Department of Energy

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Mr. Gene Jablonowski, Remedial Project Manager
U.S. Environmental Protection Agency
Region V, SRF-5J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402-2911

Dear Mr. Jablonowski and Mr. Schneider:

TRANSMITTAL OF THE AMENDED PAGES FOR THE OPERABLE UNIT 3 INTEGRATED REMEDIAL DESIGN/REMEDIAL ACTION WORK PLAN, ON-SITE DISPOSAL FACILITY IMPACTED MATERIALS PLACEMENT PLAN, AND THE ON-SITE DISPOSAL FACILITY WASTE ACCEPTANCE CRITERIA ATTAINMENT PLAN FOR PLACEMENT OF TRANSITE PANELS INTO THE ON-SITE DISPOSAL FACILITY

At a meeting on June 9, 1998, between officials of the Department of Energy (DOE) Fluor Daniel Fernald (FDF), U.S. Environmental Protection Agency (U.S. EPA), and Ohio Environmental Protection Agency (OEPA), DOE requested approval for the placement of all transite panels into the On-Site Disposal Facility (OSDF) without any size reduction to minimize the risk of generating friable asbestos. The agencies verbally agreed that all transite panels (Operable Unit 3 (OU3) Debris Category G) will be accepted without any size reduction for placement into the OSDF. This request was a result of a detailed walkdown performed on the remaining facilities which determined that approximately 1800 transite panels are greater than 10 feet in length.

Accordingly, the purpose of this letter is to transmit to the U.S. EPA and OEPA the enclosed amended pages of the OU3 Integrated Remedial Design/Remedial Action (RD/RA) Work Plan, OSDF Impacted Materials Placement Plan, and the Waste Acceptance Criteria (WAC) Attainment Plan for the OSDF, which contain the amended material size constraints for Category G Non-Regulated Asbestos-Containing Material (ACM).

If you any questions, please contact Pete Yerace at (513) 648-3161, or John Trygier at (513) 648-3132.

Sincerely,

Johnny Reising

FEMP:Yerace

Johnny W. Reising
Fernald Remedial Action
Project Manager

Enclosure: As Stated

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TABLE 3-8 OSDF Material Size Constraints

OU3 RI/FS Category[1]	Associated Size Constraint
General for all categories	Any piece ≤ 10′ in any dimension Any piece ≤ 1.5′ in height
A - Accessible Metals	Maximum length = 10′ Maximum width = 4′ Maximum height (incl. projections) = 1.5′
B - Inaccessible Metals	Maximum length = 10′ Maximum width = 4′ Maximum height = (incl. projections) = 1.5′ Pipes with diameter ≥ 12" split in half
D - Painted Light Gauge Metals	Maximum length = 10′ Maximum width = 4′ Maximum height (incl. projections) = 1.5′
E - Concrete	Maximum length = 6′ Maximum width = 4′ Maximum height 1.5′
G - Non-Regulated ACM	Maximum height = 1.5′ (bundled stacks)[2]
H - Regulated ACM	Maximum volume/piece = 27 ft^3 For pipes: Maximum length = 10′ Maximum width = 4′ Maximum height = (incl. projections) = 1.5′ Pipes with diameter ≥ 12" split in half
I - Miscellaneous Materials	All miscellaneous materials will be compacted Maximum length = 8′ Maximum width = 4′ Maximum height = 1.5′

Notes: 1. Material Categories C (Process Material), F (Brick), and J (Special Materials) are excluded from on-site disposal. Size constraints can be exceeded on a case-by-case basis provided that criteria for Impacted Material Category 5 is met, as defined in Section 5.2 of the IMPP.

2. Due to health and safety considerations associated with generating friable asbestos, size reduction of transite panels will not be required; transite shall be bundled, wrapped or encapsulated, and banded to a pallet. To retain flexibility for placement into the OSDF as either Category 2 (maximum height 1.5 feet) or Category 3 (maximum height 4 feet), the transite will generally be bundled by the D&D contractor into 1.5-foot stacks; two stacks may then be packaged together on a pallet for placement as Category 3, if desired by the OSDF contractor.

that have lower levels of contamination at the FEMP, while the smaller volumes of more highly contaminated materials are dispositioned off-site to locations with respectively higher protectiveness. For OU3, process-related metals (Category C), products/residues (Category J), acid brick (Category F), and technetium-contaminated concrete (Category E) from specific locations are designated for off-site dispositioning.

Potential recipients of contaminated material resulting from OU3 remedial action are the NTS facility, which is owned and operated by the DOE, and a PCDF. Specifically, the materials that will be dispose off-site include an estimated 151,000 cubic feet of OU3 process-related metals, 2,400 cubic feet of technetium-contaminated concrete, 5,280 cubic feet of potentially mixed waste acid brick; and 15,400 cubic feet of low-level waste acid brick. The determination as to which off-site facility will be used for these materials will be decided on a project-specific basis during above-grade remedial design projects and documented in the respective project implementation plans for above-grade dismantlement.

- Intact drums (i.e., drums must be empty and crushed);
- Acid brick (OU3 Debris Category F);
- Transformers which have not been either crushed or their voids filled with grout or other acceptable materials;
- Used oils;
- Whole or shredded scrap tires; and
- Materials not accompanied by the appropriate transportation manifest as specified in the IMPP.

As noted earlier, a general physical size constraint was placed on debris that are to be disposed in the OSDF by conditions provided in the OU2 IMPP. Section 4.3 of the IMPP lists physical waste acceptance criteria that must be applied to material destined for OSDF disposal. The dimensions provided in Table 3-8 represent the application of the general size constraint to OU3 material categories. The physical dimensions applied to OU3 materials have been accepted by OSDF design engineers as consistent with OSDF physical waste acceptance criteria.

Material dimensions would be limited in length to accommodate spreading and compaction equipment and limited in height to meet a specified lift thickness (i.e., thickness of OSDF compaction layers) for placement of construction materials in layers. Material placement will be also be specified by the IMPP developed pursuant to the OSDF design.

Most OU3 materials generated during dismantlement of OU3 facilities will fall into either Impacted Material Category 2 or Category 3. Category 2 refers to materials that can be spread in lifts no more than 18 inches (460 millimeters) thick and expected to be moderately compactible under the action of equipment similar to the Caterpillar dozer or 815C compactor, while Category 3 refers to impacted materials that have a maximum height of no more than four feet (1.2 meters) and are rectangularly shaped allowing impacted soil or material to be compacted around and against them. As noted in Table 3-8 (footnote), oversized materials, which fall into Impacted Material Category 5, may be allowed for OSDF placement on a case-by-case basis provided they meet the criteria established for those materials in the IMPP. Category 5 materials will likely require special handling, placement, and compaction procedures. These materials will be classified and designated in accordance with the approved RODs and the Waste Acceptance Criteria. If, during the project-specific design phase, material is identified that could potentially be considered Category 5 material, an evaluation of the material will be conducted in conjunction with the OSDF engineers to determine if further size reduction is necessary. The results of that evaluation will be documented in special placement plans prepared by OU2 that will accompany OU3 project implementation plans submitted for regulatory approval prior to utilization.

3.3.6.3 Off-Site Disposal

The decision to dispose of certain materials at off-site locations has been administratively determined as a means to remain consistent with the "balanced approach" for FEMP waste disposition. Application of this principle results in retention of the larger volume of materials

- The mass of total uranium is to be controlled by visually inspecting debris generated from within the boundaries of Operable Unit 3 to ensure that it does not contain discernable process materials. (See footnote on page 3-2.)

Physical WAC for Debris

- Due to health and safety considerations associated with generating friable asbestos, size reduction of transite panels will not be required; transite shall be bundled, wrapped or encapsulated, and banded to a pallet.

- The maximum length of irregularly shaped metals or other components of a building superstructure or finish components (excluding transite) shall be 10 feet.

- The maximum thickness of irregularly shaped metals or other components of a building superstructure or finish components shall be 18 inches.

- The maximum thickness of an individual concrete member or other component of a building slab or substructure shall be 4 feet, when the item is handled individually and is a regular shape having no concrete protrusions greater than 18 inches.

- Concrete reinforcement bars shall be cut within a nominal 12 inches of the concrete mass. The additional length added by these bars is not considered in determining the total length of the concrete mass.

- The maximum thickness of uniform pallets of building cladding (e.g., transite panels), properly banded into rectangular shapes, shall be 4 feet.

- Regulated asbestos-containing material (ACM) shall be double-bagged.

- ACM brick and commingled debris shall be double contained.

- Piping having insulation of ACM shall be segregated.

- Equipment shall be drained of all oils and liquids.

- Piping with a nominal diameter of 12 inches or greater shall be split in half.

- OSDF Category 3 items having voids greater than 1 cubic foot shall be filled with a quick set grout, or flowable cohesionless material approved by the OSDF Construction Manager. If a grout is used in this manner, it shall be allowed to set for a minimum of four hours prior to the commencement of placement of that item.

3.5 WAC FOR ALLOWABLE ANCILLARY REMEDIATION WASTE

The WAC requirements for ancillary remediation waste will be determined on a case-by-case basis as ancillary waste streams are identified. Because all ancillary waste will be either inherently soil-like or debris-like, the process of determining WAC requirements for this waste stream will include applying the soil or debris WAC, as appropriate. Section 6.0 presents the WAC attainment strategies for current and future ancillary remediation waste streams.

4.0 WASTE ACCEPTANCE CRITERIA

4.1 General

This section of the IMP Plan presents information regarding the waste acceptance criteria applicable to the OSDF. Radiological/chemical waste acceptance criteria developed by the individual operable units at the FEMP are identified and made a part of this plan. Other physical criteria are established in this plan.

4.2 OSDF Chemical/Radiological Waste Acceptance Criteria

The OU2 ROD has established a radiological waste acceptance criteria of 346 picoCuries/gram (pCi/g) of uranium-238 or 1,030 milligrams per kilogram (mg/kg) of total uranium for operable unit remediation materials destined for the OSDF. Similarly, the OU5 ROD established additional radiological and chemical waste acceptance criteria for Operable Unit 5 remediation soils destined for the OSDF. Similarly, the OU3 ROD has established a radiological waste acceptance criteria of 105 grams technetium-99 for Operable Unit 3 remediation debris materials. These waste acceptance criteria have been compiled and are presented in Table 4-1. The remediation materials sent to the OSDF from Operable Unit 3 (see Table 5-1) may also include small material contributions from Operable Units 1 and 4; any structural debris material resulting from decontamination and dismantlement of the remediation facilities from these latter operable units destined for the OSDF must meet the Operable Unit 3 waste acceptance criteria.

4.3 Physical Criteria

The physical criteria (dimensions given are considered nominal) that shall be applied to material destined to the OSDF are:

- materials from various building components (*i.e.*, steel, concrete, masonry rubble, finish components, *etc.*) shall be segregated at the staging area by the Subcontractor;

- due to health and safety considerations associated with generating friable asbestos, size reduction of transite panels will not be required; transite shall be bundled, wrapped or encapsulated, and banded to a pallet;

- the maximum length of irregularly shaped metals or other components of a building superstructure or finish component (excluding transite) shall be 10 ft. (3 m);

- the maximum thickness of irregularly shaped metals or other components of a building superstructure or finish component shall be 18 in. (450 mm);

- the maximum thickness of concrete or other components of a building slab or substructure shall be 18 in. (450 mm) when the materials are part of a load of similar material;

TABLE 5-2

OSDF SIZE CONSTRAINTS FOR DEBRIS

Debris Category	Associated Size Constraint
General for all categories	Any piece ≤ 10′ in any dimension Any piece ≤ 1.5′ in height
A - Accessible Metals	Maximum length = 10′ Maximum width = 4′ Maximum height (incl. projections) = 1.5′
B - Inaccessible Metals	Maximum length = 10′ Maximum width = 4′ Maximum height = (incl. projections) = 1.5′ Pipes with diameter ≥ 12" split in half
D - Painted Light Gauge Metals	Maximum length = 10′ Maximum width = 4′ Maximum height (incl. projections) = 1.5′
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I - Miscellaneous Materials	All miscellaneous materials will be compacted Maximum length = 10′ Maximum width = 4′ Maximum height = 1.5′

Note: Due to health and safety considerations associated with generating friable asbestos, size reduction of transite panels will not be required; transite shall be bundled, wrapped or encapsulated, and banded to a pallet. To retain flexibility for placement in the OSDF as either Category 2 (maximum height 1.5 feet) or Category 3 (maximum height 4 feet), the transite will generally be bundled by the D&D contractor into 1.5-foot stacks; two stacks may then be packaged together on a pallet as Category 3, if desired by the OSDF contractor.