Fernald Silo 3 Waste

The Fernald facility is the largest single-site cleanup facility within the Ohio Field Office complex. From 1952 to 1989, Fernald operated as a uranium processing facility supplying high-purity uranium metal fuel cores and target elements to defense-related facilities within the Department of Energy (DOE) complex. In 1986, Fernald began a 10-year environmental site investigation to determine contamination levels and develop cleanup plans. Included in the plan was the cleanup of concrete waste silos.

**Cleanup Plan for the Silos**

A thorough review process was conducted incorporating independent analysis by industry specialists, DOE, regulators, and stakeholders. The waste is defined under Section 11e.(2) of the Atomic Energy Act, which defines byproduct material as “tailings or wastes produced as a result of the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.”

Silo 3 contains 5,100 cubic yards of cold metal oxides (in a dry powder form), a byproduct of the uranium processing operations. The Silo 3 material will be conditioned to reduce the dispersability and metals mobility of the waste before shipping it to the Envirocare for disposal.

**Transportation and Packaging**

Fernald plans to begin shipping the Silo 3 waste in the spring of 2005. Shipments will continue for approximately 6 months. The conditioned waste will be placed in Supersaks™, soft-sided packages which meet the Department of Transportation Industrial Packaging Type 2 requirements. This packaging, along with the low concentrations of radioactive material, present a limited hazard to the public and environment.

**Identifying Shipment Contents**

“Radioactive Class 7” placards will be placed on each shipment in accordance with the Department of Transportation regulations. Each container will be labeled on two sides with the appropriate radioactive material label to identify their contents and radioactivity level.

Workers will remove 5,100 cubic yards of low-level cold metal oxide waste from Silo 3.
**Shipment Routing**

The shipments will be by highway using commercial carriers. All drivers are provided a briefing on emergency response actions to take in the event of an incident, actions to take in the event of severe weather, and the importance of remaining on the designated routes. The designated routes for the Silo 3 material are currently being used for other infrequent low-level waste shipments from Fernald to Envirocare in Clive, Utah. Discussions were held in the early planning phase with the states on the Silo materials and the disposition of the material.

**Inspections**

Only motor carriers with satisfactory ratings under the Department’s Motor Carrier Evaluation Program will be used to transport the Silo 3 material. The carriers’ equipment will be inspected upon arrival at the site. After loading the trailers and prior to release of the shipment from the site, radiological surveys will be performed by Fernald to ensure all safety requirements are met.

**Emergency Response**

State and local government agencies have the primary responsibility for response in the event of an accident or incident involving one of these shipments. DOE continues to provide radiological training to State and local emergency response units through the Transportation Emergency Preparedness Program (TEPP). DOE Radiological Assistance Program teams are available and, if requested, can respond and provide on-scene support in approximately 4-6 hours. For comprehensive emergency response and incident mitigation information regarding the material in the shipment, Fernald’s 24-hour emergency response telephone number will be on the shipping paper.

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**The routes used will be similar to those used for other infrequent low-level waste shipments from Fernald, OH.**

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**Additional information may be obtained from:**

Gary Stegner, Public Affairs, Fernald Closure Project, at 513-246-0074.