

DLD (SP03)

**From:** Jay Hyland <Jay.Hyland@state.me.us>  
**To:** OWFN\_DO.owf1\_po(TJO)  
**Date:** Mon, Nov 8, 1999 5:51 PM  
**Subject:** Request for Information SP-99-074

Dear Tom,  
 Attached please find a document that deals directly with the State of Maine regulations (exact quotes) and answers to questions 42 and 43 in the above mentioned All Agreement States letter.  
 We are very concerned about how the NRC may choose to answer this letter and would very much like to be kept in the "loop".  
 I would even suggest that, if time allows, a conference call be set up to discuss this issue.  
 Mr. Mobley is a very well respected and conservative health professional that deserves far better treatment than that presently being afforded to him. Particularly in Tennessee where he has been tasked with onerous licensing situations for decades that were not of his own creation. To now hang him out to dry would be nothing more than contemptuous.  
 There is a reason why many states are now in line to become Agreement States and it is not the wholesale irradiation of the public that drives us. On the contrary we take our regulatory roll extremely seriously, we regulate more materials, including naturally occurring and accelerator produced, as well as x-ray and linear accelerator use.  
 We are all in the Environmental Protection or Public Health sections of our various State Governments and our enabling legislation is driven by Public Health and Safety. I hope these issues are highlighted in your response.  
 Thank you for the opportunity to comment.

Jay Hyland, Manager  
 Maine Radiation Control Program

**CC:** Shawn Seeley <Shawn.Seeley@state.me.us>, Pat Dosti...

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## REPLY TO SP-99-074 QUESTIONS

### Question 42:

Regarding definitions of specific terms. The Maine regulations have definitions for only two of the referenced words, specifically; "waste" and "Byproduct material". I would guess that these are identical to the NRC definitions but have included the definitions from our rules.

- (16) **"Byproduct material"** means (a) any radioactive material, except special nuclear material, yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material, (b) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content, including discrete surface wastes resulting from uranium or thorium solution extraction processes. Underground ore bodies depleted by these solution extraction operations do not constitute "byproduct material" within this definition.
- (126) **"Waste"** means those low-level radioactive wastes that are acceptable for disposal in a land disposal facility. For the purposes of this definition, low-level waste has the same meaning as in the Low-Level Radioactive Waste Policy Act, P.L. 96-573, as amended by P.L. 99-240, effective January 15, 1986; that is, radioactive waste (a) not classified as high-level radioactive waste, spent nuclear fuel, or byproduct material as defined in Section 11e.(2) of the Atomic Energy Act (uranium or thorium tailings and waste) and (b) classified as low-level radioactive waste consistent with existing law and in accordance with (a) by the U.S. Nuclear Regulatory Commission.

### Question 43:

Below you will find the Maine regulations that specifically deal with disposal, termination of specific licenses, transfer of materials, and release of a site for unrestricted use. On a case by case basis we feel that we may be legally justified in a release of solid materials, though we have not had time for our Attorney General to review this question. We never have released for unrestricted use any materials in the past. We don't feel that what Tennessee did is "a completely different standard", after all the limit they chose is below the limit being discussed at the NUREG 1640 workshops and below what European countries are now doing.

No Maine couldn't ban the import of the MSC nickel, because once released for unrestricted use there would be no way to track its whereabouts. Yes, banning the nickel would create "conflicts, duplications, gaps, or other conditions that would jeopardize an orderly pattern".

**34. Method for Obtaining Approval of Proposed Disposal Procedures.** A licensee or registrant or applicant for a license or registration may apply to the Agency for approval of proposed procedures, not otherwise authorized in these regulations, to dispose of licensed or registered material generated in the licensee's or registrant's operations. Each application shall include:

- A. A description of the waste containing licensed or registered material to be disposed of, including the physical and chemical properties that have an impact on risk evaluation, and the proposed manner and conditions of waste disposal; and
- B. An analysis and evaluation of pertinent information on the nature of the environment; and
- C. The nature and location of other potentially affected facilities; and
- D. Analyses and procedures to ensure that doses are maintained ALARA and within the dose limits in Part D.

### 15. Expiration and Termination of Licenses

- B. Each licensee shall notify the Agency immediately, in writing, and request termination of the license when the licensee decides to terminate all activities involving materials authorized under the license. The notification and request for termination of the license must include the reports and information specified in paragraphs .D(1)(d) and (e) of this section. The licensee is subject to the provisions of paragraphs (D) and (E) of this section, as applicable.
- (b) Remove radioactive contamination to the extent practicable except for those procedures covered by paragraph C.15.D(3) of this section;
  - (c) Properly dispose of source material;
  - (e) Submit a radiation survey report of the premises to confirm the absence of radioactive materials or to establish the levels of residual radioactive contamination, unless the licensee demonstrates the absence of residual radioactive contamination in some other manner. The licensee shall, as appropriate:
    - (2) If no residual radioactive contamination attributable to activities conducted under the license is detected, the licensee shall submit a certification that no detectable radioactive contamination was found. If the information submitted under this paragraph and paragraphs .D(1)(d) and (e) of this section is adequate, the Agency will notify the licensee in writing that the license is terminated.
- (3) (a) If detectable levels of residual radioactive contamination attributable to activities conducted under a license are found, the license continues in effect beyond the expiration date, if necessary, with respect to possession of residual radioactive material present as contamination until the Agency notifies the licensee in writing that the license is terminated. During this time the licensee is subject to the provisions of paragraph (E) of this section.
- (b) In addition to the information submitted under paragraphs D.(1)(d) and (e) of this section the licensee shall submit a plan for decontamination, if required, as regards residual radioactive contamination remaining at the time the license expires.
  - (c) The licensee shall also submit a plan for completion of decommissioning, recovery, or site reclamation if the procedures necessary to carry these out have not been previously approved by the Agency.
- E. The proposed decommissioning, recovery, or site reclamation plan, if required by paragraph C.15.D(3) or by license condition, must include:
- (1) Discussion of these planned activities;
  - (2) Description of methods used to assure protection of workers and the environment against radiation hazards during such activities;
  - (3) A description of the planned final radiation survey; and
  - (4) An updated detailed cost estimate, comparison of that estimate with present funds set aside, and plans for assuring the availability of adequate funds for completion of

decommissioning, recovery or site reclamation.

- (5) The proposed plan will be approved by the Agency if the information therein demonstrates that the objectives of the plan will be completed as soon as is reasonable and that the health and safety of workers and the public will be adequately protected.

F. Each licensee who possesses residual by-product material, source material, or special nuclear material under paragraph C.15.D(3), following the expiration date specified in the license, shall:

- (1) Limit actions involving source radioactive material to those related to decontamination and other activities related to preparation for release for unrestricted use; and
- (2) Continue to control entry to restricted areas until they are suitable for release for unrestricted use and the Agency notifies the licensee in writing that the license is terminated.

G. As the final step in decommissioning, the licensee shall-

- (1) Certify the disposition of all licensed material, including accumulated wastes, by submitting Maine Form 892 or equivalent information; and
- (2) 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 in some other manner that the premises are suitable for release in accordance with the criteria for decommissioning in D.60 through D.65. The licensee shall, as appropriate-
  - (i) Report levels of gamma radiation in units of millirems per hour at one meter from surfaces, and report levels of radioactivity, including alpha and beta, in units of microcuries per 100 square centimeters - removable or fixed - for surfaces, microcuries per milliliter for water, and picocuries per gram for solids such as soils or concrete; and
  - (ii) Specify the survey instrument(s) used and certify that each instrument is properly calibrated and tested.

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

- (1) Radioactive material has been properly disposed;
- (2) Reasonable effort has been made to eliminate residual radioactive contamination, if present; and
- (3)
  - (i) A radiation survey has been performed which demonstrates that the premises are suitable for release in accordance with the criteria for decommissioning in D.60 through D.65; or
  - (ii) Other information submitted by the licensee is sufficient to demonstrate that the premises are suitable for release in accordance with the criteria for decommissioning in D.60 through D.65.
- (4) Records required by Part D have been received.

## 21. Transfer of Material.

- A. No licensee shall transfer radioactive material except as authorized pursuant to this section.
- B. Except as otherwise provided in the license and subject to the provisions of C.21.C and D, any licensee may transfer radioactive material:
- (1) to the Agency with prior approval of the agency;
  - (2) to the U.S. Department of Energy;
  - (3) to any person exempt from these regulations to the extent permitted under such exemption;
  - (4) to any person authorized to receive such material under terms of a general license or its equivalent, or a specific license or equivalent licensing document, issued by the agency, the U.S. Nuclear Regulatory Commission, any Agreement State or any Licensing State, or to any person otherwise authorized to receive such material by the Federal Government or any agency thereof, the Agency, any Agreement State or any Licensing State; or
  - (5) as otherwise authorized by the Agency in writing.
- C. Before transferring radioactive material to a specific licensee of the Agency, the U.S. Nuclear Regulatory Commission, an Agreement State or a Licensing State, or to a general licensee who is required to register with the Agency, the U.S. Nuclear Regulatory Commission, an Agreement State or a Licensing State prior to 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.
- D. The following methods for the verification required by C.21.C are acceptable:
- (1) The transferor may have in his possession, and read, a current copy of the transferee's specific license or registration certificate;
  - (2) 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;
  - (3) for emergency shipments the transferor may accept oral 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 provided, that the oral certification is confirmed in writing within 10 days;
  - (4) the transferor may obtain other sources of information compiled by a reporting service from official records of the Agency, the U.S. Nuclear Regulatory Commission, the licensing agency or an Agreement State or a Licensing State as to the identity of licensees and the scope and expiration dates of licenses and registration; or

- (5) when none of the methods of verification described in C.21.D 1-4 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 a record confirmation from the Agency, the U.S. Nuclear Regulatory Commission, or the licensing agency of an Agreement State or a Licensing State that the transferee is licensed to receive the radioactive material.
- (6) Preparation for shipment and transport of radioactive material shall be in accordance with the provisions of Part L.

### **33. General Requirements.**

A. A licensee or registrant shall dispose of licensed or registered material only:

- (1) By transfer to an authorized recipient as provided in D.38, or in Parts C, M, or U<sup>6/</sup> of these regulations, or to the U.S. Department of Energy; or
- (2) By decay in storage; or
- (3) By release in effluents within the limits in D.14; or
- (4) As authorized pursuant to D.34, D.35, D.36, or D.37.

B. A person shall be specifically licensed or registered to receive waste containing licensed or registered material from other persons for:

- (1) Treatment prior to disposal; or
- (2) Treatment or disposal by incineration; or
- (3) Decay in storage; or
- (4) Disposal at a land disposal facility licensed pursuant to Part M; or
- (5) Storage until transferred to a storage or disposal facility authorized to receive the waste.

### **RADIOLOGICAL CRITERIA FOR LICENSE TERMINATION**

**60. General Provisions and Scope.** The criteria in this subpart apply to the decommissioning of facilities licensed under Parts C, E, G and K of these regulations.

- A. The criteria in this subpart do not apply to sites which have been decommissioned prior to the effective date of this rule.
- B. 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 subpart were not met and residual radioactivity remaining at the site could result in significant threat to public health and safety.

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<sup>6/</sup> Part M and U are reserved.

- C. When calculating TEDE to the average member of the critical group the licensee shall determine the peak annual TEDE dose expected within the first 1000 years after decommissioning.

**61. Radiological Criteria for Unrestricted Use.** 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 shall not exceed 0.25 mSv (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.

**62. Criteria for 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 D.61. 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 deaths from transportation accidents, expected to potentially result from decontamination and waste disposal;
- B. The licensee has made provisions for legally enforceable institutional controls that provide reasonable assurance that TEDE from residual radioactivity distinguishable from background to the average member of the critical group will not exceed 0.25 mSv (25 mrem) per year;
- 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:
- (1) Funds placed into an account segregated from the licensee's assets and outside the licensee's administrative control as described in Part C.8.F.
  - (2) Surety method, insurance, or other guarantee method as described in Part C.8.F.;
  - (3) A statement of intent in the case of State, or local Government licensees, as described in Part C.8.F.; or
  - (4) When a governmental entity is assuming custody and ownership of a site, an arrangement that is deemed acceptable by such governmental entity.
- D. The licensee has submitted a decommissioning plan or License Termination Plan (LTP) to the Agency indicating the licensee's intent to decommission in accordance with Parts C, D, and E, and specifying that the licensee intends to decommission by restricting use of the site. The licensee shall document in the LTP or 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.
- (1) 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:

- (a) Whether provisions for institutional controls proposed by the licensee:
  - (i) Will 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 mSv (25 mrem) TEDE per year;
  - (ii) Will be enforceable; and
  - (iii) Will not impose undue burdens on the local community or other affected parties.
- (b) Whether the licensee has provided sufficient financial assurance to enable a third party, including a governmental custodian of a site, to assume and carry out responsibilities for any necessary control and maintenance of the site;
- (2) In seeking advice on the issues identified in 62.D.(1), the licensee shall provide for:
  - (a) Participation by representatives of a broad cross section of community interests who may be affected by the decommissioning;
  - (b) An opportunity for a comprehensive, collective discussion on the issues by the participants represented; and
  - (c) A publicly available summary of the results of all such discussions, including a description of the individual viewpoints of the participants on the issues and the extent of agreement and disagreement among the participants on the issues; and
- 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:
  - (1) 1mSv (100 mrem) per year; or
  - (2) 5MsV (500 mrem) per year provided the licensee:
    - (a) Demonstrates that further reductions in residual radioactivity necessary to comply with the 1 mSv/yr (100 mrem/yr) 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;
    - (b) Makes provisions for durable institutional controls;
    - (c) 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 3 years to assure that the institutional controls remain in place as necessary to meet the criteria of D.62.B. and to assume and carry out responsibilities for any necessary control and maintenance of those controls. Acceptable financial assurance mechanisms are those in paragraph C. of this section.

### **63. Alternate Criteria for License Termination**



- A. The Agency may terminate a license using alternate criteria greater than the dose criterion of parts D.61., D.62.B., and D.62.D., if the licensee:
- (1) 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, would be more than the 1 mSv/y (100 mrem/y) limit, by submitting an analysis of possible sources of exposure;
  - (2) Has employed to the extent practical restrictions on the site use according to the provisions of D.62. in minimizing exposures at the site; and
  - (3) Reduces doses to ALARA levels, taking into consideration any detriments such as traffic accidents expected to potentially result from decontamination and waste disposal.
  - (4) Has submitted a decommissioning plan or License Termination Plan (LTP) to the Agency indicating the licensee's intent to decommission in accordance with Parts C, D, and E., and specifying that the licensee proposes to decommission by use of alternate criteria. The licensee shall document in the decommissioning plan or LTP 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:
    - (a) Participation by representatives of a broad cross section of community interests who may be affected by the decommissioning;
    - (b) An opportunity for a comprehensive, collective discussion on the issues by the participants represented; and
    - (c) A publicly available summary of the results of all such discussions, including a description of the individual viewpoints of the participants on the issues and the extent of agreement and disagreement among the participants on the issues
- B. The use of alternate criteria to terminate a license requires the approval of the Agency after consideration of the Agency's staff's recommendations that will address any comments by other appropriate agencies and any public comments submitted pursuant to D. 64.

**64. Public Notification and Public Participation.** Upon the receipt of an LTP or decommissioning plan from the licensee, or a proposal by the licensee for release of a site pursuant to D.62. and D.63., or whenever the Agency deems such notice to be in the public interest, the Agency shall:

- A. Notify and solicit comments from:
- (1) Local 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
  - (2) Other appropriate agencies for cases where the licensee proposes to release a site pursuant to D.63.
- 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.

- 65. Minimization of Contamination.** Applicants for licenses, after July 1, 1999, 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..