



Department of Energy

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SEP 23 1998

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

DOE-1215-98

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

Dear Mr. Saric and Mr. Schneider:

TRANSMITTAL OF REVISED AREA 1, PHASE II INTEGRATED REMEDIAL DESIGN PACKAGE

Enclosed please find a draft final Area 1, Phase II (A1PII) Integrated Remedial Design Package (IRDP). This submission includes the following:

- Area 1, Phase II Implementation Plan, Revision D
- Draft Certified for Construction (CFC) design documents for Sewage Treatment Plant (STP) Excavation
- Response-to-Comments document

The A1PII Implementation Plan has been revised significantly since the last formal version (Revision C) was issued in November 1997. These revisions include the following:

- Changes made in response to U.S. Environmental Protection Agency (U.S. EPA) and Ohio Environmental Protection Agency (OEPA) comments
- Updates based on new analytical data
- Separating the performance of the A1PII Remedial Action (RA) activities across three subcontractor packages:
 - (1) Site preparation work,
 - (2) STP excavation work, and
 - (3) Lead trap range work

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Because of the extensive revisions, redline and strikeout notations were not used in this document to denote text changes. The draft CFC design documents include both construction drawings and technical specifications. The strategy is to finalize and issue these plans and specifications for bid in the next few weeks. The enclosed Response to Comments (RTC) document addresses both the U.S. EPA and OEPA comments. As described in the RTC document, the comments have been addressed and/or incorporated into the A1PII IRDP. Some of the major changes to the IRDP and remaining issues are described below:

MAJOR CHANGES TO IRDP

Some of the major changes to the IRDP include:

- Utilizing three RA design packages for remediation of A1PII
- Incorporating additional predesign data
- Eliminating equipment wash facility in STP excavation package
- Addressing digester sludge as part of STP excavation contract
- Revising the approach to handling remediation generated wastewater

Utilizing three RA design packages for remediation of A1PII. The RA for A1PII will be accomplished through the following three RA design packages: 1) site preparation, 2) STP excavation, and 3) trap range remediation. The design documents for the site preparation phase are complete and construction work is anticipated to start in the next few weeks; the CFC Site Preparation design documents were previously issued and approved by the regulators. The enclosed STP excavation design documents are scheduled to be finalized CFC and issued for bid in the next few weeks. The design and procurement packages for trap range remediation are being developed and a Request for Proposal (RFP) to select the subcontractor is scheduled to be issued in October 1998.

Incorporating additional predesign data. Additional predesign data are presented in the Implementation Plan. These data include real-time measurements, digester sludge analyses and additional technetium-99 data.

Eliminating equipment wash facility in STP Excavation package. Based on excavation and loading experience at soil Stockpile 5 (SP-5) and the configuration of the STP area, the proposed equipment wash facility for the STP excavation contract has been eliminated. Revised loading and monitoring requirements are presented in the Implementation Plan and in the design documents.

Addressing digester sludge as part of STP excavation contract. There are approximately 650 cubic yards of digester sludge in the STP area. This sludge is currently located in the east sludge drying bed, the digester, and the west chamber of the primary settling basin. This material exceeds the On-Site Disposal Facility (OSDF) Waste Acceptance Criteria

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(WAC) for both technetium-99 and uranium, but passes the Toxicity Characteristic Leaching Procedure. The material will be stabilized and temporarily stockpiled in soil Stockpile 7 (SP-7) by the STP excavation subcontractor and ultimately disposed off site.

Revising the approach to handling remediation generated waste water. The previously proposed approach to handle remediation-generated waste water from A1P11 has been revised. Perched groundwater encountered during excavation and surface water from the STP excavation will be collected in an STP excavation sump and pumped to the Leachate Conveyance System for treatment in the Advanced Wastewater Treatment (AWWT) Facility. The OSDF leachate will have higher priority for treatment in the AWWT than water from the STP excavation sump.

REMAINING ISSUES

There are some remaining issues and details that are being addressed. The issues include the following:

- Handling of digester sludge
- Revised configuration of SP-7
- Additional sampling and analysis in the incinerator area

Handling of digester sludge. Additional analyses are being performed on the digester sludge. The analyses are being performed to address potential bacteria in the material and to determine possible mixing ratios (the quantity of sludge that will be mixed with lime and/or soil) to stabilize the material to reduce the water content. The STP excavation subcontractor will mix the digester sludge with lime and above-WAC technetium-99 soil in the STP area to eliminate any free liquids. This initial mixing will be done to stabilize the material prior to hauling. Transport of the material may still require bed liners, water tight beds, and/or diapers for transport to SP-7 to ensure that the material does not leak/spill in transit. Further mixing may be performed in SP-7 (if needed). The evaluation and analyses are expected to be completed in the next two weeks.

Revised configuration of SP-7. The STP excavation subcontractor will be required to perform preliminary grading work to prepare SP-7 to receive the digester sludge material. This work will primarily consist of separating the above-WAC technetium-99 material (east side) from the above-WAC uranium material (west side). The subcontractor will excavate an area between the two types of material by creating a ditch between the two piles to keep the runoff from the technetium-99 from contaminating the uranium-based above-WAC material. The material excavated will be used to construct a berm and to further mix with digester sludge, if necessary. The SP-7 berm will be built in the northeast corner of SP-7; it will be about three feet high and will be used to store and mix the digester sludge/technetium-99 material from the STP. Other material excavated from SP-7 will be used to mix with the digester sludge and technetium-99 soil so that the material passes the paint filter test for free liquids. The current operation of the subcontractor in SP-7 will be directed to keep above-WAC uranium material on the west side of SP-7; a western access point may be required.

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Additional sampling and analysis in the incinerator area. Additional sampling will be performed in the foot print of the former STP incinerator. This activity will investigate the surface and subsurface uranium and technetium-99 contamination in the area. The design of the excavation in the incinerator area may be revised based on this sampling and analysis.

If you have any questions or require additional information, please contact Robert Janke at (513) 648-3124.

Sincerely,



Johnny W. Reising
Fernald Remedial Action
Project Manager

FEMP:Nickel

Enclosures

cc w/enclosures:

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