ATTACHMENT 71122.O2

INSPECTION AREA: Radioactive Material Processing and Transportation

CORNERSTONE: Public Radiation Safety

INSPECTION BASES: This inspection area verifies aspects of the Public Radiation Safety cornerstone for which there are no performance indicators for unplanned public exposure during transportation of radioactive material. The licensee's radioactive material processing and shipping programs are required by Criterion 60 of Appendix A to 10 CFR Part 50 and must comply with the requirements of 10 CFR Parts 20, 61, and 71 and Department of Transportation regulations contained in 49 CFR Parts 170-189.

LEVEL OF EFFORT: Inspect Biennially

71122.02-01 INSPECTION OBJECTIVES

01.01 To verify that the licensee's radioactive material processing and transportation program complies with the requirements of 10 CFR Parts 20, 61, and 71 and Department of Transportation regulations contained in 49 CFR Parts 170-189.

71122.02-02 INSPECTION REQUIREMENTS

02.01 Inspection planning and In-Office Inspection. When possible, coordinate the inspection schedule with the licensee to coincide with a Type B shipment or other non-excepted package shipments.

a. Review the solid radioactive waste system description in the FSAR and the recent radiological effluent release report for information on the types and amounts of radioactive waste disposed.

b. Review the scope of the licensee's audit program to verify that is meets the requirements of 10 CFR 20.1101(c).

02.02 Radioactive waste system walk-down

a. Walk-down the liquid and solid radioactive waste processing systems to verify and assess that the current system configuration and operation agree with the descriptions contained in the FSAR and in the Process Control Program (PCP).

b. Review the status of any radioactive waste process equipment that is not operational and/or is abandoned in place. Review the licensee's administrative

and physical controls (i.e., has the system been drained and isolated from other systems) to ensure that the equipment will not contribute to an unmonitored release path and/or affect operating systems or be a source of unnecessary personnel exposure.

c. Review the adequacy of any changes made to the radioactive waste processing systems since the last inspection. Verify that the changes were reviewed and documented in accordance with 10 CFR 50.59, as appropriate. Review the impact, if any, to radiation doses to members of the public.

d. Review current processes for transferring radioactive waste resin and sludge discharges into shipping/disposal containers to determine if appropriate waste stream mixing and/or sampling procedures, and methodology for waste concentration averaging provide representative samples of the waste product for the purposes of waste classification as specified in 10CFR61.55 for waste disposal.

02.03 Waste characterization and classification

a. Review the radio-chemical sample analysis results (i.e., “10 CFR Part 61" analysis) for each of the licensee’s radioactive waste streams (e.g., dry active waste (DAW), ion exchange resins, mechanical filters, and sludges and activated materials). Review the licensee’s use of scaling factors and calculations used to account for difficult-to-measure radionuclides (refer to the Branch Technical Position, “Waste Form Technical Position,” IE Information Notice 86-20, Technical Position on Concentration Averaging, and NUREG-1608). Verify that the licensee’s program assures compliance with 10 CFR 61.55 and 10 CFR 61.56 as required by Appendix G of 10 CFR Part 20.

b. Review the licensee’s program to ensure that the waste stream composition data accounts for changing operational parameters and thus remains valid between the annual or biennial sample analysis update. For example, the shipping staff may monitor reactor coolant radio-chemistry to ensure the stability of the waste stream analyses. Changes in reactor coolant chemistry (e.g., fuel integrity or corrosion film morphology) can result in changes to the waste stream compositions.

02.04 Shipment preparation

a. Observe shipment packaging, surveying, labeling, marking, placarding, vehicle checks, emergency instructions, disposal manifest, shipping papers provided to the driver, and licensee verification of shipment readiness. Verify that the requirements of any applicable transport cask Certificate of Compliance have been met (refer to NUREG-1660). Verify that the receiving licensee is authorized to receive the shipment packages. If applicable, verify that the licensee’s procedures for cask loading and closure procedures are consistent with the vendor’s current approved procedures.

b. Observe radiation workers during the conduct of radioactive waste processing and radioactive material shipment preparation activities. Determine if the shippers are knowledgeable of the shipping regulations and whether shipping personnel

demonstrate adequate skills to accomplish the package preparation requirements for public transport with respect to NRC Bulletin 79-19 and 49 CFR Part 172 Subpart H. If direct observation is limited, review the technical instructions presented to workers during routine training. Verify that the licensee's training program provides training to personnel responsible for the conduct of radioactive waste processing and radioactive material shipment preparation activities

02.05 Shipping Records. Sample at least 5 non-excepted package shipment (LSA I, II, III, SCO I, II, Type A, or Type B) records. Review these records for compliance with NRC and DOT requirements. For example, ensure the shipping documents contain emergency response information and a 24-hour contact telephone number as required by 49 CFR Part 172 (refer to NUREG-1660).

02.06 Identification and Resolution of Problems

a. Review the licensee's Licensee Event Reports, Special Reports, audits, State agency reports, and self assessments related to the radioactive material and transportation programs performed since the last inspection. Determine if identified problems are entered into the corrective action program for resolution.

b. Review corrective action reports written against the radioactive material and shipping programs since the previous inspection. Interview staff and review documents to determine if the following activities are being conducted in an effective and timely manner commensurate with their importance to safety and risk:

1. Initial problem identification, characterization, and tracking.
2. Disposition of operability/reportability issues.
3. Evaluation of safety significance/risk and priority for resolution.
4. Identification of repetitive problems.
5. Identification of contributing causes.
6. Identification and implementation of effective corrective actions.
7. Resolution of non-cited violations (NCVs) tracked in corrective action system(s).
8. Implementation/consideration of risk significant operational experience feedback.

Emphasis should be placed on ensuring problems are identified, characterized, prioritized, entered into a corrective action, and resolved.

c. For repetitive deficiencies or significant individual deficiencies in problem identification and resolution identified above, determine if the licensee's self-assessment activities are also identifying and addressing these deficiencies.

71122.02-03 RESOURCE ESTIMATE

The estimated hours to complete this procedure ranges from a minimum of 34 hours to a maximum of 46hours, with a base of 40 hours.

71122.02-04 COMPLETION STATUS

Inspection of the minimum sample size will constitute completion of this procedure in the Reactor Programs System (RPS). That minimum sample size consists of 6 samples determined as follows:

Section 02.01 a, b	1 sample
Section 02.02 a, b, c, d	1 sample
Section 02.03 a, b	1 sample
Section 02.04 a, b	1 sample
Section 02.05	1 sample
Section 02.06 a, b, c	1 sample

END