

April 21, 2016

MEMORANDUM TO: John R. Tappert, Director
Division of Decommissioning, Uranium Recovery
and Waste Programs
Office of Nuclear Material Safety
and Safeguards

FROM: Gregory Suber, Chief */RA/*
Low-Level Waste Branch
Division of Decommissioning, Uranium Recovery
and Waste Programs
Office of Nuclear Material Safety
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SUBJECT: PROCEDURE FOR THE REVIEW OF LICENSE APPLICATIONS
FOR THE IMPORT AND EXPORT OF RADIOACTIVE WASTE¹

Enclosed is a proposed procedure covering the review of license applications for the import and export of radioactive waste in accordance with 10 CFR Part 110. The Office of International Programs (OIP) of the U.S. Nuclear Regulatory Commission (NRC) receives several low-level radioactive waste related import/export license applications per year. The OIP periodically requests the assistance of the Low-Level Waste (LLW) branch staff in the Division of Decommissioning, Uranium Recovery and Waste Programs (DUWP) in reviewing the applications. We receive, on average, two requests per year.

To help ensure consistency in our reviews, we have developed the attached procedure. The purpose of this procedure is to document the protocol for initiating and completing the review as well as how the LLW staff conducts the review of a license application to import and export radioactive waste implementing the LLW import and export regulations. This procedure discusses the LLW staff's role and responsibilities, process of vetting and resolving complex issues, and the technical and regulatory analyses that may be necessary to respond to an OIP request.

CONTACTS: James Shaffner, NMSS/DUWP
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Enclosure: As stated

¹ This procedure covers conventional LLW, as well as radioactive material that meets the 10 CFR 110.2 definition of radioactive waste.

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**Office of Nuclear Materials Safety and Safeguards
Division of Decommissioning, Uranium Recovery and Waste Programs (DUWP)
Low-Level Waste (LLW) Branch
Operating Procedures**

**Procedure on the Review of License Applications for the Import and Export of
Radioactive Waste¹**

1. Introduction:

The U.S. Nuclear Regulatory Commission (NRC) is responsible for licensing and regulating the import and export of nuclear equipment and material as set forth in Part 110 of Title 10 of the *Code of Federal Regulations*, “Export and Import of Nuclear Equipment and Materials” (Part 110). Part 110 prescribes licensing, enforcement, and rulemaking procedures and criteria, under the Atomic Energy Act, for the import and export of nuclear equipment and materials.

The Office of International Programs (OIP) in the NRC receives license applications to import and export radioactive material including, in some cases low-level radioactive waste. Once an application is received, the OIP Licensing Officer will coordinate the review and input needed from program offices, such as the Office of Nuclear Material Safety and Safeguards (NMSS), Office of Nuclear Reactor Regulation (NRR), Office of Nuclear Security and Incident Response (NSIR), and with other Federal agencies and the Executive Branch. The roles and responsibilities of the OIP Licensing Officer also include coordinating with external and internal stakeholders. To process a LLW related application, OIP staff may request the assistance of the LLW branch staff in DUWP. The LLW branch receives, on average, two requests per year. The role of the DUWP staff will depend on the nature of the OIP request for technical assistance on a case specific basis. In all cases, OIP has the responsibility to make the licensing decision.

2. Purpose:

The purpose of this procedure is to document how the LLW staff conducts the review of a license application to import and export radioactive waste in accordance with the LLW import and export regulations in Part 110. This procedure will discuss the LLW staff’s role and responsibilities, the process of vetting and resolving complex issues, and the technical and regulatory analyses to respond to OIP’s request.

3. Relevant regulations:

The regulations in Part 110 apply to all individuals in the United States who import and export nuclear equipment and material under NRC licensing authority. The NRC issues two types of import and export licenses: general and specific.

A specific license is required for import and/or export of radioactive waste, which typically will be for the purpose of processing, disposal or return to point of origin. To obtain a specific license, an application must be filed with the NRC using NRC Form 7. Each application for an NRC-

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specific import or export license must provide certain details regarding the proposed import or export transaction (110.32).

NRC general licenses authorize selected exports or imports of nuclear material or equipment by rulemaking and do not require the issuance of a license to a particular person. There are no license applications for general licenses. Nuclear material that falls within the categories identified in 10 CFR 110.1(b)(1)-(6) are excluded from the definition of radioactive waste and are permitted to be imported or exported under general license (provided that the general license requirements in Part 110 are satisfied).

The regulations also contain import and export licensing review criteria, specifically at Subpart D of Part 110.

The Commission periodically revises Part 110 through rulemaking. On July 28, 2010, the NRC published a final rule in the *Federal Register* (75 FR 44072) that updates, clarifies, and corrects several provisions in Part 110 to improve NRC's regulatory framework for the import and export of nuclear equipment, material, and radioactive waste. The final rule also clarified and corrected the regulations addressing the general license for the export of byproduct material, amended the regulations governing the import and export of Category 1 and 2 quantities of materials listed in Appendix P to Part 110, and revised the definition of "radioactive waste" in Part 110. This rule became effective on August 27, 2010. Knowledge of the new definition is important to the review of a license application.

4. Review process and procedures:

Once OIP receives a license application, an OIP Licensing Officer is assigned and reviews the application for completeness. For a specific license, the OIP Licensing Officer will ensure:

- Upon the receipt of each import or export specific license application, the NRC will notice the license application by making it available at the NRC Web site (www.nrc.gov) and in some cases, the *Federal Register*. NRC welcomes public comments on all applications for specific import or export licenses and requests that, if possible, they be submitted within 30 days from either the release of the application on the Web site or from the publication of the *Federal Register* notice.
- During the review, OIP coordinates with the Executive Branch in accordance with 110.41.
- Upon approval of the application, the OIP issues a license to import or export the material or equipment.

Every application submitted to the NRC for a specific import or export license will be made available to the public in appropriate form via NRC's online document management system ([ADAMS](#)). The OIP Licensing Officer ensures the license application is added to ADAMS.

Once the application is accepted, the OIP Licensing Officer may request technical assistance from program offices, including NMSS, in accordance with agreed upon protocol. These requests should include an agreed upon due date which may be negotiated based on the staff schedule and workload. The goal of these reviews is to complete as soon as possible within the agreed upon due date. Simple, straightforward reviews may be completed by DUWP staff in

less than one day. Replies will be approved by a branch chief and forwarded to OIP via email. Complex reviews may require significantly more time and interaction with DUWP and NMSS senior management. Responses may require a formal concurrence. The ADAMS Accession number for the license application should be provided to the LLW staff. A Cost Activity Code (CAC) should be provided to the LLW staff for the review of the license application.

Once a review completion date is agreed upon, the LLW staff reviews the application consistent with the definitions in 110.2, especially the radioactive waste definition, and Subpart D criteria. The LLW staff should review the definition of radioactive waste to ensure applications meet the definition and is not one of the six exclusions. If it is determined that the radioactive material identified in the application does meet one of the six exclusions, the applicant will be so notified by the OIP Licensing Officer. The Statement of Consideration published in 75 FR 44072 provides additional guidance on the six exclusions including clarifications on radioactive and nonradioactive waste that arises from recycling.

The LLW staff should review the license applications for consistency with 110.32, "Information Required in an Application for a Specific License/NRC Form 7," 110.40, "Commission Review," 110.42, "Export Licensing Criteria," and 110.43, "Import Licensing Criteria." In particular, the LLW staff should review the information required in an application for the proposed import and export of radioactive waste in 110.32(f)(5-7):

- The volume, physical and chemical characteristics, route of transit of shipment, classification (as defined in 10 CFR 61.55 (NOTE: an exemption from the classification requirement can be requested if waste is to be exported rather than disposed of in accordance with 10 CFR Part 61)) if imported or exported for direct disposal at Part 61 or equivalent Agreement State licensed facility, and ultimate disposition (including forms of management or treatment) of the waste (applicable to an import or export license application);
- The industrial or other process responsible for generation of the waste, and the status of the arrangements for disposition, including pertinent documentation of these arrangements (applicable to an import license application); and
- The description of end use by all consignees in sufficient detail to permit accurate evaluation of the justification for the proposed import or export, including the need for shipment by the dates specified (applicable to an import or export license application).

In most cases, the LLW staff review of the information that the licensee has provided on the application on each of these topics to ensure that it is logical and consistent. In cases where a licensee states that an activity will be performed in accordance with his or her domestic license, the reviewer should verify that the activity is permitted. The reviewer deems it appropriate to confirm this with the regulatory organization that administers the domestic license (likely an Agreement State official). OIP should coordinate such contact through the NRC Agreement State Program.

If the LLW staff believes that additional detail is warranted regarding one or more aspects of the licensee submittal, the LLW staff should coordinate the solicitation of the information with the OIP licensing officer.

OIP is responsible for issuing a specific license to import or export radioactive waste in accordance with 110.45(a) and 110.45(b), respectively. OIP may request LLW staff to provide some assistance reviewing the proposed action consistent with these standards. An import or export license issued by the NRC only authorizes the radioactive waste covered by the license to enter or exit the United States. This license alone does not authorize possession of the waste (e.g., another license would need to be issued under Parts 30, 40 or 70 by the NRC or Agreement State) or guarantee access to a waste management facility or a disposal site in the United States or another county (60 FR 37560).

Typically, the LLW staff have been concerned with following issues in specific license applications:

- *Disposal of foreign origin radioactive waste in commercial disposal facilities in the United States.* This could be very controversial. Most radioactive waste accepted for processing is returned to the country of origin for disposal or storage. It is imperative that the processor be able to identify safeguards to ensure that any waste resulting from the processing of foreign origin waste is kept separate from domestic processed waste (i.e., residual waste).
- *Purported future beneficial use.* NRC has the obligation to consider the importer's determination that the imported material is not waste. The importer/exporter should be able to identify an unambiguous beneficial end use for processed material (e.g., decontaminated scaffolding and laundry). Conversely, contaminated material that is imported/exported for processing (e.g., for volume reduction and/or stabilization) and the end product has not an identifiable beneficial use (e.g., Dry active waste (DAW), wood, metal, and resins) should be considered radioactive waste.
- *Proposed path forward and end use.* Processors that process different types of material should be able to demonstrate the path forward and end use of each stream, either as usable material or waste. There could also be a contingency plan if the identified path forward becomes unavailable before the process is complete. In the United States, a key function of the regulatory process for importation of contaminated material is to ensure that an appropriate facility has agreed to accept the waste for management or disposal. In other words, NRC must find that there is a defined and agreed upon path forward for any material that needs to be disposed of.
- *Residual Waste.* Residual waste is defined in Appendix G, 10 CFR Part 20, as waste that, as a result of processing (e.g., incineration) cannot be and does not need to be assigned to the original generator of the waste. Some compacts and States may not allow foreign residual waste in their disposal facility and as such, coordination with the States and compacts is necessary if there were residual waste to be generated (see Section 5 below for more information).

During the review process, it may be advantageous to contact the applicant for clarification of certain details or for additional information NRC deemed necessary to review the proposed action. Such interactions shall be requested of and coordinated by OIP.

Once the LLW staff completes the review, staff will discuss with the LLW Branch chief and then send the outcome of the review to the OIP Licensing Officer staff in a written document (e.g., an email). If the review results in comments in response to the OIP request for assistance, the OIP licensing Officer will determine the need for and nature of follow-up with the applicant. In some cases, the license application may be controversial and/or complex (see above for issues with

previous reviews) and require additional work as was in the case of the EnergySolutions' proposal to import and export radioactive waste from Italy. The LLW staff may be called upon to answer public comments or Congressional inquiries on the license application. Alignment on the comments may be needed with NMSS senior management before submittal to the OIP Licensing Officer. If the OIP Licensing Officer disagrees with the comments, the issue can be raised to senior NMSS and OIP management. If necessary, issues could be resolved thru the NRC non-concurrence or differing opinion processes.

A hearing may be requested on the license application in accordance with Subparts H and I of Part 110. The LLW staff may be called upon to assist in the hearing process which is outlined in the Subparts and would be coordinated by the Office of the General Counsel.

5. Coordination:

The NRC specifically OIP consults with the applicable Federal and State agencies and LLW Compacts prior to issuing a license for the import or export of radioactive waste. Coordination is necessary for import licenses as the NRC "will not grant an import license for waste intended for disposal unless it is clear that the waste will be accepted by a disposal facility, host State, and Compact (where applicable). This will be part of the determination regarding the appropriateness of the facility that has agreed to accept the waste for management or disposal." (60 FR 37560) OIP also consults with the Department of State and other cognizant Federal agencies regarding proposed exports of radioactive waste. External consultation is done with the specific internal NRC organizations which provide primary consultation with the external entity (e.g., Agreement States Program Branch).

6. References:

U.S. Code of Federal Regulations, "Licensing Requirements for Land Disposal of Radioactive Waste," Part 61, Title 10, "Energy."

U.S. Code of Federal Regulations, "Export and Import of Nuclear Equipment and Material," Part 110, Title 10, "Energy."

Lieberman, J. and John Greeves, 2010. "Importing and Exporting Radioactive Materials and Waste for Treatment, Processing and Recycling." Washington, DC.