OhioEPA
State of Ohio Environmental Protection Agency

Southwest District
401 East Fifth Street
Dayton, Ohio 45402-2911
TELE: (937)285-6357 FAX: (937)285-6404
www.epa.state.oh.us

Bob Taft, Governor
Bruce Johnson, Lt. Governor
Joseph P. Koncelik, Director

June 16, 2005

U. S. Department of Energy
Ohio Field Office
Fernald Closure Project
175 Tri-County Parkway
Springdale, Ohio 45246

RE: Transmittal of the Draft A7 - Silos 1 and 2 Ra Contamination Excavation Plan Drawing

Dear Mr. Taylor:

Ohio EPA has reviewed DOE's June 9, 2005 submittal on the "Transmittal of the Draft Area 7 - Silos 1 and 2 Radium Contamination Excavation Plan Drawing". The original submittal lacked details on the excavation, and after a phone conversation between Michelle Waller (Ohio EPA) and Jyh-Dong Chiou (Flour Fernald) on June 15, 2005, the attached e-mail was submitted. With the information supplied via this e-mail and the understanding that all proper precautions with regards to loadout and transportation of the soils from around the Silos will be taken (i.e. tarping haul trucks and dust suppression), Ohio EPA approves this submittal.

Should you have any questions, please contact Michelle Waller or me.

Sincerely,

Michelle Waller
for
Thomas A. Schneider
Fernald Project Manager
Office of Federal Facilities Oversight

cc: Jim Saric, U.S. EPA
Mark Shupe, GeoTrans, Inc.
Michelle Cullerton, Tetra Tech EM Inc.

Q:\ou5\A7\silos1&2raexcavplndraw.wpd

From: "Chiou, Jyh-Dong" <Jyh-Dong.Chiou@fernald.gov>
To: "'michelle.waller@epa.state.oh.us'" <michelle.waller@epa.state.oh.us>
Date: 6/15/05 6:07PM
Subject: FW: Silos Soil Drawings

Michelle,

As we discussed this afternoon by phone, the attached file and answers to Tom's questions (listed in Tom's email) explain this task in more details. Please review the information and let me know how we can proceed. Thanks.

J.D.

> -----Original Message-----
> From: Miller, Frank
> Sent: Wednesday, June 15, 2005 4:54 PM
> To: Chiou, Jyh-Dong
> Subject: RE: Silos Soil Drawings
>
> JD,
>
> Below are the answers to Tom's questions (in Blue). This proposed excavation has been accelerated to immediately remove the highly radioactive source soil beneath the silos footprints. The excavation represents only a subset of the overall excavation that has been designed to remediate the entire silos area. USEPA requested a separate drawing to be submitted for this accelerated excavation. We will also forward to them and OEPA an outline of this accelerated scope (attached), which will address OEPA's concerns.
>
> Frank
>
> > <<Outline for Removal of Highly Radioactive Soil at Silo 1.doc>>
>
> -----Original Message-----
> From: Tom Schneider [mailto:Tom.Schneider@epa.state.oh.us]
> Sent: Wednesday, June 15, 2005 10:32 AM
> To: Johnny.Reising@fernald.gov; Jyh-Dong.Chiou@fernald.gov
> Cc: Kelly Kaletsky; Michelle Waller; Saric.James@epamail.epa.gov;
> michelle.cullerton@ttemi.com
> Subject: Silos Soil Drawings
>
>
> JD & Johnny,
>
> I talked with Michelle and Kelly this morning as well as looked over
> the submittal "Transmittal of Draft Area 7 Silos 1 & 2 Radium
> Contamination Excavation Plan Drawing." Ohio EPA understands Fluor's
> desire to rush the excavation, however we can not approve proceeding
> with the excavation based upon the incomplete information provided.
> Some very basic requirements of an excavation plan were not included. A
> list of very basic issues that aren't addressed are provided below:
>
> 1. No characterization data is presented. The RI/FS data that represent this soil, which is directly beneath the silos themselves and is the extent of this excavation, has already been submitted with the request for Silos Berm removal (Silo DCN 724).
> 2. No basis for the design depths (or even the design depths
> themselves) is presented. The design depths are based on RI/FS data and the actual depth of the

decant sump. The intent of this abridged excavation plan is to target the highly radioactive soil for immediate removal. This excavation is only a subset of the overall excavation that will be necessary to remediate the silos area. The predesign data that defines the overall excavation will be included as part of the Area 7 Silos and General Area IRDP.
> 3. No excavation control is presented. How will excavation control
> occur to assure the soil going to the OSDF meets the WAC, considering
> the standard use of real-time is not an option? Excavation control will be performed as prescribed by Section 5.1 of the PSP Guidelines for General Characterization for Sitewide Soil Remediation. This includes the use of physical sampling where real-time scanning is not an option. Additionally, WAO will be present for the entirety of this excavation as usual.
> 4. What soil will be used to plug the K-65 trench? Will there be
> sampling at the bottom of the trench prior to plugging? The intent of the plug is to prevent runoff from the non-excavated concrete trench from entering remediated areas. The plug will be inside of the open-ended concrete trench, therefore, any suitable soil can be used. However, the plug material will be considered AWAC and be sent offsite for disposal along with the remainder of the trench once excavated (at a later date).
> 5. How will the digging of the K-65 trench be handled to ensure the
> AWAC soil excavated is properly managed, segregated and handled to
> ensure non-AWAC soils aren't impacted? > The entire concrete trench will be excavated as a typical AWAC area with dedicated trucks and equipment. Because this is a Tc99 AWAC area, physical samples will be collected beneath the former trench and on all si> dewalls. This will be done in the same manner as other sections of the K65 Trench that have already been remediated.
> 6. Considering the dose rates of the soil in this area are higher than
> any other soil excavation completed to date, special material handling
> issues should be presented as well as management plans within the OSDF
> to ensure placement of below WAC soils doesn't negatively impact cell
> operations/worker safety. The excavation and loadout of this soil will be controlled in the same manner as the Silos structures themselves were done. The placement will be done in the typical manner that Thorium impacted material is placed in the cell with all appropriate controls and personnel safety measures as required by the RadCon procedures and sufficient to protect personnel.
>
> Assuming DOE/FF actually has answers to these issues, a process for
> providing the information to us will need to be developed. Please
> contact Michelle Waller to further discuss.
>
> TomS
>
> Thomas A. Schneider
> Office of Federal Facilities Oversight
> Ohio EPA
> t (937) 285-6466
> f (937) 285-6404
> http://offo2.epa.state.oh.us
> tom.schneider@epa.state.oh.us

those of the individual sender and may not necessarily reflect the views of the company.
****

CC: "Alkema, Ken" <Ken.Alkema@fernald.gov>, "Reising, Johnny" <Johnny.Reising@fernald.gov>, "'donna.bohannon@epa.state.oh.us'" <donna.bohannon@epa.state.oh.us>, "'tom.schneider@epa.state.oh.us'" <tom.schneider@epa.state.oh.us>, "'michelle.cullerton@ttemi.com'" <michelle.cullerton@ttemi.com>, "'saric.james@epamail.epa.gov'" <saric.james@epamail.epa.gov>

Scope of Accelerated Excavation of Highly Radioactive Soil at Silo 1 & 2 Footprint

The intent of this abridged excavation plan is to target the highly radioactive soil in the vicinity of the Silo 1 & 2 footprints for immediate removal as well as to expose the decant sump that still contains waste material that must be processed through the treatment facility. Once the decant sump has been exposed, D&D will transport any waste material that remains in the tank to the TTA for processing and subsequently size reduce the tank for off site disposal through SP-7. This accelerated excavation is only a subset of the overall excavation that will be necessary to remediate the silos area. A separate Integrated Remedial Design Package will be submitted for agency review and approval that governs the remediation of the remainder of the Silos Footprint as well as several other large sections of Area 7.

Outline for Removal of Highly Radioactive Soil at Silo 1 & 2 Footprint

1. Remove all above-grade Silos 1 & 2 bridges material to OSDF
2. Collect physical samples for Total U at surface of Silo 1 and Silo 2 (satisfy real-time lift scan requirement)
3. Remove first lift of excavation around Silo 2 and decant sump sending any AWAC to SP-7 and meets-WAC to OSDF.
4. Collect physical samples for Total U at surface of second lift (satisfy real-time lift scan requirement)
5. Remove second lift of excavation around Silo 2.
6. Collect physical samples for Total U at surface of third lift [if third lift is necessary](satisfy real-time lift scan requirement)
7. Expose decant sump
8. Allow D&D to clean and remove decant sump.
9. Sample soil adjacent to the K65 Trench to determine extent of AWAC Tc99 area.
10. Remove K65 Trench and any identified soil as AWAC and send to SP-7.
11. Collect physical samples beneath the former trench and on all sidewalls for Tc99, (and uranium to satisfy real-time lift scan requirement).
12. Confirm that all AWAC soil has been removed beneath K65 Trench.
13. Remove first lift of excavation around Silo 1 and remaining K65 Trench footprint sending any AWAC to SP-7 and meets-WAC to OSDF.
14. Collect physical samples for Total U at surface of second lift (satisfy real-time lift scan requirement)
15. Remove second lift of excavation around Silo 1.
16. Collect physical samples for Total U at surface of third lift [if third lift is necessary](satisfy real-time lift scan requirement)
17. Stop at proposed design depth (defined by historical slant boring data collected from beneath Silos 1 & 2 footprints).