DCD (SP02)

Conference of Radiation Control Program Directors, Inc.

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February 23, 2000

Paul Lohaus
Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Rockville, MD 20852

Dear ~~Mr~~ Paul Lohaus:

Please find enclosed a finished copy of the latest suggested state regulation from the Conference for Radiation Control Program Directors. **Part O - Decommissioning** was adopted by the Board of Directors of CRCPD on February 11, 2000.

The CRCPD requests that correspondence relative to Federal Concurrence from your agency be submitted within 60 days of receipt of this correspondence.

Thank you for your attention to this important matter.

Sincerely,

Pat Gorman

Patricia Gorman
Deputy Director, CRCPD

OSP
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cc: Charles Hardin
Executive Director, CRCPD
Robert Hallisey
Chairperson, CRCPD
Ken Weaver
Chair, SR-12 Part O working group

OSP-006 Template SP-C-7

PART O

DECOMMISSIONING

Sec. O.1 - Purpose. This Part provides for removing safely from service a facility or site having radioactive material, a radiation-producing or radioactivity-inducing machine.

Sec. O.2 - Scope.

a. Any person licensed to receive, possess, own, acquire, use, process, transfer or dispose of radioactive material is subject to this Part, except the following:

   i. Low-level waste disposal facility licensees under Part M of these regulations (ancillary facilities that support radioactive waste management and disposal activities are subject to this part); and

   ii. Uranium and thorium recovery facility licensees under Part U, Appendix A, of these regulations, or uranium solution extraction facilities.

b. In addition to conforming to the licensing, registration or reporting requirements of these regulations and the standards for protection in Part D of these regulations, the person responsible for decommissioning a facility or site that is within the scope of this Part is required to conform to the requirements of this Part.

Sec. O.3 - Definitions. As used in this Part, these terms have the definitions set forth below.

"Critical group" means the group of individuals reasonably expected to receive the greatest exposure to residual radioactivity for any applicable set of circumstances.

"Decommission" means to remove 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 or (2) release of the property under restricted conditions and termination of the license.

"Decommissioning plan" means a written document that includes the licensee's planned procedures and activities for decommissioning of the facility or site.

"Distinguishable from background" means that the detectable concentration of a radionuclide is statistically different from the background concentration of that radionuclide in the vicinity of the site or, in the case of structures, in similar materials using adequate measurement technology, survey, and statistical techniques.

"Facility" means the location within one building, vehicle, or under one roof and under the same administrative control (1) at which the possession, use, processing or storage of radioactive material is or was authorized or (2) at which one or more radiation-producing machines or radioactivity-inducing machines are installed or located. "Facility" may also mean multiple such locations at a site or part of a site.

"Final radiation survey" means the survey of the facility or site after decommissioning activities have been completed during which the determination is made by the licensee that the facility or site meets the Agency's release criteria.

"Licensee" means any person who is licensed by the Agency, as defined in Part A of these regulations. For purposes of this Part O, the term "licensee" also means any person who is responsible for decommissioning by being registered with the Agency, being subject to a record of possession of a radiation source or device under general license, or being otherwise legally obligated to conduct decommissioning activities in accordance with these regulations and the Act.

"Principal activity" means an activity authorized by the license which is essential to achieving the purpose(s) for which the license was issued or amended. Storage during which no licensed material is accessed for use or disposal and activity incidental to decontamination or decommissioning are not principal activities.

"Residual radioactivity" means radioactivity in structures, materials, soils, groundwater, and other media at a site resulting from activities under the license's control. This includes radioactivity from all licensed and unlicensed sources used by the licensee, but excludes background radiation. It also includes radioactive materials remaining at the site as a result of routine or accidental releases of radioactive material at the site and previous burials at the site, even if those burials were made in accordance with provisions of these regulations.

"Restricted use" means that a limit or control has been placed on future use of the facility and the facility is no longer under the control of the licensee, registrant, of holder of the record of possession.

"Site" means the area contained within the boundary of a location under the control of persons generating or storing radioactive materials.

"Unrestricted use" means that the facility or area may be used by individuals for any purpose without limits or controls. The facility or area is no longer under the control of the licensee, registrant, or holder of the record of possession.

Sec. O.4 - Minimization of Contamination. Applicants for licenses, other than renewals, shall describe in the application how facility design and procedures for operation will minimize, to the extent practicable, contamination of the facility and the environment, facilitate eventual decommissioning, and minimize, to the extent practicable, the generation of radioactive waste.

Sec. O.5 - An Expired License Remains in Effect Until Final Agency Action.

a. In accord with Part C of these regulations, each existing license shall not expire until final Agency action.

b. With respect to possession of radioactive material and residual radioactive contamination, each specific license continues in effect beyond the expiration date until the agency notifies the licensee in writing that the license is terminated, even if:

   i. The licensee decides not to renew the license [Part C.32c.ii];

   ii. No application for license renewal is submitted [Part C.32d];

   iii. An application for renewal is denied; or

   iv. The Agency revokes a license.

c. After the expiration date specified in the license, each licensee to which O.5b applies and who possesses radioactive material, including residual radioactive material, shall:

   i. Limit actions involving radioactive material to those related to decommissioning; and,

   ii. Continue to control entry to restricted areas until they are suitable for release in accordance with Agency requirements.

Sec. O. 6 - Decommissioning Timeliness.

a. Each licensee or person in possession of a non-exempt source of radiation who decides to terminate all activities involving that source of radiation shall notify the Agency immediately, in writing.

b. Each licensee or person responsible for a facility or site which includes a non-exempt source of radiation or which may be contaminated by residual radioactivity shall, no less than 30 days before vacating or relinquishing possession or control, notify the Agency, in writing, of the intent to vacate.

c. The licensee shall notify the Agency in writing within 60 days of the occurrence of any of the following:

   i. The licensee has decided to permanently cease principal activities at the entire site or in any separate building or outdoor area that contains residual radioactivity such that

the building or outdoor area is unsuitable for release in accordance with these regulations; or,

ii. No principal activities under the license have been conducted for a period of 24 months; or,

iii. No principal activities have been conducted for a period of 24 months in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance these regulations.

c. From the date of notification of the Agency required in O.6a and O.6b, the licensee shall either

i. Begin decommissioning activities; or

ii. Within 12 months of notification submit a decommissioning plan, if required by O.7, and begin decommissioning upon Agency approval of that plan.

d. Coincident with the notification of the Agency required in O.6a and O.6b, the licensee shall maintain in effect all decommissioning financial assurances established by the licensee pursant to Part S in conjunction with a license issuanc or renewal or as required by this Part. The amount of the financial assurance must be increased, or may be decreased, as appropriate, to cover the detailed cost estimate for decommissioning established pursuant to O.7d.v.

e. The Agency may approve an alternate schedule for the submission of plans and for the completion of decommissioning as required pursuant to O.6a and O.6b if the Agency determines that the alternate schedule (1) is necessary to effectively conduct decommissioning, (2) presents no undue risks to public health and safety, and (3) is otherwise in the public interest. The request must be submitted no later than 30 days before notification pursuant to Part C.32b of these regulations. The schedule for decommissioning may not commence until the Agency has made a determination on the request.

Sec. O.7 - Decommissioning Plan.

a. A licensee must submit a decommissioning plan: if the licensee intends to terminate the license using radiological criteria specified in O.10 or O.11; if otherwise required by these regulations; if required by license condition; or if the procedures and activities necessary to carry out decommissioning of the site or separate building or outdoor area have not been previously approved by the Agency and these procedures could increase potential health and safety impacts to workers or to the public, such as in any of the following cases:

i. Procedures would involve techniques not applied routinely during cleanup or maintenance operations;

ii. Workers would be entering areas not normally occupied where surface contamination and radiation levels are significantly higher than routinely encountered during the operation for which the license was issued;

iii. Procedures could result in significantly greater airborne concentrations of radioactive materials than are present during operation; or,

iv. Procedures could result in significantly greater releases of radioactive material to the environment than those associated with the operation for which the license was issued.

b. Procedures with potential health and safety impacts may not be carried out prior to approval of the decommissioning plan.

c. The proposed decommissioning plan for the facility or site (or separate building or outdoor area) must include:

i. A description of the conditions of the facility or site sufficient to evaluate the acceptability of the plan;

ii. A description of planned decommissioning activities;

iii. A description of methods used to ensure protection of workers and the environment against radiation hazards during decommissioning;

iv. A description of the radiation survey planned to demonstrate compliance with 0.8d and O.9a (or if applicable, O.10 or O.11); and,

v. An updated detailed cost estimate for decommissioning, comparison of that estimate with present funds set aside for decommissioning, and a plan for assuring the availability of adequate funds for completion of decommissioning.

d. For decommissioning plans calling for completion of decommissioning later than 24 months after plan approval, the plan shall include a justification for the delay. The proposed decommissioning plan will be approved by the Agency if the information therein demonstrates that the decommissioning will be completed as soon as practicable and that the health and safety of workers and the public will be adequately protected.

Sec. O.8 - Completion of Decommissioning.

a. The licensee shall complete decommissioning of the facility or site as soon as practicable but no later than 24 months following the initiation of decommissioning, unless an alternate schedule addressing the factors in O.8c is requested with written justification and approved by the Agency.

b. When decommissioning involves the entire site, the licensee shall request license termination upon completion of decommissioning activities.

c. For decommissioning plans calling for completion of decommissioning later than 24 months after plan approval, the plan shall include a justification for the decommissioning schedule warranted by consideration of the following:

   i. Whether it is technically feasible to complete decommissioning within the allotted 24-month period;

   ii. Whether sufficient waste disposal capacity is available to allow completion of decommissioning within the allotted 24-month period;

   iii. Whether a significant volume reduction in wastes requiring disposal will be achieved by allowing short-lived radionuclides to decay;

   iv. Whether a significant reduction in radiation exposure to workers can be achieved by allowing short-lived radionuclides to decay; and,

   v. Other site-specific factors which the Agency may consider appropriate on a case-by-case basis, such as the regulatory requirements of other government agencies, lawsuits, ground-water treatment activities, monitored natural ground-water restoration, actions that could result in more environmental harm than deferred cleanup, and other factors beyond the control of the licensee.

d. As the final step in decommissioning, the licensee shall:

   i. Conduct a radiation survey of the premises where the licensed activities were carried out and submit a report of the results of this survey unless the licensee demonstrates that the premises are suitable for release in some other manner. The licensee shall, as appropriate:

      (1) Report levels of gamma radiation in units of millisieverts (or microroentgens) per hour at one meter from surfaces, and report levels of radioactivity, including alpha and beta, in units of megabecquerels (or disintegrations per minute or microcuries) per 100 square centimeters - removable and fixed - for

surfaces, megabecquerels (or microcuries) per milliliter for water, and becquerels (or picocuries) per gram for solids such as soils or concrete; and,

(2) Specify the survey instrument(s) used and certify that each instrument is properly calibrated and tested.

ii. Certify the disposition of all licensed material including accumulated wastes, by submitting a completed Agency Form T (Attachment A) or equivalent information.

Sec. O.9 - Termination of a License Without Restriction.

a. A site will be considered acceptable for unrestricted use if the residual radioactivity that is distinguishable from background radiation results in a TEDE to an average member of the critical group that does not exceed 0.25 millisievert (25 mrem) per year, including that from groundwater sources of drinking water, and the residual radioactivity has been reduced to levels that are as low as reasonably achievable (ALARA). Determination of the levels which are ALARA must take into account consideration of any detriments, such as deaths from transportation accidents, expected to potentially result from decontamination and waste disposal.

b. Specific licenses, including expired licenses, will be terminated upon written notice to the licensee when the Agency determines that:

i. Radioactive material has been properly disposed;

ii. Reasonable effort has been made to eliminate residual radioactive contamination, if present; and;

iii. Documentation is provided to the Agency that:

(1) A radiation survey has been performed which demonstrates that the premises are suitable for release in accordance with Agency requirements; or

(2) Other information submitted by the licensee is sufficient to demonstrate that the premises are suitable for release in accordance with Agency requirements.

Sec. O.10 - License Termination Under Restricted Conditions. A site will be considered acceptable for license termination under restricted conditions if:

a. The licensee can demonstrate that further reductions in residual radioactivity necessary to comply with the provisions of Part D of these regulations would result in net public or environmental harm or were not being made because the residual levels associated with restricted conditions are ALARA. Determination of the levels which are ALARA must take

into account consideration of any detriments, such as traffic accidents, expected to potentially result from decontamination and waste disposal; and

b. The licensee has made provisions for legally enforceable institutional controls that provide reasonable assurance that the TEDE from residual radioactivity distinguishable from background to the average member of the critical group will not exceed 0.25 millisievert (25 mrem) per year, including that from groundwater sources of drinking water; and

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

   i. Funds placed into an account segregated from the licensee's assets and outside the licensee's administrative control as described in 10 CFR 30.35(f)(1);

   ii. Surety method, insurance, or other guarantee method as described in 10 CFR 30.35(f)(2);

   iii. A statement of intent in the case of Federal, State, or local Government licensees, as described in 10 CFR 30.35(f)(4); or

   iv. When a governmental entity is assuming custody and ownership of a site, an arrangement that is deemed acceptable by such governmental entity; and

d. The licensee has submitted a decommissioning plan to the Agency indicating the licensee's intent to decommission in accordance with this Part O and specifying that the licensee intends to decommission by restricting use of the site. The licensee shall document in the decommissioning plan how the advice of individuals and institutions in the community who may be affected by the decommissioning has been sought and incorporated, as appropriate, following analysis of that advice;

   i. Licensees proposing to decommission by restricting use of the site shall seek advice from such affected parties regarding the following matters concerning the proposed decommissioning:

      (1) Whether provisions for institutional controls proposed by the licensee:

         (A) Will provide reasonable assurance that the TEDE from residual radioactivity distinguishable from background to the average member of the critical group will not exceed the applicable limit in Part D of these regulations; and

(B) Will be enforceable; and

(C) Will not impose undue burdens on the local community or other affected parties; and

(2) Whether the licensee has provided sufficient financial assurance to enable an independent third party, including a governmental custodian of a site, to assume and carry out responsibilities for any necessary control and maintenance of the site; and

ii. In seeking advice on the issues identified in O.10d.i, the licensee shall provide for:

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

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

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

e. Residual radioactivity at the site has been reduced so that if the institutional controls were no longer in effect, there is reasonable assurance that the TEDE from residual radioactivity distinguishable from background to the average member of the critical group is as low as reasonably achievable and would not exceed either:

i. 1 millisievert (100 mrem) per year; or

ii. 5 millisievert (5 mrem) per year provided the licensee:

(1) Demonstrates that further reductions in residual radioactivity necessary to comply with the 1 millisievert/year (100 mrem/y) value of paragraph (e)(1) of this section are not technically achievable, would be prohibitively expensive, or would result in net public or environmental harm;

(2) Makes provisions for durable institutional controls; and

(3) Provides sufficient financial assurance to enable a responsible government entity or independent third party, including a governmental custodian of a site, both to carry out periodic rechecks of the site no less frequently than every 5 years to assure that the institutional controls remain in place as necessary to

meet the criteria of O.10b and to assume and carry out responsibilities for any necessary control and maintenance of those controls. Acceptable financial assurance mechanisms are those in O.10c.

Sec. O.11 - Alternate Criteria for License Termination.

a. The Agency may terminate a license using alternate criteria greater than the dose criteria of O.10b and O.10d.i.(1)(A), if the licensee:

i. Provides assurance that public health and safety would continue to be protected, and that it is unlikely that the dose from all man-made sources combined, other than medical, could be more than the 1 millisievert/year (100 mrem/y) limit of Part D of these regulations, by submitting an analysis of possible sources of exposure; and

ii. Has employed, to the extent practical, restrictions on site use according to the provisions of O.10 in minimizing exposures at the site; and

iii. Reduces doses to ALARA levels, taking into consideration any detriments such as traffic accidents expected to potentially result from decontamination and waste disposal; and

iv. Has submitted a decommissioning plan to the Agency indicating the licensee's intent to decommission in accordance with this Part O and specifying that the licensee proposes to decommission by use of alternate criteria. The licensee shall document in the decommissioning plan how the advice of individuals and institutions in the community who may be affected by the decommissioning has been sought and addressed, as appropriate, following analysis of that advice. In seeking such advice, the licensee shall provide for:

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

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

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

b. The use of alternate criteria to terminate a license requires the approval of the Agency after consideration of the staff's recommendations that will address any comments provided by federal, state and local governments and any public comments submitted pursuant to O.12.

Sec. O.12 - Public Notification and Public Participation. Upon the receipt of a decommissioning plan from the licensee, or a proposal by the licensee for release of a site pursuant to O.10 or O.11, or whenever the Agency deems such notice to be in the public interest, the Agency shall:

a. Notify and solicit comments from:

   i. Local and state governments in the vicinity of the site and any Indian Nation or other indigenous people that have treaty or statutory rights that could be affected by the decommissioning; and

   ii. The Environmental Protection Agency for cases where the licensee proposes to release a site pursuant to O.11.

b. Publish a notice in a forum, such as local newspapers, letters to state or local organizations, or other appropriate forum, that is readily accessible to individuals in the vicinity of the site, and solicit comments from affected parties.

Sec. O.13 - Applicability of Decommissioning Criteria Following License Termination. After a site has been decommissioned and the license terminated in accordance with the criteria in this subpart, the Agency will require additional cleanup only if, based on new information, it determines that the criteria of this part were not met and residual radioactivity remaining at the site could result in significant threat to public health and safety.

PART O

ATTACHMENT A

FORM T - CERTIFICATE OF TERMINATION AND DISPOSITION OF RADIOACTIVE MATERIAL

LICENSEE NAME: **LICENSE NUMBER:**

ADDRESS:

The following information is provided in accordance with Part O.8. This regulation is attached to this form. Complete the items below which are applicable to your licensed activity:

__ 1. All use of radioactive materials authorized under the above referenced license has been terminated.

__ 2. Radioactive contamination has been removed to the level outlined in Part O.8 to the extent practicable.

__ 3. All radioactive material previously procured and/or possessed under the authorization granted by the above referenced license has been disposed of as follows:

__ Transferred to (Name and Address): _____

which is authorized to possess such material under License Number _____

issued by (Licensing Agency): _____

__ Decayed, surveyed and disposed of as non-radioactive trash.

__ Licensed under License Number: _____

issued by (Licensing Agency): _____

__ No radioactive material has ever been procured and/or possessed by the licensee under the authorization granted by the above referenced license.

__ Other (Attach additional pages).

__ 4. Attached are radiation surveys or the equivalent as specified in Part O. 8.d.i.

__ 5. Additional remarks. (Attach additional pages).

THE UNDERSIGNED, ON BEHALF OF THE LICENSEE, HEREBY CERTIFIES THAT LICENSABLE QUANTITIES OF RADIOACTIVE MATERIAL UNDER THE JURISDICTION OF [STATE RADIATION CONTROL PROGRAM] ARE NOT POSSESSED BY THE LICENSEE. IT IS THEREFORE REQUESTED THAT THE ABOVE REFERENCED LICENSE BE TERMINATED.

DATE: _____ **SIGNATURE: _____**

TITLE: _____

1999
RATIONALE

PART O

DECOMMISSIONING

Introduction

In 1988 the U.S. Nuclear Regulatory Commission (NRC) amended its regulations in 10 CFR Parts 30, 40, and 70 to set forth the technical criteria for decommissioning licensed nuclear facilities. These regulations, as published in the Federal Register (FR) on June 27, 1988 (53 FR 24018), and including amendments promulgated in the 1990s, are the basis of this Part O. Their intent is to ensure that decommissioning of all licensed nuclear facilities is performed in a safe and timely manner.

The NRC decommissioning regulations were amended on July 26, 1993 (58 FR 39628), effective October 25, 1993, to establish additional recordkeeping requirements, including documentation of restricted areas and spill sites. On July 15, 1994 (59 FR 36026), NRC established time frames and schedules for the decommissioning of licensed nuclear facilities. This "Timeliness Rule" was effective August 15, 1994. A licensed facility that has been unused for NRC licensed operations for a period of 24 months is subject to the timeliness rule. The timing provisions related to the decommissioning of unused outside areas (including burial areas) containing elevated levels of licensed radioactive materials are at 10 CFR 30.36(d), 40.42(d), 70.38(d) and 72.54(d).

On July 26, 1995 (60 FR 38235), effective November 24, 1995, NRC clarified that financial assurance requirements must be in place during operations and updated when licensed operations cease. The intent of this requirement, as prescribed in the financial assurance sections of these regulations, is to ensure that adequate funds are available to ensure that the decommissioning of licensed facilities can be accomplished.

Additional requirements for disposition of records were added to 10 CFR Parts 30, 40 and 70 on May 16, 1996 (61 FR 24669), effective June 17, 1996. These provisions are reflected in the recordkeeping section of Part C.

On August 22, 1994, the NRC published a proposed rule for comment in the Federal Register [59 FR 43200] to amend 10 CFR Part 20 of its regulations "Standards for Protection Against Radiation" to include radiological criteria for license termination. The public comment period closed on January 20, 1995. Comments received on the proposed rule were summarized in NUREG/CR-6353. A workshop was held on December 6-8, 1994, to solicit additional comments related to site-specific advisory boards as described in the proposed rule. Comments received during that workshop were summarized in NUREG/CR-6307. The final rule on radiological criteria for license termination was published July 21, 1997 (62 FR 39068). The criteria added by NRC to 10 CFR Parts 30, 40 and 70 will be found in Part D of these regulations. For low-level radioactive waste disposal facilities, the

criteria apply only to ancillary surface facilities that support radioactive waste disposal activities. The criteria were not applied to uranium and thorium recovery facilities subject to Part U, Appendix A, or to uranium solution extraction facilities.

The sections of this rationale are annotated with the U.S. Nuclear Regulatory Commission compatibility categories, as follows:

A = Basic radiation protection standard or related definitions, signs, labels or terms necessary for a common understanding of radiation protection principles. The State program element should be essentially identical to that of NRC.

B = Program element with significant direct transboundary implications. The State program element should be essentially identical to that of NRC.

C = Program element, the essential objectives of which should be adopted by the State to avoid conflicts, duplications or gaps. The manner in which the essential objectives are addressed need not be the same as NRC provided the essential objectives are met.

D = Not required for purposes of compatibility.

NRC = Not required for purposes of compatibility. These are NRC program element areas of regulation that cannot be relinquished to Agreement States pursuant to the AEA or provisions of Title 10 of the Code of Federal Regulations. The State should not adopt these program elements.

H&S = Program elements identified as H&S are not required for purposes of compatibility; however, they do have particular health and safety significance. The State should adopt the essential objectives of such program elements in order to maintain an adequate program.

Sec. O.1 and O.2 - Purpose and Scope.

Part O brings together special requirements for decommissioning a facility or site with residual radioactivity, or the potential to have residual radioactivity. Section O.2b makes clear that a person responsible for decommissioning a facility or site that is within the scope of Part O is required to conform to the requirements of Part O. The exclusion of low-level radioactive waste disposal cells (but not ancillary facilities in support of radioactive waste disposal) mirrors 10 CFR 20.1401, as does the exclusion for uranium and thorium recovery facilities and for uranium solution extraction facilities.

Sec. O. 3 - Definitions.

The definition of "background radiation" is compatibility category A. The current definition in Part A (December 1995) lacks the NRC phrase "...or from past nuclear accidents such as Chernobyl that

contribute to background radiation and are not under the control of the licensee". The Part A definition is sufficient for Part O upon modification in accord with 10 CFR 20.1103 (62 FR 39058).

The 10 CFR 20.1103 definition of "distinguishable from background" is placed in Part O until being added to Part A. This definition is compatibility category B.

The definitions of "critical group", and "residual radioactivity" are from 10 CFR 20.1003 and are compatibility category B. Each may be appropriately placed in Part A.

The definition of "decommission" is from 10 CFR 20.1003 and is compatibility category C. It may be appropriately placed in Part A. The term decommissioning applies unequivocally to a facility or site where licensed activities have been conducted. The use of the term for situations not involving licensure is less clear and sure. Some states extend the meaning of the term to include release of any property where residual radioactivity has been present whether use of the property was explicitly commissioned into service under a license or not. A matter for future consideration is whether to clarify or extend the NRC definition which relates directly to closure with or without restrictions and license termination.

The definitions of "decommissioning plan" and "final radiation survey" are provided for reference. They do not come from NRC definitions. The term "radiation survey" is used in 10 CFR, for example in 10 CFR 30.36(k)(3)(i). The term of art "final radiation survey" is considered equivalent to "final status survey" or "final release survey". If the dose limits in Sec. O.9 and O.10, which use the terms "critical group" and "residual radioactivity", are placed in Part D, these two definitions may also appropriately be moved to Part D.

Definitions for "restricted use" and "unrestricted use" are provided in Part O for reference, not from an NRC definition. The definition of "restricted use" could be modified in the future as experience is gained with institutional controls in this type of decommissioning. Restriction is when conditions are placed on future use but the license is terminated.

The definition of "facility" is augmented from Sec. B.2, Registration of Radiation Machine Facilities, by adding a clause related to use of radioactive material. "Facility" may also mean multiple such locations at a site.

The definition of "licensee" from Part A is reiterated and utilized in Part O for two reasons. First, so that the single word "licensee" can stand throughout Part O to mean any person obligated to conduct decommissioning. Second, to be consistent for situations in some states in which a legal obligation may exist, not involving licensure, to safely remove property from service and reduce residual radioactivity in accordance with Agency regulations and state law.

The definition of "principal activity" is from 10 CFR 30.4, 10 CFR 40.4 and 10 CFR 70.4 and is NRC compatibility category D. How the definition applies to "decay in storage" is a matter for future consideration.

A definition of "site" is added based on a definition from the Colorado Code of Regulations. "Site" means the area contained within the boundary of a location under the control of a person generating or storing radioactive materials. "Person" would have the definition in law reflected in 10 CFR 150.3(g), which is assigned NRC compatibility category C.

Sec. O.4 - Minimization of Contamination.

Sec. O. 4 mirrors the U.S. Nuclear Regulatory Commission 10 CFR 20.1406. This section is NRC compatibility category C.

Sec. O. 5 - An Expired License Remains in Effect Until Final Agency Action.

Sec. O.5a relates C.32 and C.33 to Part O. An expired license is to remain in effect until final Agency action on decommissioning. Sec. O.5b requires prior notification 30 days before vacating or relinquishing possession or control of premises which may have residual radioactivity. O.5c states two basic requirements for cases when residual radioactivity is present after use of radioactive material has ceased in anticipation of license termination. O.5 is considered NRC compatibility category D.

Sec. O.6 - Decommissioning Timeliness.

Time frames and schedules for the decommissioning of licensed nuclear facilities, the "Timeliness Rule" was effective August 15, 1994 (59 FR 36026), are included in Part O and apply to any licensed facility that has been unused for licensed operations for a period of 24 months. The timing provisions related to the decommissioning of unused outside areas (including burial areas) containing elevated levels of licensed radioactive materials are at 10 CFR 30.36(d), 40.42(d), 70.38(d) and 72.54(d) and are NRC compatibility category H&S.

For good cause the Agency can extend the time frame for completion of decommissioning. O.7 is based on 10 CFR 30(g)(2) et al. and is NRC compatibility category H&S.

Sec. O.7 - Decommissioning Plan.

Sec. O.7a establishes when a decommissioning plan is required for an entire site or separate building or outdoor area. O.7d is a minimum table of contents. O.7 is based on 10 CFR 30(g)(4) et al. and is NRC compatibility category H&S.

Sec. O.8 - Completion of Decommissioning.

Sec. 0.8a requires decommissioning to be completed no later than 24 months following initiation. O.8d specifies the final steps to complete decommissioning. O.8 is based on 10 CFR 30(h) et al. and is NRC compatibility category H&S.

Sec. O.9 - Termination of a License Without Restriction.

Sec. O.9a mirrors the U.S. Nuclear Regulatory Commission 10 CFR 20.1402 criterion for a site to be considered acceptable for unrestricted use. O.9b, which is the same as 10 CFR 30.36(k), prescribes what is required for the Agency to terminate a specific radioactive material license without restriction. O.9 is NRC compatibility category C.

Sec. O.10 - License Termination Under Restricted Conditions.

Sec. O.10a mirrors the U.S. Nuclear Regulatory Commission 10 CFR 20.1403 criteria for a site to be considered acceptable for restricted use. O.10b is the same as 10 CFR 20.1403(b). O.10c refers to NRC financial assurance criteria which are to be incorporated into Part C or a new Part S. O.10d, which is the same as 10 CFR 20.1403(d), requires that the advice of individuals and institutions in the community who may be affected by the decommissioning be sought and incorporated in the decommissioning plan by any licensee seeking to terminate a specific radioactive material license by restricting use. O.10 is NRC compatibility category C.

Sec. O.11 - Alternate Criteria for License Termination.

Sec. O.11 mirrors the U.S. Nuclear Regulatory Commission 10 CFR 20.1404 mechanism for license termination in the very rare case when dose criteria are difficult to meet directly. This section is NRC compatibility category C.

Sec. O.12 - Public Notification and Public Participation.

Sec. O.12 reflects the U.S. Nuclear Regulatory Commission 10 CFR 20.1405 modest provisions for community involvement in Sec. O.10 and Sec. O.11 decommissioning planning. This section is NRC compatibility category C.

Sec. O.13 - Applicability of Decommissioning Criteria Following License Termination.

Sec. O.13, which is the same as 10 CFR 20.1401(c), makes clear that additional cleanup following decommissioning and license termination is required only if new information indicates a significant threat to public health and safety from residual radioactivity. This section is NRC compatibility category C.

Matters for Future Consideration

These matters for future consideration came from state radiation control agency comments and from federal and state agency documents used by the working group:

1. Consider changing the scope be oriented primarily to regulating "any facility in which is present a radiation source or residual radioactivity", rather than using the basic approach that a person is licensed to be accountable for radiation sources and use of radioactive material.

2. Consider adding Section O.2a.iii. excepting "wells in which a radiation source or device is abandoned down-hole according to the provisions of W.501 of these regulations."

3. Consider adding Section O.2a.iv. excepting "facilities at which, contrary to the intent of the owner, the presence of a radiation source or radioactive contamination was discovered, promptly reported to the Agency, and became subject to other provisions of the Agency regulations or policy."

4. In Section O.4, consider adding definitions of "equipment", "license termination", and "structure".

5. Consider modifying the NRC definition of "critical group" based on the following commentor suggestion: "critical group" means the group of individuals reasonably expected to receive the greatest exposure to residual radioactivity for any applicable set of circumstances, the details of which will be established by the Agency at an early stage in the decommissioning.

6. Consider modifying the NRC definition of "decommission" based on the following commentor suggestion: "decommission" means to remove a facility safely from service, remove discrete radiation sources, and reduce residual radioactivity to a level that permits (1) release of the property, either for unrestricted use or under restricted conditions and , and (2) appropriate amendment or termination of licenses, registrations or records of the Agency to reflect the release of the facility from the associated requirements.

7. In Section O.4, consider adding a statistical criterion or basis to the definition of "distinguishable from background". Consider substituting "detectable background concentration" for "background concentration", although some states may permit an estimated background concentration to be used when the estimate is conservative or health protective. Consider modifying the NRC definition of "distinguishable from background" based on the following commentor suggestion: "distinguishable from background" means that the detectable concentration of a radionuclide is statistically different from the background concentration of that radionuclide, i.e. in similar facilities, but which have not been subject to contamination by regulated activities, within the vicinity of the site using measurement technology, survey, statistical techniques and level of confidence acceptable to the Agency.

8. Consider modifying the NRC definition of "facility" based on the following commentor suggestion-- "Facility" means a discrete piece of equipment, vehicle, room, building, other structure, or parcel of land including vegetation, well, drainage conduit, groundwater, pond, stream or other body of water (1) at which the use, processing, disposal or storage of radioactive material or radioactivity inducing machine is or was authorized or (2) at which one or more radiation-producing machines or radioactivity-inducing machines are located.

9. Consider modifying the NRC definition of "principal activity" based on the following commentor suggestion--"Principal activity" means an activity authorized by the license which is essential to achieving the purpose(s) for which the license was issued or amended. Activity incidental to decontamination or decommissioning is not a principal activity. How the definition of "principal activity" relates to "decay in storage" is a matter for future consideration.

10. Consider modifying the NRC definition of "residual radioactivity" based on the following commentor suggestion--"residual radioactivity" means radioactivity distinguishable from background in a facility resulting from activities under the license's control, including on-site burials and other local disposals made in accordance with provisions of these regulations.

11. The section on minimization of contamination is brought forward as O.4. It could be moved to Part C.

12. In Section O.5, which derives from NRC's decommissioning timeliness rule, the phrase "licensee, registrant, or holder of the record of possession" is substituted in the definitions of "restricted use" and "unrestricted use", to be consistent with practices in some states to remove safely from service radiation machines, radioactive sources, including generally licensed sources, and other radioactive materials. The definition of "restricted use" could be modified in the future, following from the definition of decommission, as experience is gained with decommissioning involving institutional controls and restrictions.

13. In Section O.4 through O.7, consider rearranging the order and reformatting. The CRCPD Office of Executive Director provided drafts with extensive suggestions for reordering Part O. Part O tracks presently with the corresponding sections of 10 CFR. Extensive reformatting may be appropriate after conferring with cognizant U.S. Nuclear Regulatory Commission staff.

15. In Section O.7c, consider whether to refer only to "decontamination procedures" and whether this provision contradicts O.6.

16. Regarding O.8d.i, consider whether this degree of explicitness is necessary. While some states prefer this degree of specification, others prefer not to be so specific. The provision does include the caveat "as appropriate". This subsection could be place in brackets as optional. The difference between fixed, removable and total contamination measurements is a related consideration.

17. In Section O.8c, consider whether cost effectiveness, in particular whether license financial status is secure, as a potential justification for an alternate schedule.

18. Add the numerical standards in Section O.9, O.10 and O.11 to Part D.

19. In Section O.10e.ii(1), consider whether a reference to ALARA should be added.

20. In Section O.13, consider whether to add numerical criteria to this "finality rule".

20. Consider whether to utilize disposition forms from elsewhere in the Suggested State Regulations for Control of Radiation related to disposition of radioactivity-inducing machines and radiation-producing machines, whether to amend Agency Form T, or whether to add another separate Agency form to Part O.