

**DIVISION OF WASTE MANAGEMENT AND ENVIRONMENTAL PROTECTION  
ENVIRONMENTAL AND PERFORMANCE ASSESSMENT DIRECTORATE  
OPERATING PROCEDURES**

**EPPAD 3.5**

**REVIEW, APPROVAL, AND DOCUMENTATION OF LOW-  
ACTIVITY WASTE DISPOSALS IN ACCORDANCE WITH 10  
CFR 20.2002 AND 10 CFR 40.13(a)**

Draft for Interim Use

Revision 0  
August 2009

Enclosure



Attachment 4 No Significant Impact and Environmental Assessment), and Safety Evaluation  
Report for § 20.2002 Request (ML062570209, ML062440191)  
Example Approval of § 40.13(a) Disposal and Safety Evaluation Report  
(ML072340221)

## Acronyms

ADAMS	Agency-wide Documents Access and Management System
ALARA	As Low as Reasonably Achievable
DCD	Document Control Desk
DURLD	Division of Uranium Recovery and Licensing Directorate
DWMEP	Division of Waste Management and Environmental Protection
EA	Environmental Assessment
EIS	Environmental Impact Statement
ERB	Environmental Review Branch
EDO	Office of the Executive Director
FONSI	Finding of No Significant Impact
FRN	Federal Register Notice
FSME	Office of Federal and State Materials and Environmental Management Programs
LA	Licensing Assistant
LAW	Low-Activity Waste
LLW	Low-Level Waste
LLWB	Low-Level Waste Branch
NEPA	National Environmental Policy Act
NRC	Nuclear Regulatory Commission
NMSS	Office of Nuclear Materials Safety and Safeguards
NRR	Office of Nuclear Reactor Regulation
PM	Project Manager
PA	Performance Assessment
RCRA	Resource Conservation and Recovery Act
SUNSI	Sensitive Unclassified Non-Safeguards Information
SER	Safety Evaluation Report
TAC	Technical Activity Code
TAR	Technical Assistance Request
TER	Technical Evaluation Report
WDTS	Waste Disposal Tracking System

**DIVISION OF WASTE MANAGEMENT AND ENVIRONMENTAL PROTECTION  
DECOMMISSIONING DIRECTORATE OPERATING PROCEDURES**

**DWMEP 3.5  
(Draft for Interim Use)**

**1.0 Purpose**

The purpose of this procedure is to describe the process for reviewing, approving, and documenting the results of the staff's review of alternative disposal requests of low-activity wastes (LAW) received from licensees and license applicants. The staff may authorize these requests under the provisions of 10 CFR 20.2002 and 10 CFR 40.13(a).

**2.0 Scope**

This procedure covers all of the steps that Nuclear Regulatory Commission (NRC) staff needs to take in order to review, document, and approve a request for alternative disposal of LAW, including:

- entering documents in the NRC public document system (ADAMS);
- establishing a Technical Activity Code (TAC) for monitoring time charged to the project;
- conducting a technical review of the disposal request, including performing dose assessments;
- preparing a Safety Evaluation Report (SER);
- preparing an Environmental Assessment (EA) and/or Finding of No Significant Impact (FONSI);
- coordinating with State regulatory agencies and disposal site operators;
- and implementing the Communications Plan (Attachment 1), where applicable, including conducting public meetings.

This procedure has been prepared for use by Division of Waste Management and Environmental Protection (DWMEP) staff. However, because LAW disposal requests are also received by the Regions, the Office of Nuclear Material Safety and Safeguards (NMSS), and the Office of Nuclear Reactor Regulation (NRR), sections of this procedure may be of value to those organizations as well. The DWMEP Performance Assessment Branch staff are often requested to perform the technical reviews for these other organizations, and will follow applicable parts of this procedure when providing assistance to others.

Although § 20.2002 and § 40.13(a) reviews are similar in most respects, there are a few differences which are described in this procedure. Where there are differences between the procedures for handling the different types of requests, a sub-section for each type of request is provided.

This procedure does not cover all releases of solid materials from a licensee's control, only those that are formally proposed to NRC for approval under 10 CFR 20.2002 and 10 CFR 40.13(a), typically for disposal in a Resource Conservation and Recovery Act (RCRA) landfill. NRC's complete procedures for release of solid materials are described in Appendix B, NUREG-1812, "Generic Environmental Impact Statement: Controlling the Disposition of Solid Materials,

Draft Report for Comment” (Attachment 3 to SECY-05-0054, available on the external NRC web site).

### **3.0 Background**

10 CFR 20.2001 identifies the mechanisms by which a licensee may lawfully dispose of its licensed radioactive waste. It contains seven different disposal paths, including § 20.2002, a provision for “alternative disposal” authorizations. Section 20.2002 is a general provision that allows for other disposal methods, different from those already defined in the regulations, provided that doses are maintained as low as reasonably achievable (ALARA) and within the dose limits in Part 20. In practice, § 20.2002 (formerly § 20.304 and § 20.302) is most often used for disposal of LAW in hazardous or solid waste landfills that are permitted under RCRA, but it can be used for any type of disposal not already defined in the regulations, such as disposal on a licensee’s site or on off-site private property.

The term “low-activity waste” does not have a statutory or regulatory definition, but generally means wastes that contain some residual radioactivity, including naturally occurring radionuclides, which can be safely disposed of in hazardous or municipal solid waste landfills. Such waste is invariably a fraction of the limits for Class A low-level waste (LLW) contained in 10 CFR Part 61, and is often below concentrations that are considered safe for unrestricted release under international standards. Although these materials could be disposed of in a LLW disposal facility licensed under 10 CFR Part 61, if a licensee so chose, a disposal at another type of facility under § 20.2002 may reduce transportation distances and provide for more disposal options, while still providing for protection of public health and safety and the environment.

The NRC regulatory framework requires possessors of radioactive materials to have a license governing such possession or to be exempted from licensing. For off-site disposals, NRC issues an exemption from the requirement for a license for possession of the radioactive material by the off-site facility, in conjunction with the § 20.2002 authorization. On-site § 20.2002 disposal approvals by NRC remain under license and must be addressed by licensees as part of the decommissioning of the facility to ensure that when the license is terminated, the site meets the criteria in the license termination rule in Subpart E of 10 CFR Part 20. NUREG-1757, Rev 2, “Consolidated NMSS Decommissioning Guidance,” addresses in greater detail the unique considerations for on-site disposal.

The regulations in 10 CFR 40.13 exempt persons from the licensing requirements for certain materials containing uranium and thorium referred to as “unimportant quantities.” One of these exemptions, § 40.13(a), is for “chemical mixtures, compounds, solutions, or alloys” in which the source material is by weight less than 0.05 percent. Section 40.13(a) exempts any person from NRC licensing requirements “to the extent that such person receives, possesses, uses, transfers, or delivers source material in any chemical mixture, compound, solution, or alloy in which source material is by weight less than one-twentieth of 1 percent (0.05 percent) of the mixture, compound, solution, or alloy.” The 0.05 percent by weight limit was chosen on the basis of concentrations of source material that are necessary to be a useful source of fissionable material. Section 40.51(b)(3) applies to transfers of source material to non-Part 61 licensed persons. Therefore, when issuing an exemption under § 40.13(a), § 40.51 may be referenced to allow for the transfer of unimportant quantities of source material.

## **4.0 Schedule**

Typically, a request for alternative disposal takes three to four months to complete. Simple requests may be shorter and more complex requests, such as those that require Requests for Additional Information (RAIs) (see Section 7.0) and/or enhanced stakeholder interactions (see Section 10.0) could take significantly longer.

## **5.0 Responsibilities**

### **5.1 Project Manager**

The DWMEP Environmental project manager (PM) would typically be selected from the Decommissioning and Uranium Recovery Licensing Directorate (DURLD) or the Low-Level Waste Branch (LLWB). The PM will coordinate among all external and internal parties involved in the disposal request and its review, including any affected States. The PM is responsible for ensuring agency procedures for documentation and meetings are completed. The PM will maintain the relevant documents for ready access by the technical staff and will be responsible for transmitting information to and from the licensee and the technical reviewers. The PM will keep management updated on the status of the review of the disposal request, including updating the Branch Chief notes. The PM is also responsible for working with the licensing assistant (LA) to open TAC numbers and review all charges to the TAC prior to submitting them to the licensee for reimbursement.

If the PM receives incoming mail from the licensee, he or she will ensure it has been placed into ADAMS. The PM is responsible for setting up and conducting meetings with licensees, including providing opportunities for public participation. When appropriate, the PM will develop a public meeting notice to be posted on the external NRC website a minimum of 10 calendar days before the meeting date.

Allegations regarding a specific LAW request are to be referred to the FSME Allegations Coordinator for action. Briefings related to a specific FSME facility are typically handled by the FSME PM for that facility. However, the Environmental PM, or PA analyst, could be invited to such briefings.

### **5.2 PA Analyst**

Technical staff who review § 20.2002 or § 40.13(a) disposal requests are typically selected from the PA Branch of DWMEP. The PA analyst is responsible for conducting a technical review of the licensee's alternative disposal request in accordance with the guidance in this procedure, and ensuring that radiation exposures to members of the public are within the dose limits established by NRC (see Section 7.0). Specifically, the PA analyst will perform the following:

- A technical review of the licensee's PA and associated documents, including review of groundwater monitoring plans, or results, as applicable, (potentially for on-site disposals), review of technical reports, and/or review of the development or implementation of computer codes used to determine the dose impacts as a result of the disposal.
- The PA analyst should scope out the work to be performed prior to undertaking any technical analyses. In particular, the analyst should have a clear understanding of what type of results are needed and the form that the results should be presented. A plan should be developed and discussed with the Branch Chief and the PM.

- If a licensee sends information that is used as a basis for the technical review directly to the analyst, the analyst will ensure that it is provided to the PM so that it is placed into ADAMS. The analyst should retain or request a copy for his or her use.
- The analyst should create and maintain a file to document his or her assessment.
- The analyst is fully responsible for their technical review; however, they should be mindful of how their technical review fits within the overall safety and environmental review being conducted. The review should be risk-informed and performance-based consistent with the relevant policy limits cited in Section 7.0 of this procedure.
- In conducting his or her analysis, the analyst should use a risk-informed process by focusing on those aspects of the review that are expected to have the greatest effect on the results. Sensitivity analysis should be used to help inform the analyst's review.
- In the absence of agency guidance for specific areas of review, Industry standards and practices (e.g., ASTM standards), as well as peer-reviewed technical journals, should be used as a basis for the staff's findings.
- The analyst should document its findings, usually in the form of a technical evaluation report (TER). The analyst should confer with the PM, at the initial stage of the technical review, on the form or type of document needed. The TER usually provides the main content of the SER (Attachment 3). A TER needs to describe the nature of the technical review, specifically what the analyst reviewed, and a basis for why the analyst finds the analysis to be acceptable or unacceptable. The documentation of the analyst's findings should be reviewed by the PA Branch Chief prior to providing it to the PM. Accordingly, the plan for the technical review needs to allow time in the schedule for the Branch Chief's review.
- At the request of the PM, the analyst may be invited to participate in meetings with licensees to address aspects of the technical review. The analyst is expected to take the lead during parts of the meeting related to their technical review.

### **5.3 Licensing Assistant**

The LA will work with the PM and with the Time and Labor Coordinator for FSME to open up a fee-reimbursable TAC for each specific disposal request. The TAC should be linked to the initial letter with the disposal request from the licensee.

## **6.0 Administrative Processing**

### **6.1 Receipt**

Upon receipt of a § 20.2002 or § 40.13(a) disposal request from a licensee, the PM should first work with the LA to develop a fee-reimbursable TAC number for the request.

Second, the PM should review the submittal for the presence of proprietary information, in accordance with 10 CFR 2.390. Licensees sometimes submit information that they request be withheld from public disclosure. This information usually contains trade secrets or privileged,

confidential commercial, privacy, or financial data. The licensee should identify or label this information in a manner that could restrict the public disclosure of any portion of the document. The licensee is required to provide justification for withholding any information from the public. The requirements for this justification are provided in § 2.390 (e.g., an affidavit describing how the information to be withheld contains trade secrets or privileged, confidential, commercial, privacy, or financial data). The PM will then review the information to determine if they agree with the licensee's justification and determine whether any information should be withheld. Normally, LAW disposal requests do not contain proprietary information. Additional information on NRC's procedures for handling proprietary information can be found in Management Directive 12.6 (NRC Sensitive Unclassified Information Security Program) and in DWMEP Procedure 1.9, Section 1.9.5, "Handling Sensitive Information."

Licenseses will normally submit the original document(s) to:

ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington DC 20555

The Document Control Desk (DCD) will docket the document and distribute it according to the internal distribution established by the PM. To facilitate processing, the PMs may request their licensees to submit a copy directly to the PM, along with the original submittal sent to the DCD. In either case, PMs should ensure that a copy has been sent to the DCD for processing.

## **6.2 Initial Processing**

Upon receipt of the LAW disposal request, the PM will perform an acceptance review. The acceptance review will typically include, but shall not be limited to: (1) the sufficiency of the disposal request to address the criteria in § 20.2002 and/or § 40.13(a), including associated guidance; (2) justification for proprietary information (see Section 6.1); and (3) significant technical deficiencies that may preclude completion of the safety review (see Section 7.0). The acceptance review should be completed within 30 days. The objective of the acceptance review is to verify that the application contains sufficient information before the staff begins an in-depth technical review. Following the acceptance review, the PM will send a letter to the licensee acknowledging the start of the review. An example of this letter is provided in Attachment

### **6.2.1 Waste Disposal Tracking System**

The Waste Disposal Tracking System (WDTS) is a recently developed database developed by DWMEP to track future § 20.2002 waste disposal approvals. The database is accessible on the NRC internal webpage, at <http://papaya.nrc.gov/NMSS/WDTS/home/login.cfm>. Any staff member can access the database to perform queries and print out reports, but only several individuals from each of the Regions and NRC Headquarters have been designated as responsible for inputting information into the system for that particular organization. The names of the individuals that were provided are listed on the opening page of the website.

Upon receipt of a § 20.2002 disposal request, the PM will arrange for the request to be entered into the WDTS. The PM will also update the WDTS once the review has been completed.

A memorandum from DWMEP to NRR and the Regions (ML060180325) has instructions for use of the WDTS, including inputting data.

## **6.3 Notice for Opportunity for Hearing**

### **6.3.1 § 20.2002 Requests**

Because the review of the § 20.2002 disposal request for materials licensees results in a license amendment (see Section 9.0), an opportunity for a hearing should be provided. Following the satisfactory completion of the acceptance review, the PM will prepare and publish a *Federal Register Notice* (FRN) announcing, as appropriate: (1) the staff's consideration of the license amendment request; (2) an opportunity for public comment, and (3) an opportunity for a hearing.

Hearing procedures for the granting, renewal, or licensee-initiated amendment of a materials license subject to 10 CFR Parts 30, 32 - 35, 39, 40, or 70 are addressed in 10 CFR 2, Subparts C and L. Any person whose interest may be affected by such a licensing action may file a request for a hearing. Regulations governing a request for a hearing are contained in 10 CFR 2.309.

### **6.3.2 § 40.13(a) Requests**

If a request for disposal authorization is a material part of a license amendment or initial license issuance, there would be an opportunity for hearing on the amendment or license, and the exemption could be part of that hearing. A stand-alone § 40.13(a) exemption request does not require an opportunity for hearing. The PM should consult OGC if further clarification is needed on individual § 40.13(a) requests, as needed.

## **7.0 Safety/Security Review**

### **7.1 Dose Assessments**

The PA analyst will review the dose assessment(s) provided by the licensee as part of their § 20.2002 or § 40.13(a) request by utilizing the guidance in NUREG-1757, Volume 2, "Consolidated Decommissioning Guidance - Decommissioning Process for Materials Licensees - Final Report", as a primary source to guide the reviews. Specifically, guidance in Chapters 5 and 6 and Appendices I, J, and N may be used. Specific acceptability of licensee approaches will depend on the alternative method of disposal requested.

At a minimum, the analyst will ensure that the description of the source term, the scenarios evaluated, the parameters used, and the conceptual and mathematical models utilized in the licensee's dose assessment are appropriate for the alternate method of disposal requested. The analyst should also perform sensitivity analyses or alternative calculational methods to ensure that the estimated dose from the disposal will be within the dose guidelines presented in Section 7.2. NUREG-1573, "A Performance Assessment Methodology for Low-Level Radioactive Waste Disposal Facilities" (ML003770778) may also be consulted for guidance. Alternative calculational methods could involve prior LAW disposal approvals and/or calculations of similar materials in other reports such as NUREG-1640, "Radiological Assessments for Clearance of Equipment and Materials from Nuclear Facilities". In applying such guidance, the analyst should note where the assumptions in the guidance differ from the actual disposal request scenario and how this was accounted for in the licensee's and/or NRC's analysis

#### **7.1.1 On-Site Disposals (§ 20.2002 requests only)**

Since the dose from on-site disposals will be included in any future dose evaluations for license termination, the licensee can utilize site-specific arguments similar to decommissioning guidance (see NUREG-1757) for establishment of scenarios and parameters.

While the approval of a single § 20.2002 request for a licensee is a small fraction of the unrestricted release limit in § 20.1402, multiple requests or pre-existing contamination from other sources nearby may cause an area to not be appropriate for on-site disposal. Therefore, the analyst should consider the guidance on cumulative dose in Appendix K of NUREG-1757 when reviewing on-site disposals. Because on-site disposals are generally a small fraction of the unrestricted dose limit, the analyst does not need to consider radon from source material, byproduct or special nuclear material, consistent with the statements of consideration for the License Termination Rule in Subpart E of 10 CFR Part 20 (see 62 *Federal Register* 39083).

On-site disposal analyses should be calculated to peak dose within 1,000 years of the expected date of license termination of the facility, consistent with regulations in the License Termination Rule in Subpart E of 10 CFR Part 20. The time period of intruder scenario calculations, if appropriate, can be delayed until after the expected date of license termination, allowing for natural decay of the source and potential build-up of progeny.

### **7.1.2 Off-Site Disposals**

Off-site disposals will largely follow the same general guidance as provided in NUREG-1757, Volume 2, Appendices I and J. For modeling disposal in waste facilities, additional guidance from NUREG-1573, "A Performance Assessment Methodology for Low-Level Radioactive Waste Disposal Facilities", may be useful, if more realistic modeling approaches than NUREG-1757, Appendix J are required. Timeframes specified in NUREG-1573 for performance assessment should be used for evaluation of a request, unless other timeframes have been appropriately justified in a licensee's submittal. Examples of modeling workers and other activities at such facilities can be found in NUREG-1640 and NUREG-1717, "Systematic Radiological Assessment of Exemptions for Source and Byproduct Materials".

The analyst should ensure that potential exposure groups were evaluated for each stage of the disposal off-site, such as transportation workers and workers at the receiving site. Analysis of transportation doses should be coordinated with the Division of Spent Fuel Storage and Transportation within NMSS. Past reviews have indicated that worker dose at the receiving facility tends to bound the doses from other scenarios.

Disposal in RCRA disposal facilities should evaluate both long-term off-site and intruder dose calculations. The analyst should use simple methods at first to scope or bound the problem and use more sophisticated approaches if necessary. Radon from source material, byproduct or special nuclear material needs to be considered, as appropriate, for off-site disposal (as per § 20.1001 and definition of "background radiation").

## **7.2 Dose Guidelines**

### **7.2.1 § 20.2002 Requests**

The 10 CFR Part 20 dose limit is 100 millirem/year (mrem/yr). NRC typically approves § 20.2002 requests that will result in a dose to a member of the public (including all exposure groups) that is no more than "a few millirem/year" (see SECY-07-0060, Attachment 1, and NUREG-1757). NRC selected this criterion because it is a fraction of the natural radiation dose

(approximately one percent of the radiation exposure received by members of the public from background radiation), a fraction of the annual public dose limit, and an attainable objective in the majority of cases.

### **7.2.2 § 40.13(a) Requests**

For some limited types and quantities of materials that fall under the exemption for unimportant quantities of source material in § 40.13(a), transfers could potentially result in scenarios where exposure limits in 10 CFR Part 20 could be exceeded. Therefore, the dose assessment described in Section 7.1 is evaluated prior to transfer of these unimportant quantities. The dose limits for reviewing § 40.13(a) disposal requests are detailed in SRM-SECY-00-0201, and summarized below.

- Requests for transfers would normally be approved if the estimated dose to a member of the public is unlikely to exceed a dose limit of 25 mrem/yr.
- The Commission should be kept informed of transfer and disposal requests that the NRC receives for evaluation of material within the 25 mrem/yr to 100 mrem/yr range, as well as its resolution status.
- Staff may also submit applications for Commission approval with calculated exposures above 100 mrem/year if the staff believes such approvals are justified due to the unique circumstances of the specific case under review.

### **7.3 Criticality Review**

For 20.2002 requests involving special nuclear material, the potential for criticality will need to be addressed in the SER. These requests should be coordinated with the Office of Nuclear Material Safety and Safeguards which will provide expertise in review and evaluation of criticality safety. NMSS will also provide input for an SER.

### **7.4 Physical Security**

Although physical security is not expected to be an issue for these types of disposals because the concentrations are so low, certain cases may require special consideration. For example, disposals of special nuclear material would require an exemption from Part 70 requirements for security. The PM should request technical assistance from the Office of Nuclear Safety and Incident Response in reviewing and evaluating any security issues associated with a proposed disposal involving special nuclear material. NSIR should also provide input to the SER.

### **7.5 Requests for Additional Information**

Technical reviews of licensee submittals often result in comments concerning the information provided and/or the lack thereof. Such comments/reviews will be documented as RAIs. For LAW disposal requests, the analyst conducting the review should notify the PM that deficiencies in the licensee's submittal may require issuing some RAIs. The PM should then consider holding a meeting or conducting a telephone conference with the licensee early in the review process and prior to transmittal of the RAI to identify and discuss significant issues/deficiencies. The PM and the analyst should use these meetings to clarify issues and answer simple questions. Site visits and conference calls with the licensee have been found to limit the number

of RAIs and decrease the overall review time. The PM should document any site visits and conference calls with the licensee. The PM will also highlight any significant issues/deficiencies for management attention as they arise.

Following an initial meeting with the licensee, the analyst will develop any technical RAIs for the PM's review. General comments, if any, should be segregated from specific comments. A consistent numbering scheme should be used to uniquely identify comments to facilitate later reference. RAIs should be in the form of a request for information, clarification, or revision to the licensee's submittal. The individual comments should be in the form of statements, not questions. RAIs should also be as specific as possible to avoid confusion by the licensee and should reference specific portions of regulations and/or guidance, when applicable. In all cases, the technical basis (e.g., reference to a specific regulation or guidance) and risk significance, if applicable, for the requested information should be included for each comment.

Unless brief, the comments should normally be included as an enclosure to a letter to the licensee. The PM would develop this cover letter. The cover letter should:

- Identify the document being reviewed and any previous RAIs;
- Summarize significant comments;
- Refer to the enclosure(s) for the complete comments;
- Include an expected response date;
- Plan a meeting or conference call, if appropriate, to discuss the RAI; and
- Identify the PM as the point of contact for the response.

The PM and the analyst should meet or hold a telephone conference with the licensee shortly before transmittal of the RAI to discuss the areas requiring additional information and staff's expectations. The PM will create a concurrence package containing the RAI and cover letter for the Branch Chief's review. The PM should annotate significant issues in the RAI concurrence package.

After the RAIs are issued, the PM and analyst can follow up with a telephone conference with the licensee, if needed, to discuss technical issues and possible resolution. The PM will report issues that may impact the schedule or require management action (e.g., policy decision) as they arise.

A draft SER and EA should be prepared prior to transmittal of the RAI. The purpose of these drafts is to ensure that all technical areas are addressed in the RAI and to help determine the importance (or relative insignificance) of additional information needs. The drafts will be retained by the PM and will not be transmitted to the licensee.

## **7.6 Safety Evaluation Report**

The purpose of the SER is to document the evaluation conducted by the staff to reach the licensing decision. A draft SER is required to support the RAI, as noted above. See Attachment 3 for example of SER for a § 20.2002 disposal request and Attachment 4 for an SER for a § 40.13(a) request.

For most LAW disposal requests, the content of the SER is identical to the TER developed by the PA analyst. In some cases, the PM will add input as appropriate from criticality safety and/or physical security reviewers, where disposals involve special nuclear material. When the PA

analyst determines that there is sufficient information to complete a technical review of a LAW disposal request, they should develop the draft TER for the Branch Chief's review. Subsequently, the PA analyst will submit a final TER to the PM. The PM will then prepare the final SER and obtain concurrence from the PA Branch Chief in addition to the LLW Branch Chief.

The Safety Evaluation Report should contain the following language in the conclusions section for 10 CFR 20.2002 authorizations:

"Further, in accordance with the provisions of 10 CFR [30.11, 40.14, and/or 70.17], "the Commission may, upon application by an interested person or upon its own initiative, grant such exemptions from the requirements of the regulations. . . as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest." Based on the above analyses, this material authorized for disposal poses no danger to public health and safety, does not involve information or activities that could potentially impact the common defense and security of the United States, and it is in the public interest to dispose of wastes in a controlled environment such as that provided by the licensed landfills [may want to add more descriptive detail on case-specific basis e.g. state-regulated landfill]. Therefore, to the extent that this material authorized for disposal in this 20.2002 authorization is otherwise licensable, the staff concludes that the site authorized for disposal is exempt from further Atomic Energy Act (AEA) and NRC licensing requirements."

## **8.0 Environmental Reviews**

### **8.1 § 40.13(a) Reviews**

Reviews of § 40.13(a) disposal requests which involve material already exempted by the regulations do not require the preparation of an EA. Approvals of these requests can be completed after an SER is prepared.

### **8.2 § 20.2002 Reviews**

NRC approvals of § 20.2002 disposal requests generally require that an EA be prepared. NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs", contains complete guidance for staff on how to comply with the National Environmental Policy Act (NEPA) for NRC licensing decisions. This section contains a summary of the pertinent sections for LAW waste disposals. NUREG-1748 should be referred to for additional guidance, including the proper format and content of an EA.

An EA is defined as a concise public document that serves to briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement (EIS) or a FONSI. The most common error found in draft EAs is the lack of discussion of non-radiological concerns.

The EA for LAW disposal requests is normally prepared by the Environmental PM. The PM may receive support from the Environmental Review Branch (ERB) to review EAs that are developed by the PM. The PM should consult with the ERB Branch Chief to determine if a Technical Assistance Request (TAR) is needed to review an EA. The PM may also request ERB review of complex or non-routine EAs by sending the EA to the electronic mail address

[Environmental\\_Reviews@nrc.gov](mailto:Environmental_Reviews@nrc.gov). The ERB Branch Chief will respond to the PM with the name of the staff member assigned to conduct the review. Details of the ERB review process are in Section 1.3.1 of NUREG-1748. The typical review period for EAs is 30 days. .

The results of the ERB review are documented in an email or memo to the PM. This email or memo should request the PM submit the ADAMS tracking number for the final EA to the ERB PM.

In the vast majority of the cases, the EA will result in a FONSI. Section 10 CFR 51.35 requires that the FONSI be published in an FRN before a license amendment approving the § 20.2002 disposal request can be issued. Section 10 CFR 51.32 specifies the content of a FONSI. Before the FONSI is published, the approved EA should be placed in ADAMS under the appropriate docket and made publicly available. An example FRN containing the FONSI and EA is presented in Attachment 3, as well as sample memorandum letter issuing the FRN.

Prior to finalizing the EA, the PM should consult with State regulatory agencies. The PM should send the draft EA to the State where the proposed disposal facility is located as well as the state where the licensee submitting the § 20.2002 disposal request is located. Any comments received should be addressed and incorporated into the Final EA. See Section 11.0 for additional coordination measures for § 20.2002 disposal requests. In certain cases, an EA may be issued for public comment. Consult with the ERB to determine if this is appropriate for a particular case.

## **9.0 Final Documentation**

### **9.1 *NRR Process (for reference)***

SECY-06-0056 explains that the agency uses two different approval processes for § 20.2002 disposal requests. NMSS, FSME, and the Regions approve § 20.2002 requests from materials and fuel cycle licensees with a license amendment. For reactor licensees, however, NRR approves § 20.2002 disposals with a letter. For reactors, license amendments are reserved for high safety significance items, and there is an extensive hierarchy for tracking all items of safety significance. The hierarchy includes license conditions, licensee commitments, and other reactor licensee actions. § 20.2002 authorizations do not meet the established criteria for including them in reactor licenses because of their low safety significance. In contrast, for materials licensees, it is advantageous to NRC Regions to include the § 20.2002 authorization in the license as a way to track and inspect against licensee commitments.

### **9.2 *DWMEP Process***

The final action taken by DWMEP staff reviewing a LAW disposal request will be either: (1) approval of the request and issuance of the license amendment for a § 20.2002 disposal request or a letter for a § 40.13(a) disposal request; or (2) denial of the request.

#### **9.2.1 *Approval***

### **§ 20.2002 disposal requests**

For off-site disposals, NRC issues an exemption from the requirement for a license for possession of the radioactive material by the off-site facility, in conjunction with the § 20.2002 authorization. This exemption is cited in the approval letter and the license amendment (see Attachment 3). The specific language in the cover letter should be following, if the request is approved:

“In accordance with the provisions of 10 CFR [30.11, 40.14, and/or 70.17], “the Commission may, upon application by an interested person or upon its own initiative, grant such exemptions from the requirements of the regulations . . . as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest.” To the extent that the material authorized for disposal in this 20.2002 authorization is otherwise licensable, the staff concludes that the site authorized for disposal is exempt from further AEA and NRC licensing requirements. The enclosed safety evaluation report concludes that the exemptions are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest. The staff also evaluated the environmental impacts of the exemptions and determined that granting these exemption(s) would not result in any significant impacts. For this action, an Environmental Assessment and Finding of No Significant Impact were prepared and published in the Federal Register (XX FR XXXXX). Accordingly, pursuant to 10 CFR [30.11, 40.14, and/or 70.17], the exemptions are granted and effective immediately.”

After appropriate review and development of a basis for issuing an EA, including the statements below, the EA should state the following--for the Introduction, Identification of Proposed Action, add “[t]his proposed action would also exempt the site authorized for disposal of the low-contaminated material from further Atomic Energy Act (AEA) and NRC licensing requirements.” For the Environmental Impacts of the Proposed Action, add “[t]he proposed action and attendant exemption of the site from further AEA and NRC licensing requirements will not significantly increase the probability or consequences of accidents, no changes are being made in the types of any effluents that may be released off site, and there is no significant increase in occupational or public radiation exposure.”

As discussed in Section 8.0, after the draft EA is placed in ADAMS, the PM will forward the draft EA to the appropriate State agencies for a 30-day review. After the 30-day period, the PM will finalize the EA for inclusion in the FRN.

In consultation with the LA, the PM will prepare the FRN for the EA/FONSI and forward it to the Office of Administration for publication in the *Federal Register*. The PM will perform a Sensitive Unclassified Non-Safeguards Information (SUNSI) review to make sure all referenced documents are publicly available.

The PM will then prepare a mark-up of the license including any new license conditions and provide it to the LA. The LA will prepare the license amendment, retaining an electronic file of the amendment.

The PM will prepare the approval package for the concurrence (see Attachment 3). This

package should include:

- A cover letter;
- The revised license;
- The SER as an enclosure; and
- Reference to the EA/FONSI that was published in a FRN.

Following approval the LA will update the license docket file, and will close the TAC if no follow-up actions are required as a result of the amendment.

Although standard practice is to publish a final EA after consultation with the affected States, in certain cases, a draft EA may also be published for public comment. The PM should consult with DWMEP management to determine if this additional step is appropriate.

#### **40.13(a) disposal requests**

The PM will prepare the approval package for the appropriate concurrence level. This may be the project manager in the Decommissioning Directorate. (see Attachment 4). This package should include:

- A cover letter; and
- The SER as an enclosure.

#### **9.2.2 Denial**

Staff requirements for the denial of a license application are contained in 10 CFR 2.108. These requirements also apply to the denial of LAW disposal requests.

### **10.0 Determination on Enhanced Communications with Stakeholders**

The Commission directed the staff, in SRM-SECY-06-0056, to implement special outreach measures for some significant § 20.2002 requests. Implementing these outreach measures will help to anticipate stakeholder concerns and requests for involvement; will increase transparency for these requests; and should help to reduce staff resources used to respond to stakeholder concerns. Although these enhanced measures were developed for § 20.2002 requests, they may also be implemented for significant § 40.13(a) requests to transfers unimportant quantities of source materials to exempt persons.

Early in the review process, the PM should determine which, if any, outreach measures are needed for a specific § 20.2002 request. The Commission requested provisions for increased stakeholder involvement for “significant” LAW disposal requests. A request would not be considered significant and no special measures would be necessary if the following conditions are met:

- The proposed § 20.2002 disposal will be in a facility that routinely disposes of large quantities of similar radioactive materials, in accordance with its permit,

- The proposed § 20.2002 disposal involves small quantities and concentrations of materials (would not apply to disposals such as incinerator ash from research facilities disposed of in accordance with Policy and Guidance Directive 8-10, "Disposal of Incinerator Ash as Ordinary Waste").
- The proposed disposals involve a high degree of certainty that the scenarios and assumptions used for the dose analyses are appropriate, based on past approvals, and will ensure that doses to a member of the public will not be above "a few millirem per year," or,
- The proposed disposal is on a licensee's site.

In SRM-SECY-06-0056, the Commission indicated the staff should inform the Commission when it receives a § 20.2002 request it deems "significant". The PM should do this through an EDO Daily Note (see Attachment 6). A short paragraph should be sent in an attachment to an email to the Branch Chief, who will submit it to the Division TA, who will submit it to the Office TA by 10 am, to be included in that day's Daily Note.

### **10.1 Outreach Measures**

The PM should determine early in the review process whether additional outreach measures are warranted, typically judging from the level of stakeholder interest. The PM should discuss the need for these measures for such transfers with their Branch Chief.

Notwithstanding the above guidelines, there could also be instances in which a public meeting is warranted, based on requests from the public, elected officials, the State, the licensee, or for other reasons. When a specific § 20.2002 request is deemed to require special measures for communicating with or involving the public, the PM should prepare a communication plan specific to the request. The following tools should be included in the plan (from the direction provided in the SRM-SECY-06-0056):

- An FRN announcing the receipt of the § 20.2002 request;
- If necessary, one or more public meetings, preferably in the vicinity of the proposed disposal facility;
- A Fact Sheet describing the proposed disposal.

All public meetings should be posted on the public NRC website 10 days in advance of the meeting date. Additional details on the outreach measures to be employed for enhanced communication are contained in the Communication Plan for § 20.2002 disposals, Attachment 1.

### **11.0 Coordination**

Because State agencies typically regulate alternative disposals of LAW under RCRA, PMs should ensure that appropriate coordination has occurred with these regulators as well as the proposed disposal site operators. This coordination is important because § 20.2002 approvals do not supersede or override a disposal facility's State's RCRA permit.

Upon receipt of the § 20.2002 request, the PM should review the incoming request from the licensee to determine what, if any, coordination the licensee has had with the State

regulatory agency regarding the acceptability of the proposed disposal at a specific facility. Except for the exceptions identified below, the PM should independently contact the RCRA permitting agency and, if acceptable to the State agency, the disposal facility operator, and provide them a copy of the disposal authorization request, if the licensee has not already provided it.

At a minimum, the State's documented views on the acceptability of the disposal should be included in the docket file in ADAMS and referenced in the SER (see Section 7.4).

For the U.S. Ecology Idaho RCRA hazardous waste disposal site, the State receives notification of disposals from U.S. Ecology, in accordance with its permit. The PM should verify that the proposed disposal is in accordance with the Waste Acceptance Criteria for the facility (available at [www.Americanecology.com](http://www.Americanecology.com)). The permittee will normally handle coordination with the State, as required in the permit, therefore, the PM does not need to furnish a copy of the licensee's disposal request to the State. If, however, the proposed disposal requires enhanced outreach with stakeholders (see Section 10.0), the PM should contact the Chief, Bureau of Permits and Enforcement, Idaho Department of Environmental Quality (currently Brian Monson, [Brian.Monson@deq.idaho.gov](mailto:Brian.Monson@deq.idaho.gov) and (208) 373-0490). The PM should send the draft EA and draft final SER for review to the State where the disposal will take place (i.e., Idaho) as well as the State where the licensee is located.

For the Waste Control Specialists (WCS) facility in Texas, the Radioactive Waste section within the Texas Commission on Environmental Quality should be consulted regarding the proposed disposal. A copy of the application and the draft final EA and SER should be furnished to the State where the disposal will take place (i.e., Texas) as well as the State where the licensee is located. Currently, WCS is not authorized to receive § 20.2002 disposals granted by NRC, but may receive § 40.13(a) requests for disposal from NRC licensees.

## **12.0 Jurisdiction**

### **12.1 Agreement States**

As discussed in Information Notice No. 86-90, "Requests to Dispose of Very Low-Level Radioactive Waste Pursuant to 10 CFR 20.302" issued on November 3, 1986, the role of Agreement State regulators varies for § 20.2002 requests submitted by reactor licensees versus § 20.2002 requests submitted by materials licensees.

For reactor licensees submitting § 20.2002 requests, if both the reactor and the proposed disposal facility are located in the same Agreement State, typically the State regulator will perform the review of the request, not NRC staff. If the disposal facility is not located in the Agreement State, NRC staff would typically conduct the review.

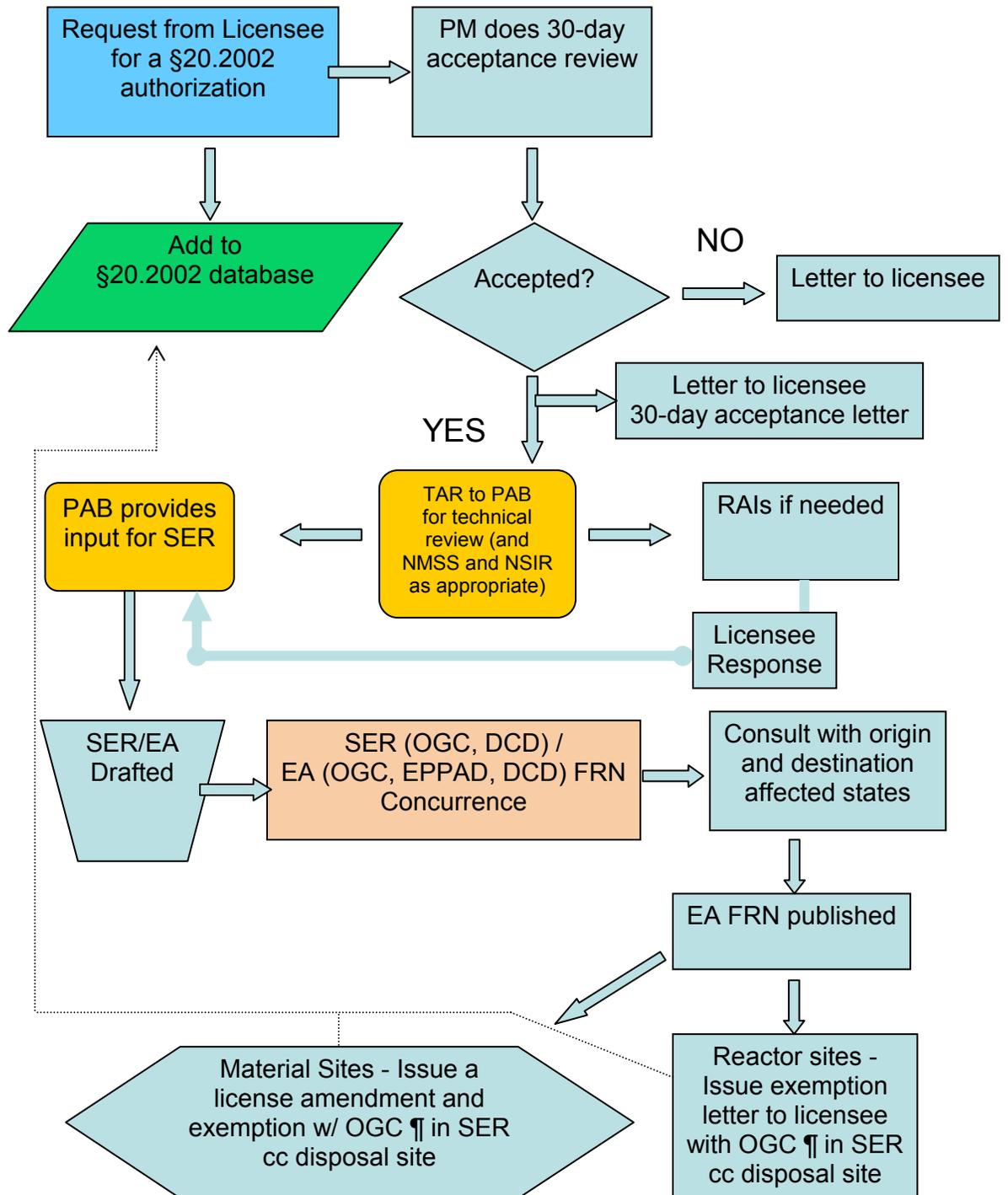
For materials licensees, Agreement State regulators will typically review § 20.2002 requests for disposal in their state or elsewhere. Therefore, Agreement State regulators review most § 20.2002 requests for their materials licensees.

As noted in Section 11.0, currently, Texas regulations do not allow § 20.2002 disposals in their state, therefore, WCS is not authorized to receive § 20.2002 disposals.

## **12.2 Non-Licensees**

Approval of both the § 20.2002 requests and the § 40.13(a) requests only applies to NRC licensees. In some instances, NRC will receive requests to dispose of LAW under § 20.2002 from former NRC licensees, whose licenses have been terminated through the Site Decommissioning process. Such disposal requests would be considered to be requested by non-licensees, and these reviews follow a more informal process than the one described in this procedure. Specifically, the review would be conducted as described in Section 7.0, however, approval can be documented through a letter, rather than through preparation of an SER and an EA/FONSI.

**Figure 1**  
**Typical 20.2002 Low-Activity Waste Disposal Authorizations**



**Figure 2**  
**40.13(a) Low-Activity Waste Disposal Authorizations**

