20, 2007, the NRC will continue to hold compatibility determinations in this area in abeyance until the final rule is published and the Agreement State implementation date becomes effective. NRC staff is tracking all States where there are comments even though the compatibility determinations are held in abeyance. With the issuance of the new "general license" rule and its effective implementation by Agreement States, NRC will supersede the entry for RATS 2001-1 for all States in this situation, including Nevada.
5	2002-2	Medical Use of Byproduct Material 10 CFR 20, 32, and 35	Nevada changed "authorized user" to "licensee," based on NRC's instruction. Please see SRS September 18, 2009, item 11. The terms will be again reversed in the next legislative cycle in 2011-2012.	vada made the revision based on previous direction by NRC. NRC staff regrets the error in the September 18, 2009 review and notes through this letter, which will be available to the public, that Nevada will correct this during the next revision of the regulations. NRC will track the comment until Nevada revises its regulation during the next legislative cycle in 2011-2012.

STATE REGULATION STATUS

State: Nevada

Tracking Ticket Number: 10-45

[No amendment(s) reviewed. State Regulations Status (SRS)

Date: October 5, 2010

Corrections are identified by a ★ at the beginning of the equivalent NRC requirement.]

RATS ID	NRC Chronology Identification	Date Due for State Adoption	Incoming Package	Outgoing Package	Notes
1991-1	Safety Requirements for Radiographic Equipment Part 34 55 FR 843 (**Superceded by 1997-5)**	01/10/1994	Final	No Comments 09/21/1994	Nevada has adopted Final Regulations equivalent to RATS ID: 1997-5.
1991-2	ASNT Certification of Radiographers Part 34 56 FR 11504 (**Superceded by 1997-5)**	none	Not Required	Not Required	Nevada has adopted Final Regulations equivalent to RATS ID: 1997-5.
1991-3	Standards for Protection Against Radiation Part 20 56 FR 23360; 56 FR 61352; 57 FR 38588; 57 FR 57877; 58 FR 67657; 59 FR 41641; 60 FR 20183;	01/01/1994	Final	No Comments 12/15/1997	
1991-4	Notification of Incidents Parts 20, 30, 31, 34, 39, 40, 70 56 FR 64980;	10/15/1994	Final	No Comments 9/21/94	
1992-1	Quality Management Program and Misadministrations Part 35 56 FR 34104 **(Superceded by 2002-2)**	01/27/1995	Not Required	Not Required	Nevada has adopted Final Regulations equivalent to RATS ID: 2002-2.
1992-2	Eliminating the Recordkeeping Requirements for Departures from Manufacturer's Instructions Parts 30, 35 57 FR 45566	none	Not Required	Not Required	These regulation changes are not required to be adopted for purposes of Compatibility.
1993-1	Decommissioning Recordkeeping and License Termination: Documentation Additions [Restricted areas and spill sites] Parts 30, 40 58 FR 39628	10/25/1996	Final ML101690074 License Condition ML092120075	No Comments 07/14/2010 ML101800043 No Comments 09/03/2009 ML092260209	Nevada has addresses the outstanding comment in the final regulation through the 2009 license condition.

RATS ID	NRC Chronology Identification	Date Due for State Adoption	Incoming Package	Outgoing Package	Notes
1993-2	Licensing and Radiation Safety Requirements for Irradiators Part 36 58 FR 7715	07/01/1996	Not Applicable[1]	Not Applicable	Nevada does not have any licensees subject to these regulations. (See SECY-95-112)
1993-3	Definition of Land Disposal and Waste Site QA Program Part 61 58 FR 33886	07/22/1996	Not Applicable[1]	Not Applicable	Nevada does not have any licensees subject to these regulations. (See SECY-95-112)
1994-1	Self-Guarantee as an Additional Financial Mechanism Parts 30, 40, 70 58 FR 68726; 59 FR 1618	none	Not Required	Not Required	These regulation changes are not required to be adopted for purposes of Compatibility.
1994-2	Uranium Mill Tailings Regulations: Conforming NRC Requirements to EPA Standards Part 40 59 FR 28220	07/01/1997	Not Applicable	Not Applicable	Nevada does not have authority to regulate this material under its Agreement.
1994-3	Timeliness in Decommissioning Material Facilities Parts 30, 40, 70 59 FR 36026	08/15/1997	Final ML050960361	No Comments 05/19/2005 ML051390275	
1995-1	Preparation, Transfer for Commercial Distribution, and Use of Byproduct Material for Medical Use Parts 30, 32, 35 59 FR 61767; 59 FR 65243; 60 FR 322	01/01/1998	Final	No Comments 09/18/2009 ML092230010	
1995-2	Frequency of Medical Examinations for Use of Respiratory Protection Equipment	03/13/1998	Final ML101690074	No Comments 07/14/2010 ML101800043	
1995-3	Low-Level Waste Shipment Manifest Information and Reporting Parts 20, 61 60 FR 15649; 60 FR 25983	03/01/1998	Final ML101690074	Comments 07/14/2010 ML101800043	
1995-4	Performance Requirements for Radiography Equipment Part 34 60 FR 28323 **(Superceded by 1997-5)**	06/30/1998	Proposed	No Comments 03/10/1999	Nevada has adopted Final Regulations equivalent to RATS ID: 1997-5.

RATS ID	NRC Chronology Identification	Date Due for State Adoption	Incoming Package	Outgoing Package	Notes
1995-5	Radiation Protection Requirements: Amended Definitions and Criteria Parts 19, 20 60 FR 36038	08/14/1998	Final ML101690074	No Comments 07/14/2010 ML101800043	
1995-6	Clarification of Decommissioning Funding Requirements Parts 30, 40, 70 60 FR 38235	11/24/1998	Final ML101690074	No Comments 07/14/2010 ML101800043	
*1995-7	Medical Administration of Radiation and Radioactive Materials Parts 20, 35 60 FR 48623 **(Superceded by 2002-2 and 2005-2)**	10/20/1998	Final	No Comments 09/18/2009 ML092230010 10/05/2010 ML102740221	
*1996-1	Compatibility with the International Atomic Energy Agency Part 71 60 FR 50248; 61 FR 28724 **(Superceded by 2004-1)**	04/01/1999	Proposed		Nevada has adopted Final Regulations equivalent to RATS ID: 2004-1. ML102740221
1996-2	One Time Extension of Certain Byproduct, Source and Special Nuclear Materials Licenses Parts 30, 40, 70 61 FR 1109	02/15/1999	Not Required	Not Required	These regulation changes are not required to be adopted for purposes of Compatibility.
1996-3	Termination or Transfer of Licensed Activities: Record keeping Requirements Parts 20, 30, 40, 61, 70 61 FR 24669	06/17/1999	Final ML033210100	No Comments 12/23/03 ML033580078	
1997-1	Resolution of Dual Regulation of Airborne Effluents of Radioactive Materials; Clean Air Act Part 20 61 FR 65120	01/9/2000	Final ML050960361	No Comments 05/19/2005 ML051390275	
1997-2	Recognition of Agreement State Licenses in Areas Under Exclusive Federal Jurisdiction Within an Agreement State Part 150 62 FR 1662	02/27/2000	Final ML033210100	No Comments 12/23/03 ML033580078	

RATS ID	NRC Chronology Identification	Date Due for State Adoption	Incoming Package	Outgoing Package	Notes
1997-3	Criteria for the Release of Individuals Administered Radioactive Material Parts 20, 35 62 FR 4120	05/29/2000	Final ML033210100	No Comments 12/23/03 ML033580078	
1997-4	Fissile Material Shipments and Exemptions Part 71 62 FR 5907 **(Superceded by 2004-1)**	02/10/2000	Not Required	Not Required	These regulation changes are not required to be adopted for purposes of Compatibility. (See STP-97-078)
1997-5	Licenses for Industrial Radiography and Radiation Safety Requirements for Industrial Radiography Operations Parts 30, 34, 71, 150 62 FR 28947	06/27/2000	Final ML033210100	No Comments 12/23/03 ML033580078	
1997-6	Radiological Criteria for License Termination Parts 20, 30, 40, 70 62 FR 39057	08/20/2000	Final ML033210100	No Comments 12/23/03 ML033580078	
1997-7	Exempt Distribution of a Radioactive Drug Containing One Micro curie of Carbon-14 Urea Part 30 62 FR 63634	01/02/2001	Final ML033210100	No Comments 12/23/03 ML033580078	
1998-1	Deliberate Misconduct by Unlicensed Persons Parts 30, 40, 61, 70, 71,	02/12/2001	Final ML033210100	No Comments 12/23/03 ML033580078	
1998-2	Self-Guarantee of Decommissioning Funding by Nonprofit and Non-Bond-Issuing Licensees Parts 30, 40, 70 63 FR 29535	07/01/2001	Not Required	Not Required	These regulation changes are not required to be adopted for purposes of Compatibility.
1998-3		07/10/2001	Not Required	Not Required	These regulation changes are not required to be adopted for purposes of Compatibility. (See STP-98-074) Nevada has adopted Final Regulations equivalent to RATS ID: 2002-2.
1998-4	Licenses for Industrial Radiography and Radiation Safety Requirements for Industrial Radiographic Operations Part 34 63 FR 37059	07/09/2001	Final ML033210100	No Comments 12/23/03 ML033580078	

RATS ID	NRC Chronology Identification	Date Due for State Adoption	Incoming Package	Outgoing Package	Notes
1998-5	Minor Corrections, Clarifying Changes, and a Minor Policy Change Parts 20, 35, 36 63 FR 39477; 63 FR 45393	10/26/2001	Final ML033210100	No Comments 12/23/03 ML033580078	
1998-6	Transfer for Disposal and Manifests: Minor Technical Conforming Amendment Part 20 63 FR 50127	11/20/2001	Final ML072490051	No Comments 10/29/2007 ML073020215	
1999-1	Radiological Criteria for License Termination of Uranium Recovery Facilities Part 40 64 FR 17506	06/11/2002	Not Applicable	Not Applicable	Nevada does not have the authority to regulate this material under its Agreement
1999-2	Requirements for Those Who Possess Certain Industrial Devices Containing Byproduct Material to Provide Requested Information Part 31 64 FR 42269	10/04/2002	Not Required	Not Required	These regulation changes are not required to be adopted for purposes of Compatibility.
1999-3	Respiratory Protection and Controls to Restrict Internal Exposure Part 20 64 FR 54543; 64 FR 55524	02/02/2003	Final	Comments 09/18/2009 ML092230010	
2000-1	Energy Compensation Sources for Well Logging and Other Regulatory Clarifications Part 39 65 FR 20337	05/17/2003	License Condition ML031970217	No Comments 07/30/2003 ML032120269	
2000-2	New Dosimetry Technology Parts 34, 36, 39 65 FR 63750	01/08/2004	Final ML072490051	No Comments 10/29/2007 ML073020215	
2001-1	Requirements for Certain Generally Licensed Industrial Devices Containing Byproduct	02/16/2004	Final ML072490051	Comments 10/29/2007 ML073020215	
2002-1	Revision of the Skin Dose Limit Part 20 67 FR 16298	04/05/2005	Final ML072490051	No Comments 10/29/2007 ML073020215	

RATS ID	NRC Chronology Identification	Date Due for State Adoption	Incoming Package	Outgoing Package	Notes
2002-2	Medical Use of Byproduct Material Parts 20, 32, 35 67 FR 20249	10/24/2005	Final ML101690074	Comments 07/14/2010 ML101800043	
2003-1	Financial Assurance for Materials Licensees Parts 30, 40, 70 68 FR 57327	12/03/2006	Final ML072490051	No Comments 10/29/2007 ML073020215	
2004-1	Compatibility With IAEA Transportation Safety Standards and Other Transportation Safety Amendments Part 71 69 FR 3697	10/01/2007	Final ML101690074	No Comments 07/14/2010 ML101800043	
2005-1	Security Requirements for Portable Gauges Containing Byproduct Material Part 30 70 FR 2001	07/11/2008	Final ML072490051	No Comments 10/29/2007 ML073020215	
2005-2	Medical Use of Byproduct Material - Recognition of Specialty Boards Part 35	04/29/2008	Proposed ML091940055	No Comments 08/18/2009 ML092100500	
2005-3	Increased Controls for Risk-Significant Radioactive Sources	12/01/2005	License Condition ML053130011	No Comments 11/10/2005 ML053180009	
2006-1	Minor Amendments Parts 20, 30, 32, 35, 40 and 70	03/27/2009	Proposed ML091940055	No Comments 08/18/2009 ML092100500	
2006-2	National Source Tracking System - Serialization Requirements Part 32 with reference to Part 20 Appendix E 71 FR 65685	02/06/2007	Final	No Comments 09/18/2009 ML092230010	
2006-3	National Source Tracking System Part 20 71 FR 65685, 72 FR 59162	01/31/2009	Final ML083460193	No Comments 01/22/2009 ML083530067	
2007-1	Medical Use of Byproduct Material - Minor Corrections and Clarifications Parts 32 and 35 72 FR 45147, 54207	10/29/2010	Proposed ML091940055	No Comments 08/18/2009 ML092100500	

RATS ID	NRC Chronology Identification	Date Due for State Adoption	Incoming Package	Outgoing Package	Notes
2007-2	Exemptions From Licensing, General Licenses, and Distribution of Byproduct Material: Licensing and Reporting Requirements Parts 30, 31, 32, 150 72 FR 58473	12/17/2010	Final ML101690074	No Comments 07/14/2010 ML101800043	
2007-3	Requirements for Expanded Definition of Byproduct Material Parts 20, 30, 31, 32, 33, 35, 61, 150 72 FR 55864	11/30/2010	Proposed ML091940055	No Comments 08/18/2009 ML092100500	
2007-4	Order Imposing Fingerprinting Requirements and Criminal History Records Check Requirements for Unescorted Access to Certain Radioactive Material NRC Order EA-07-305 72 FR 70901	06/05/2008	License Condition ML080430350	No Comments 2/28/2008 ML080580177	
2008-1	Occupational Dose Records, Labeling Containers, and Total Effective Dose Equivalent Parts 19, 20 72 FR 68043	02/15/2011	Proposed ML091940055	No Comments 08/18/2009 ML092100500	
2009-1	Medical Use of Byproduct Material – Authorized User Clarification Part 35 74 FR 33901	09/28/2012			

[1] IMPEP Team: verify that Nevada does not have any licensees subject to these regulations during each review.

July 14, 2010

Karen Beckley, Supervisor
Bureau of Health Protection
Nevada State Health Division
1179 Fairview Drive, Suite 201
Carson City, NV 89701-5405

Dear Ms. Beckley

We have reviewed the final revision to the Nevada Regulations Administrative Code, Chapter 459, Hazardous Materials, received by our office on June 21, 2010. These regulations were reviewed by comparison to the equivalent Nuclear Regulatory Commission (NRC) rules in 10 CFR Parts 19, 20, 30, 31, 32, 35, 40, 61, 70, 71, 150 and the requirements of the nine amendments identified in the enclosed State Regulation Status (SRS) Data Sheet. We discussed our review of the regulations with Sneha Ravikumar on July 14, 2010.

As a result of our review, we have two comments that have been identified in the enclosure. Please note that we have limited our review to regulations required for compatibility and/or health and safety. We have determined that if these regulations are revised, incorporating our comments and without other significant change, they would meet the compatibility and health and safety categories established in the Office of Federal and State Materials and Environmental Management Programs (FSME) Procedure SA-200.

We request that, when you revise your regulations to address our comments, a copy of the "as published" regulations be provided to us for review. As requested in FSME Procedure SA-201, "Review of State Regulatory Requirements," please highlight the location of any changes made by Nevada, in response to our comments, and provide a copy to Division of Materials Safety and State Agreements, FSME.

The SRS Data Sheet summarizes our knowledge of the status of other Nevada regulations, as indicated. Please let us know if you note any inaccuracies, or have any comments on the information contained in the SRS Data Sheet. This letter, including the SRS Data Sheet, is posted on the FSME website: http://nrc-stp.ornl.gov/rulemaking.html.

If you have any questions regarding the comments, the compatibility and health and safety categories, or any of the NRC regulations used in the review, please contact Kathleen Schneider, State Regulation Review Coordinator, at (301) 415-2320 (kathleen.schneider@nrc.gov) or Merri Horn at (301) 415-8126 (merri.horn@nrc.gov).

Sincerely,

/RA/

Terrence Reis, Deputy Director
Division of Materials Safety and State Agreements
Office of Federal and State Materials
and Environmental Management Programs

Enclosures:
As stated

[CONCURRENCE PAGE]

Enclosures: As stated

Distribution:
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NV File

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DOCUMENT NAME: G:\DMSSA\SAISB\REGULATION TOOLBOX\States\Nevada\10-28
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OFFICE	DILR		ASPB		OGC		ASPB: Acting BC		MSSA:DD	
NAME	MHorn		KSchneider		BJones		ADias		TReis	
DATE	06/29/10		06/30/10 07/08/1		0		07/14/10 07/14/1		0	

COMPATIBILITY COMMENTS ON NEVADA FINAL REGULATIONS

STATE SECTION		NRC SECTION	RATS ID	CATEGORY	SUBJECT and COMMENTS
1	R185-08A Sec 76 NAC 459-313	20.2006	1995-3	B	**Transfer for disposal and manifests** Nevada omits the requirements specified in 20.2006 (a)(1) Nevada needs to add these requirements to NAC 459 in order to meet the Compatibility Category B designation assigned to 10 CFR 20.2006.
2	NAC459-335 2.(b)	20.1301(c)(2)	2002-2	A	**Dose limits for individual members of the public** Nevada substitutes the term “licensee” for “authorized user” in NAC 459.335 2.(b) Nevada needs to substitute “authorized user” for “licensee” in NAC 459 in order to meet the Compatibility Category A designation assigned to 10 CFR 20.1301(c).

STATE REGULATION STATUS

State: Nevada

Tracking Ticket Number: 10-28

[9 amendment(s) reviewed is identified by a ★ at the beginning of the equivalent NRC requirement.]

Date: July 14, 2010

RATS ID	NRC Chronology Identification	Date Due for State Adoption		Outgoing Package	Notes
1991-1	Safety Requirements for Radiographic Equipment Part 34 55 FR 843 **(Superceded by 1997-5)**	01/10/1994	Final	No Comments 09/21/1994	Nevada has adopted Final Regulations equivalent to RATS ID: 1997-5.
1991-2	ASNT Certification of Radiographers Part 34 56 FR 11504 **(Superceded by 1997-5)**	none	Not Required	Not Required	Nevada has adopted Final Regulations equivalent to RATS ID: 1997-5.
1991-3	Standards for Protection Against Radiation Part 20 56 FR 23360; 56 FR 61352; 57 FR 38588; 57 FR 57877; 58 FR 67657; 59 FR 41641; 60 FR 20183;	01/01/1994	Final	No Comments 12/15/1997	
1991-4	Notification of Incidents Parts 20, 30, 31, 34, 39, 40, 70 56 FR 64980;	10/15/1994	Final	No Comments 9/21/94	
1992-1	Quality Management Program and Misadministrations Part 35 56 FR 34104 **(Superceded by 2002-2)**	01/27/1995	Not Required	Not Required	Nevada has adopted Final Regulations equivalent to RATS ID: 2002-2.
1992-2	Eliminating the Recordkeeping Requirements for Departures from Manufacturer's Instructions Parts 30, 35 57 FR 45566	none	Not Required	Not Required	These regulation changes are not required to be adopted for purposes of Compatibility.
*1993-1	Decommissioning Recordkeeping and License Termination: Documentation Additions [Restricted areas and spill sites] Parts 30, 40 58 FR 39628	10/25/1996	Final ML101690074 License Condition ML092120075	No Comments 07/14/2010 ML101800043 No Comments 09/03/2009 ML092260209	Nevada has addresses the outstanding comment in the final regulation through the 2009 license condition.

RATS ID	NRC Chronology Identification	Date Due for State Adoption		Outgoing Package	Notes
1993-2	Licensing and Radiation Safety Requirements for Irradiators Part 36 58 FR 7715	07/01/1996	Not Applicable[1]	Not Applicable	Nevada does not have any licensees subject to these regulations. (See SECY-95-112)
1993-3	Definition of Land Disposal and Waste Site QA Program Part 61 58 FR 33886	07/22/1996	Not Applicable[1]	Not Applicable	Nevada does not have any licensees subject to these regulations. (See SECY-95-112)
1994-1	Self-Guarantee as an Additional Financial Mechanism Parts 30, 40, 70 58 FR 68726; 59 FR 1618	none	Not Required	Not Required	These regulation changes are not required to be adopted for purposes of Compatibility.
1994-2	Uranium Mill Tailings Regulations: Conforming NRC Requirements to EPA Standards Part 40 59 FR 28220	07/01/1997	Not Applicable	Not Applicable	Nevada does not have authority to regulate this material under its Agreement.
1994-3	Timeliness in Decommissioning Material Facilities Parts 30, 40, 70 59 FR 36026	08/15/1997	Final ML050960361	No Comments 05/19/2005 ML051390275	
1995-1	Preparation, Transfer for Commercial Distribution, and Use of Byproduct Material for Medical Use Parts 30, 32, 35 59 FR 61767; 59 FR 65243; 60 FR 322	01/01/1998	Final	No Comments 09/18/2009 ML092230010	
*1995-2	Frequency of Medical Examinations for Use of Respiratory Protection Equipment	03/13/1998	Final ML101690074	No Comments 07/14/2010 ML101800043	
*1995-3	Low-Level Waste Shipment Manifest Information and Reporting Parts 20, 61 60 FR 15649; 60 FR 25983	03/01/1998	Final ML101690074	Comments 07/14/2010 ML101800043	
1995-4		06/30/1998	Proposed	No Comments 03/10/1999	Nevada has adopted Final Regulations equivalent to RATS ID: 1997-5.
*1995-5	Radiation Protection Requirements: Amended Definitions and Criteria Parts 19, 20 60 FR 36038	08/14/1998	Final ML101690074	No Comments 07/14/2010 ML101800043	

RATS ID	NRC Chronology Identification	Date Due for State Adoption		Outgoing Package	Notes
*1995-6	Clarification of Decommissioning Funding Requirements Parts 30, 40, 70 60 FR 38235	11/24/1998	Final ML101690074	No Comments 07/14/2010 ML101800043	
1995-7	Medical Administration of Radiation and Radioactive Materials Parts 20, 35 60 FR 48623 **(Superceded by 2002-2 and 2005-2)**	10/20/1998	Final	Comments 09/18/2009 ML092230010	
1996-1	Compatibility with the International Atomic Energy Agency Part 71 60 FR 50248; 61 FR 28724 **(Superceded by 2004-1)**	04/01/1999	Proposed Comments 03/10/1999		Nevada has not yet adopted Final Regulations equivalent to RATS ID: 2004-1.
1996-2	One Time Extension of Certain Byproduct, Source and Special Nuclear Materials Licenses Parts 30, 40, 70 61 FR 1109	02/15/1999	Not Required	Not Required	These regulation changes are not required to be adopted for purposes of Compatibility.
1996-3	Termination or Transfer of Licensed Activities: Record keeping Requirements Parts 20, 30, 40, 61, 70 61 FR 24669	06/17/1999	Final ML033210100	No Comments 12/23/03 ML033580078	
1997-1	Resolution of Dual Regulation of Airborne Effluents of Radioactive Materials; Clean Air Act Part 20 61 FR 65120	01/9/2000	Final ML050960361	No Comments 05/19/2005 ML051390275	
1997-2	Recognition of Agreement State Licenses in Areas Under Exclusive Federal Jurisdiction Within an Agreement State Part 150 62 FR 1662	02/27/2000	Final ML033210100	No Comments 12/23/03 ML033580078	
1997-3	Criteria for the Release of Individuals Administered Radioactive Material Parts 20, 35 62 FR 4120	05/29/2000	Final ML033210100	No Comments 12/23/03 ML033580078	
1997-4	Fissile Material Shipments and Exemptions Part 71 62 FR 5907 **(Superceded by 2004-1)**	02/10/2000	Not Required	Not Required	These regulation changes are not required to be adopted for purposes of Compatibility. (See STP-97-078)

RATS ID	NRC Chronology Identification	Date Due for State Adoption		Outgoing Package	Notes
1997-5	Licenses for Industrial Radiography and Radiation Safety Requirements for Industrial Radiography Operations Parts 30, 34, 71, 150 62 FR 28947	06/27/2000	Final ML033210100	No Comments 12/23/03 ML033580078	
1997-6	Radiological Criteria for License Termination Parts 20, 30, 40, 70 62 FR 39057	08/20/2000	Final ML033210100	No Comments 12/23/03 ML033580078	
1997-7	Exempt Distribution of a Radioactive Drug Containing One Micro curie of Carbon-14 Urea Part 30 62 FR 63634	01/02/2001	Final ML033210100	No Comments 12/23/03 ML033580078	
1998-1	Deliberate Misconduct by Unlicensed Persons Parts 30, 40, 61, 70, 71, 150	02/12/2001	Final ML033210100	No Comments 12/23/03 ML033580078	
1998-2	Self-Guarantee of Decommissioning Funding by Nonprofit and Non-Bond-Issuing Licensees Parts 30, 40, 70 63 FR 29535	07/01/2001	Not Required	Not Required	These regulation changes are not required to be adopted for purposes of Compatibility.
1998-3		07/10/2001	Not Required	Not Required	These regulation changes are not required to be adopted for purposes of Compatibility. (See STP-98-074) Nevada has adopted Final Regulations equivalent to RATS ID: 2002-2.
1998-4	Licenses for Industrial Radiography and Radiation Safety Requirements for Industrial Radiographic Operations Part 34 63 FR 37059	07/09/2001	Final ML033210100	No Comments 12/23/03 ML033580078	
1998-5	Minor Corrections, Clarifying Changes, and a Minor Policy Change Parts 20, 35, 36 63 FR 39477; 63 FR 45393	10/26/2001	Final ML033210100	No Comments 12/23/03 ML033580078	
1998-6	Transfer for Disposal and Manifests: Minor Technical Conforming Amendment Part 20 63 FR 50127	11/20/2001	Final ML072490051	No Comments 10/29/2007 ML073020215	

RATS ID	NRC Chronology Identification	Date Due for State Adoption		Outgoing Package	Notes
1999-1	Radiological Criteria for License Termination of Uranium Recovery Facilities Part 40 64 FR 17506	06/11/2002	Not Applicable	Not Applicable	Nevada does not have the authority to regulate this material under its Agreement
1999-2	Requirements for Those Who Possess Certain Industrial Devices Containing Byproduct Material to Provide Requested Information Part 31 64 FR 42269	10/04/2002	Not Required	Not Required	These regulation changes are not required to be adopted for purposes of Compatibility.
*1999-3	Respiratory Protection and Controls to Restrict Internal Exposure Part 20 64 FR 54543; 64 FR 55524	02/02/2003	Final ML101690074	No Comments 07/14/2010 ML101800043	
2000-1	Energy Compensation Sources for Well Logging and Other Regulatory Clarifications Part 39 65 FR 20337	05/17/2003	License Condition ML031970217	No Comments 07/30/2003 ML032120269	
2000-2	New Dosimetry Technology Parts 34, 36, 39 65 FR 63750	01/08/2004	Final ML072490051	No Comments 10/29/2007 ML073020215	
2001-1	Requirements for Certain Generally Licensed Industrial Devices Containing Byproduct	02/16/2004	Final ML072490051	Comments 10/29/2007 ML073020215	
2002-1	Revision of the Skin Dose Limit Part 20 67 FR 16298	04/05/2005	Final ML072490051	No Comments 10/29/2007 ML073020215	
*2002-2	Medical Use of Byproduct Material Parts 20, 32, 35 67 FR 20249	10/24/2005	Final ML101690074	Comments 07/14/2010 ML101800043	
2003-1	Financial Assurance for Materials Licensees Parts 30, 40, 70 68 FR 57327	12/03/2006	Final ML072490051	No Comments 10/29/2007 ML073020215	
*2004-1	Compatibility With IAEA Transportation Safety Standards and Other Transportation Safety Amendments Part 71 69 FR 3697	10/01/2007	Final ML101690074	No Comments 07/14/2010 ML101800043	

RATS ID	NRC Chronology Identification	Date Due for State Adoption		Outgoing Package	Notes
2005-1	Security Requirements for Portable Gauges Containing Byproduct Material Part 30 70 FR 2001	07/11/2008	Final ML072490051	No Comments 10/29/2007 ML073020215	
2005-2	Medical Use of Byproduct Material - Recognition of Specialty Boards Part 35	04/29/2008	Proposed ML091940055	No Comments 08/18/2009 ML092100500	
2005-3	Increased Controls for Risk-Significant Radioactive Sources (NRC Order EA-05-	12/01/2005	License Condition ML053130011	No Comments 11/10/2005 ML053180009	
2006-1	Minor Amendments Parts 20, 30, 32, 35, 40 and 70	03/27/2009	Proposed ML091940055	No Comments 08/18/2009 ML092100500	
2006-2	National Source Tracking System - Serialization Requirements Part 32 with reference to Part 20 Appendix E 71 FR 65685	02/06/2007	Final	No Comments 09/18/2009 ML092230010	
2006-3	National Source Tracking System Part 20 71 FR 65685, 72 FR 59162	01/31/2009	Final ML083460193	No Comments 01/22/2009 ML083530067	
2007-1	Medical Use of Byproduct Material - Minor Corrections and Clarifications Parts 32 and 35 72 FR 45147, 54207	10/29/2010	Proposed ML091940055	No Comments 08/18/2009 ML092100500	
*2007-2	Exemptions From Licensing, General Licenses, and Distribution of Byproduct Material: Licensing and Reporting Requirements Parts 30, 31, 32, 150 72 FR 58473	12/17/2010	Final ML101690074	No Comments 07/14/2010 ML101800043	
2007-3	Requirements for Expanded Definition of Byproduct Material Parts 20, 30, 31, 32, 33, 35, 61, 150 72 FR 55864	11/30/2010	Proposed ML091940055	No Comments 08/18/2009 ML092100500	

RATS ID	NRC Chronology Identification	Date Due for State Adoption		Outgoing Package	Notes
2007-4	Order Imposing Fingerprinting Requirements and Criminal History Records Check Requirements for Unescorted Access to Certain Radioactive Material NRC Order EA-07-305 72 FR 70901	06/05/2008	License Condition ML080430350	No Comments 2/28/2008 ML080580177	
2008-1	Occupational Dose Records, Labeling Containers, and Total Effective Dose Equivalent Parts 19, 20 72 FR 68043	02/15/2011	Proposed ML091940055	No Comments 08/18/2009 ML092100500	
2009-1	Medical Use of Byproduct Material – Authorized User Clarification Part 35 74 FR 33901	09/28/2012			

[1] IMPEP Team: verify that Nevada does not have any licensees subject to these regulations during each review.

JIM GIBBONS
Governor

MICHAEL J. WILLDEN
Director

RICHARD WHITLEY, MS
Administrator

TRACEY D. GREEN, MD
State Health Officer

STATE OF NEVADA
DEPARTMENT OF HEALTH AND HUMAN SERVICES
HEALTH DIVISION
BUREAU OF HEALTH CARE QUALITY AND COMPLIANCE

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June 10, 2010

Terrence Reis, Deputy Director
Division of Materials Safety and State Agreements
Office of Federal and State Materials and Environmental Management Programs
U.S Nuclear Regulatory Commission,T8-E24
Washington, D.C 20555-0001

Re: Final Response to Comments in SRS 08-18-2009, SRS 09-03-2009 and SRS 09-18- 2009.

Dear Mr. Reis:

Enclosed is the State of Nevada's final response to SRS 08-18-2009, SRS 09-03-2009 and SRS 09-18-2009. We have revised our regulations incorporating your comments, without other significant changes. The new amendments to the regulations are identified by text in blue and correspond to equivalent amendments to NRC's regulations. The locations of these changes are highlighted in yellow. The following documents are included:

a. RESPONSE JUNE 2010
b. R185-08A MAY 2010
c. 2010 NAC_CHAPTER 459 – HAZARDOUS MATERIALS

a. RESPONSE JUNE 2010: This is patterned after SRS 08-18-2009, SRS 09-18-2009 and SRS 09-03-2009. Nevada's response to each comment is given in a highlighted textbox that is linked to the appropriate section in NAC 459 and R185-08A that addresses this deficiency.

b. R185-08A MAY 2010: This is the latest compilation of regulations that was adopted by the State Board of Health effective from May 7, 2010, in the State of Nevada. It is legally enforceable, though it has not yet codified. Sections of it that resolve deficiencies pointed out in the SRS sheets are highlighted in yellow with note tools giving the RATS ID and the 10 CFRs addressed by these.

c. 2010 NAC CHAPTER 459 – HAZARDOUS MATERIALS: This is Nevada Administrative Code 459, which was revised due to the codification of R149-07A. Sections that address comments made in the SRS sheets are highlighted in yellow with a note tool giving the RATS ID and the appropriate 10 CFRs.

When all three documents are open, and the highlighted boxes in "RESPONSE JUNE 2010" are clicked on, you will be taken directly to the appropriate section in 2010 NAC_CHAPTER 459 – HAZARDOUS MATERIALS or in R185-08A MAY 2010.

COMMENTS THAT ARE ADDRESSED IN "RESPONSE JUNE 2010"

A. SRS 08-18-2009

RATS ID	TITLE	STATE SECTION
1. 2004-1	General license: DOT specification container.	R185-08A Sec.25
2. 2007-2	Certain items containing byproduct material.	R185-08A Sec. 54.1.(c),(e)
3. 2007-2	Exempt quantities.	R185-08A Sec. 52.5
4. 2007-2	Certain detecting, measuring, gauging or controlling devices and certain devices for producing light or an ionized atmosphere.	R185-08A Sec.63.8

B. SRS 09-18-2009

RATS ID	TITLE	STATE SECTION
1. 1995-2	Use of Individual Respiratory Protection Equipment.	NAC 459.349.1.(c)5
2. 1995-3	Transfer for disposal and manifests.	R185-08A Sec.76
3. 1995-3	Maintenance of records, reports and transfers.	NAC 459. 8195,363,8225. 2, 819, 118, 312, 8235

4. 1995-5	Definitions	NAC.459.054.3
5. 1995-5	Definitions	NAC.459.065.3
6. 1995-6	Expiration and termination of licenses and decommissioning of sites and separate or outdoor areas.	NAC 459.200.6
7. 1999-3	Definitions	R185-08A Sec.3
8. 1999-3	Definitions	R185-08A Sec.7
9. 1999-3	Definitions	R185-08A Sec.11
10. 1999-3	Definitions	R185-08A Sec.12
11. 2002-2	Dose limits for individual members of the public.	NAC 459.335.2(b)
12. 2002-2	Manufacture, preparation or transfer for commercial distribution of radioactive drugs containing byproduct material for medical use in Part 35.	R185-08A Sec. 72
13. 2002-2	Manufacture and distribution of sources or devices containing byproduct material for medical use.	R185-08A Sec. 73
14. 1999-3	Definitions	R185-08A Sec.13

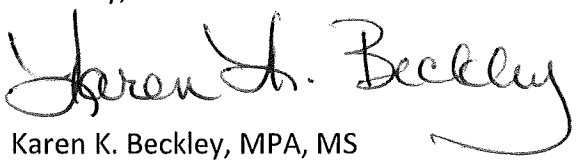
C. SRS 09-03-2009

RATS ID	TITLE	STATE SECTION
1. 1993-1	Decommissioning Recordkeeping and License Termination requirements.	R185-08A Sec. 57

We believe that the adoption of these revisions satisfies the compatibility and health and safety categories established in the Office of Federal and State Materials and Environmental Programs (FSME) Procedure SA-200.

If you have any questions or concerns, please feel free to contact Karen Beckley at 775-687-7540 or at kbeckley@health.nv.gov.

Sincerely,



Karen K. Beckley, MPA, MS
Manager, Radiation Control Program
Nevada State Health Division
Bureau of Health Care Quality and Compliance

cc: Kathleen N. Schneider, Senior Project Manager
State Agreements and Industrial Safety Branch
Division of Materials Safety and State Agreements
Office of Federal and State Materials and Environmental Management Programs

Enclosures: a. RESPONSE JUNE 2010
b. R185-08A MAY 2010
c. 2010_NAC_ CHAPTER 459 – HAZARDOUS MATERIALS