Department of Energy

Ohio Field Office
Fernald Closure Project
175 Tri-County Parkway
Springdale, Ohio 45246

OCT 17 2006

DOE-0011-07

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

Mr. Thomas Schneider, Project Manager
Ohio Environmental Protection Agency
Southwest District Office
401 East Fifth Street
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

TRANSMITTAL OF RESPONSES TO COMMENTS ON THE OPERABLE UNIT 4 COMPLEX SILOS 1 AND 2 REMEDIATION FACILITY DECONTAMINATION AND DISMANTLEMENT PROJECT COMPLETION REPORT

Reference: 1) Letter, James Saric to Johnny Reising, "Silos 1 and 2 Remediation Facility Completion Report," dated September 13, 2006

2) Letter, Thomas Schneider to Johnny Reising, "Comments - Project Completion Report, Operable Unit 4 Complex Silos 1 and 2 Remediation Facility D&D," dated September 20, 2006

Enclosed are responses to the United States Environmental Protection Agency (EPA) and Ohio Environmental Protection Agency comments on the Operable Unit 4 Complex Silos 1 and 2 Remediation Facility Decontamination and Dismantlement (D&D) Project Completion Report. Also enclosed is a change page incorporating the comments from the EPA. This change page is for Pages 5 and 6 of the subject D&D Closeout Report.

If you have any questions, please contact me at (513) 648-3139.

Sincerely,

Johnny Reising

Johnny W. Reising
Director

Enclosures

cc w/enclosure:
T. Schneider, OEPA-Dayton (three copies of enclosure)
G. Jablonowski, USEPA-V, SRF-5J
M. Cullerton, Tetra Tech
M. Shupe, HSI GeoTrans
S. Helmer, ODH
AR Coordinator, Fluor Fernald, Inc./MS6

cc w/o enclosure:
F. Johnston, Fluor Fernald, Inc./MS12
C. Murphy, Fluor Fernald, Inc./MS1
P. O'Neill, Fluor Fernald, Inc./MS60
T. Terry, Fluor Fernald, Inc./MS1

processor shear and hoe ram attachment. Materials generated during dismantlement of Building 94B included structural and miscellaneous steel, equipment, concrete, rubber roofing, piping, drywall, fabric doors and conduit/wire. Debris from the rail loadout building, electrical room, lab room, control room, ready room, new container receipt, compressor room, dry additive room and HEPA ventilation room (except for the HEPA contents) was shipped as clean debris to an offsite landfill. All other Building 94B debris was placed in the On-Site Disposal Facility.

Photos
Photos 2 and 3 of Attachment 3 show the following activities for the D&D of Building 94B:

2 – Building 94B Structural Demolition
3 – Building 94B Structural Demolition

2.2.3 Building 94C – Silos 1&2 Tank Transfer Area (TTA)

Background
Building 94C (Silos 1&2 Tank Transfer Area) was a concrete structure that provided secondary containment of stored wastes. This structure was 152 feet long, 152 feet wide and approximately forty feet tall with concrete walls for radiation shielding. The first twenty feet in height of the transfer storage tanks enclosure was 24 inches thick and the next twenty feet in height of the transfer storage tanks enclosure was 18 inches thick.

The TTA system staged residues received from Silos 1&2 (Components 34A & B) in four 750,000-gallon storage tanks for transfer to the Silos 1&2 Remediation Facility (Building 94B) that was located immediately east of the TTA.

Remedial Tasks
Remedial tasks began with a high-pressure washdown of the storage tank interior surfaces and application of encapsulant. Building 94C tanks and equipment were demolished using a track hoe mounted shear. The Building 94C concrete exterior was demolished using a track hoe with a concrete processor shear attachment and hoe ram. Materials generated during dismantlement of Building 94C included structural and miscellaneous steel, concrete, equipment, piping and conduit/wire. Sluice and slurry piping were packaged and shipped to Energy Solutions in Clive, Utah. All other debris was placed in the On-Site Disposal Facility. PCN 1

Photos
Photo 4 of Attachment 3 shows the following activity for the D&D of Building 94C:

4 – Building 94C Structural Demolition

2.2.4 Building 94D – Silos 1&2 Carbon Bed Facility

Background
Building 94D (Silos 1&2 Carbon Bed Facility) was a fifteen feet long by ten feet wide by ten feet high steel shell containing approximately 40,000 lbs of activated carbon. There were four beds in this facility. The carbon bed structure was a box culvert with ten inch

thick walls. The carbon bed facility foundation was approximately thirty feet wide by 68 feet long and three feet thick. The Building 94D four concrete shielding walls were all at least one foot thick and extended upwards to ten feet.

The Building 94D activated carbon trapped radon and allowed the radon to decay to its daughter products. The radon control system used four carbon beds operating in parallel.

Remedial Tasks
Remedial tasks began with removal of the Building 94D concrete, exposing the four carbon-filled vessels. The top of each vessel was sheared open. The carbon was saturated with water, scooped out using a track hoe equipped with a bucket and placed in the beds of articulating dump trucks. The saturated carbon debris was transported to the OSDF. The Building 94D shell and beds were demolished using a track hoe mounted shear. The concrete shielding walls were demolished using a track hoe with a concrete processor shear attachment and hoe ram attachment. Materials generated during dismantlement of Building 94D included miscellaneous steel, concrete, equipment, piping, and conduit/wire. Steel shielding plates were shipped to Oak Ridge Tennessee for recycle. All other debris generated was placed in the On-Site Disposal Facility. PCN 1

Photos
Photo 5 of Attachment 3 shows the following activity for the D&D of Building 94D:

5 – Building 94D Structural Demolition

2.2.5 Building 94E – Silos 1&2 Radon Control System (RCS)

Background
Building 94E (Silos 1&2 Radon Control System RCS) was a sixteen feet tall steel frame structure that housed the RCS process equipment. This included the desiccant drying system, condensate holdup tanks, filters and fans. The first floor area was provided with two feet thick walls for shielding to be as low as reasonably achievable compliant.

Building 94E received off-gasses from the Silos, SWRS, TWRS, the TTA System and the Silos 1&2 Remediation Facility. The RCS removed radon from gas streams, reduced radon releases to the atmosphere, monitored all releases to the atmosphere for radon and other radiological material and mitigated system upsets.

Remedial Tasks
Building 94E was demolished using a track hoe mounted shear and hoe-ram. Materials generated during dismantlement of Building 94E included concrete, structural and miscellaneous steel, equipment, piping, and conduit/wire. The Building 94E debris was shipped as clean debris to an offsite landfill.

Photos
Photo 6 of Attachment 3 shows the following activity for the D&D of Building 94E:

6 – Building 94E Structural Demolition

RESPONSES TO U.S. AND OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE OPERABLE UNIT 3 OPERABLE UNIT 4 COMPLEX SILOS 1&2 REMEDIATION FACILITY DECONTAMINATION AND DISMANTLEMENT PROJECT COMPLETION REPORT AUGUST 2006

FERNALD CLOSURE PROJECT
FERNALD, OHIO

OCTOBER 2006

U.S. DEPARTMENT OF ENERGY

RESPONSES TO U.S. ENVIRONMENTAL PROTECTION AGENCY TECHNICAL REVIEW COMMENTS ON THE PROJECT COMPLETION REPORT FOR SILO 1 & 2 REMEDIATION FACILITY DECONTAMINATION AND DISMANTLEMENT AUGUST 2006

FERNALD CLOSURE PROJECT

SPECIFIC COMMENTS

1. Commenting Organization: U.S. EPA Commentor: Saric
Section #: 2.2.3 Page #: 5 Line #: NA Code: C
Original Specific Comment #: 1
Comment: The text states that materials generated during dismantlement of Building 94C included structural and miscellaneous steel, concrete, equipment, piping, and conduit/wire. The text should be revised to state whether these materials were disposed of in the On-Site Disposal Facility (OSDF) or as clean debris in an off-site landfill.
Response: Agree.
Action: Section 2.2.3 of the Project Completion Report will be revised. A sentence will be added to the end of the paragraph "Remedial Tasks" to read: "Sluice and slurry piping were packaged and shipped to Energy Solutions in Clive, Utah. All other debris was placed in the On-Site Disposal Facility."

2. Commenting Organization: U.S. EPA Commentor: Saric
Section #: 2.2.4 Page #: 6 Line #: NA Code: C
Original Specific Comment #: 2
Comment: The text states that materials generated during dismantlement of Building 94D included miscellaneous steel, concrete, equipment, piping, and conduit/wire. The text should be revised to state whether these materials were disposed of in the OSDF or as clean debris in an off-site landfill.
Response: Agree.
Action: Section 2.2.4 of the Project Completion Report will be revised. A sentence will be added to the end of the paragraph "Remedial Tasks" to read: "Steel shielding plates were shipped to Oak Ridge Tennessee for recycle. All other debris generated was placed in the On-Site Disposal Facility."

RESPONSES TO OHIO ENVIRONMENTAL PROTECTION AGENCY REVIEW COMMENTS ON THE PROJECT COMPLETION REPORT FOR SILO 1 & 2 REMEDIATION FACILITY DECONTAMINATION AND DISMANTLEMENT AUGUST 2006

FERNALD CLOSURE PROJECT

SPECIFIC COMMENT

1. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Response to Comments Page #: Line #: Code: C
Original Comment#: 23
Comment: The report lacks a "Lessons Learned" section. Specific lessons learned from this project would include the soil contamination that occurred during the demolition of the Silos 1&2 Remediation Facility. Costs associated with the radium-226 contamination, subsequent remediation, and certification of affected areas should be included. Also, an explanation on how this type of release could occur after all of DOE's experience in D&D at the Fernald site needs to be documented in this report.
Response: Partially agree.
Action: While it is acknowledged that the quantity of soil eventually needing to be excavated was greater than originally thought, the quantity of soil contaminated could not have been accurately estimated since, based on previous D&D experience, the actual amount of resultant soil contamination is directly affected by many variables, including:

- The quantity of process material present.
- The physical composition of the material.
- The amount of dust suppression water and rainfall.
- The permeability of the surrounding soils.
- Traffic within the work area.

As a result of the D&D planning, appropriate controls were put in place to control the spread of contamination and confine it to the posted work area. These controls included the use of postings, PPE, clay berms, run-off control and collection basins. These controls proved to be very successful in limiting any significant spread of contamination during D&D to only soil immediately adjacent to the Silos 1&2 Remediation Facility. The impacted soil has been removed by subsequent soil remediation process.

In accordance with DOE Order 413.3 (Program and Project Management for the Acquisition of Capital Projects), after declaration of completion DOE will develop site wide lessons learned in the area of D&D specifically discuss the interface between D&D projects and the mitigation of soil contamination within a D&D footprint. While a lessons learned section has been included in previous project closeout reports, they have not been routinely included in recent reports because the D&D effort at the FCP is coming to an end. DOE FCP will create a site wide lessons learned database per DOE O 413.3 during the development of the Critical Decision 4 process to capture all lessons learned.