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**BUILDING 4A COMPLEX PROJECT COMPLETION REPORT COMMENT
RESPONSE**

03/27/97

**DOE-0736-97
DOE-FEMP EPAS
8
RESPONSES**



Department of Energy

**Ohio Field Office
Fernald Area Office**

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MAR 27 1997

DOE-0736-97

**Mr. James A. Saric, Remedial Project Director
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. Saric and Mr. Schneider:

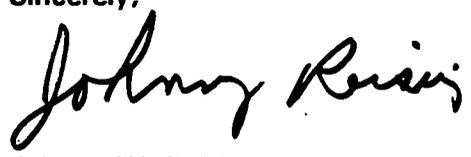
BUILDING 4A COMPLEX PROJECT COMPLETION REPORT COMMENT RESPONSE

- References:**
- 1. Letter, Saric to Reising, DOE, "Building 4A Complex Project Completion Report," dated February 26, 1997.**
 - 2. Letter, Hull (for Schneider) to Reising, "Conditional Approval of the Final Building 4A Complex Completion Report," dated February 19, 1997.**
 - 3. Letter, Reising to Saric and Schneider, "Building 4A Complex Project Completion Report," dated January 15, 1997, (Letter No. DOE 01427-97).**

Enclosed are the responses to comments from the U.S. Environmental Protection Agency (EPA) and Ohio Environmental Protection Agency (OEPA) on the Building 4A Complex Project Completion Report (References 1 and 2), and a copy of the revised Project Completion Report. The Building 4A Complex Project Completion Report was submitted to the U.S. EPA and OEPA on January 15, 1997, (Reference 3).

If you have any questions, please contact John Trygier at (513) 648-3154.

Sincerely,



Johnny W. Reising
Fernald Remedial Action
Project Manager

FEMP:Trygier

Enclosures: As Stated

cc w/encs:

- N. Hallein, EM-42/CLOV
- A. Shah, DOE-FEMP
- G. Jablonowski, USEPA-V, 5HRE-8J
- R. Beaumier, TPSS/DERR, OEPA-Columbus
- T. Schneider, OEPA-Dayton (3 copies total of enc.)
- F. Bell, ATSDR
- D. S. Ward, GeoTrans
- R. Vandegrift, ODOH
- S. McLellan, PRC
- T. Hagen, FDF/65-2
- J. Harmon, FDF/90
- AR Coordinator/78

cc w/o encs:

- T. Borgmen, FDF/44
- T. Clark, FDF/52-3
- L. Goidell, FDF/65-2
- K. Kolthoff, FDF/52-3
- C. Little, FDF/2
- T. Walsh, FDF/65-2
- EDC, FDF/52-7

Action: Section 3.1.1.C has been changed to: "As water from the decontamination wash process was collected into four 6,500 gallon collection tanks pending sampling and analysis for Building 4A contaminants of concern. The combined project wastewater was sampled as described in the Project Specific Sampling Plan, except for the Variance, both included in Attachment B. Attachment B also includes the wastewater sampling data for each of the four tanks. After review of the analytical data, the effluent was then transferred to the FEMP waste water treatment system. The wastewater samples were analyzed for RCRA metals, volatile and semi-volatile organic compounds and uranium. The discharge from the FEMP waste water treatment system is dimple tested for the presence of uranium prior to discharge in accordance with the site's National Pollutant Discharge Elimination System Permit. Quality Assurance/Quality Control samples were collected in accordance with applicable project Data Quality Objectives. equipment decontamination water was evaluated for nuclear criticality."

Commenting Organization: U.S. EPA
 Section #: 3.1.2 Page #: 8
 Original Specific Comment #: 2

Commentor: Saric
 Line #: NA

Comment: The text states that the effluent was transferred to the FEMP wastewater treatment system after the analytical data had been reviewed. The text should be revised to include the analytical data.

Response: Agree. The wastewater sample results will be included in Appendix B of the Project Completion Report. The wastewater was sampled for RCRA regulated metals, volatile and semi-volatile organic compounds, and total uranium. After reviewing the analytical results it was determined that the decontamination water was within the acceptance criteria to the facility wastewater treatment system.

Action: The text has been modified to reference the data and the sampling procedure.

Commenting Organization: U.S. EPA
 Section #: 3.2 Page #: 9
 Original Specific Comment #: 3

Commentor: Saric
 Line #: NA

Comment: The text does not specify the type of information related to Building 4A Complex material disposition that will be provided in the final remedial action report. The transmittal letter states that the final remedial action report will address final disposition of the Building 4A Complex materials. The reference to final disposition in the transmittal letter is vague and should be omitted, and the text of section 3.2 should be revised to specify the material disposition information that will appear in the final remedial action report.

Response: Agree. The material disposition information is described in the draft Operable Unit 3 Integrated RD/RA Work Plan, November 1996, Section 4.5 Remedial Action Reporting:

"The Final Remedial Action Report will serve as the final report for the OU3 integrated remedial action. Although OSWER Directive 9355.4A applies to fund-financed remedial action, this report will be prepared consistent with that directive by including the following elements:

- summary of the treatment and disposition routes taken by materials generated from each project;"

Action: The Project Completion Report has been revised to reference the above text.

Commenting Organization: U.S. EPA

Commentor: Saric

Section #: 3.2

Page #: 9

Line #: NA

Original Specific Comment #: 4

Comment: The text provides no information regarding use of the Sitewide Waste Information, Forecasting, and Tracking System (SWIFTS) database for tracking Building 4A Complex waste material. The volume of waste material piled in various interim storage locations at the site is a concern of the U.S. Environmental Protection Agency (U.S. EPA). It is U.S. EPA's understanding that the SWIFTS database can provide accurate, detailed information regarding waste material placed or destined for placement in interim storage locations. The text should be revised to explain how the SWIFTS database is used to track Building 4A Complex waste material. In addition, Section 3.2 should be revised to identify the total quantities of waste materials in the various storage locations.

Response: Agree. This SWIFTS database information is described in the draft Integrated RD/RA Work Plan, November 1996, Section 3.3.2.2 Segregation, Containerization and Tracking (the shaded text is the revision submitted to U.S. EPA, on March 7, 1997):

"All information pertaining to the tracking of above-grade material will be entered into the FEMP Sitewide Waste Information, Forecasting and Tracking System (SWIFTS) database. The SWIFTS database is a computerized system that was designed to allow for tracking of all wastes from project generation to disposition location. SWIFTS tracks containerized and uncontainerized (bulk) waste from its point of origin to its final disposition, whether off-site shipment or burial in the OSDF. Waste in interim storage awaiting final disposition is tracked according to the originating project, current location, characterization status, debris type, and quantity of material, etc. Debris is currently tracked by the weight of the material while soil and soil-type wastes are tracked by volume. Reports using SWIFTS may be produced on demand to summarize the material management status for each of the projects or any variety of status reports using the input data for materials generated to date."

Action: Based on the March 11, 1996, teleconference between Mr. Saric, U.S. EPA, and Mr. Trygier, U.S. DOE, the Project Completion Report Table 2 has been updated to provide the breakdown of Building 4A Complex material container locations by waste category and storage location effective March 14, 1997. The bulk stored waste and storage locations are provided in Table 2. Total Building 4A Complex material container storage per storage area is provided.

Additionally, three examples of SWIFTS database reports are attached to the Project Completion Report as Attachment C. Attachment C contains three of the many different SWIFTS reports that can be generated. The SWIFTS database allows more than 200 database search drivers that can be used to retrieve and select desired fields of information such as: container type, generating project, material storage location, and material type. The text has been changed to reference the SWIFTS database and Attachment C.

Comment: The text provides information regarding project specific air monitoring activities associated with decontamination and dismantlement (D&D) of the Building 4A Complex. The air monitoring data provided was collected during the D&D activities conducted August 9 through 23, 1996. Section 3.3.3 should be revised to include air monitoring data collected during the safe shutdown activities. In addition, the text refers to data collected at air monitoring station (AMS) -1B. However, the "Location Map for Integrated Environmental Monitoring Project Air Monitoring" dated January 31, 1997 does not include AMS-1B. The text should be revised to explain this discrepancy.

Response: Supplemental air monitoring is conducted to detect potential airborne radioactivity during D&D activities, primarily after the building has been opened to the environment. Prior to the opening of the building the opportunities for air borne releases to the environment are minimal.

Safe Shutdown activities, in accordance with Removal Action No. 12, are conducted inside building structures, the holdup material is containerized, the containers are swipe sampled for radiological contamination, and the personnel performing the work are subject to personal radiological monitoring. Safe Shutdown activities precede the D&D project specific air monitoring activities that were described in Section 2.3 of the Building 4A Complex Project Implementation Plan.

Table 3 of the Project Completion Report summarized the data from supplemental air monitoring conducted during the D&D portion of the project, including the minimum, average and maximum concentration of total uranium from March 31, 1995 to October 25, 1996.

Action: Table 3 and the text has been updated to show and discuss the air monitoring results from March 31, 1995 to November 8, 1996. The two weeks additional data illustrate the decrease in air emission from Building 4A after completion of field activities.

A summary of the project specific air monitoring data is included in the Project Completion Report, Attachment D, along with a diagram showing the site perimeter air monitoring locations. AMS-1B is a site boundary monitor and, thus, is shown in the diagram in Attachment D. In the Draft final Integrated Environmental Monitoring Project, dated March 1997, Figure 6-3 shows AMS-1B. Inadvertently, AMS-1B is labelled AMS-1A in Figure 6-4.

General Comments

Commenting Organization: Ohio EPA

Commentor: Ohio Department of Health

Section #: Not Applicable (NA)

Page #: NA

Line #: NA

Original General Comment #: 1

Comment: It would be appropriate to include the savings to worker exposure experienced by those staff most impacted by the changes to Performance Specification 01517 as compared to worker involved in similar D&D projects in the past. Lessons Learned may be assimilated into ALARA goals for future projects.

Response: The change in Specification 01517 helped maintain worker radiological exposures to As Low As Reasonably Achievable (ALARA). The Specification change allowed a change in work practice from individually surveying each piece of equipment at the radiological survey point. Prior to this change in work practices radiological technicians spent approximately 40 hours per week conducting surveys on the process equipment removed from Plant 4 by the laborers. This equipment had an estimated average range of 50,000 to 100,000 disintegrations per minute (dpm) per 100 square centimeters (cm²) beta-gamma. After the change in work practices, the construction coordinator conducted the visual contamination inspections in lieu of radiological technicians' surveys. The exposure of the laborers handling the material remained essentially the same. However, the radiological technicians had a reduced potential for worker exposure, estimated to be 1.4 millirem per quarter.

Action: None.

Commenting Organization: Ohio EPA

Commentor: Ohio Department of Health

Section #: Not Applicable (NA)

Page #: NA

Line #: NA

Original General Comment #: 2

Comment: The work practice of using a visual standard to determine the disposition of equipment/debris may be suitable for typical process residue but is inadequate for materials which may be stained or corroded and thus mask radioactive contamination. These materials should be collected and a survey conducted to determine their radiological status, particularly if there potential for recycle or release for unrestricted use.

Response: Quantitative radioactivity surveys for D&D debris were made for the purpose of identifying proper radiological safety precautions for workers. Quantitative radioactivity surveys (baseline, routine surveys, and swipe samples) were conducted prior to removing the exterior siding. The visual inspection processes were examined and accepted by Ohio EPA staff during a visit to Plant 4 specifically to review the inspection process and the role it played in the management of D&D wastes.

The production material from Plant 4 was either green salt (UF₄) or orange oxide (UO₃). The green or orange production residues are very distinctive colors and are easily distinguished from the colors observed for rust or metal staining. Any equipment or material considered to have a green or orange shading was determined not to meet the waste acceptance criteria for the on-site disposal facility and was, therefore, containerized for shipment to NTS as process equipment, Category C.

If and when a decision is made for unrestricted release, the materials must undergo an additional rigorous and thorough quantitative analytical process prior

to release as described in Department of Energy (DOE) Order 5400.5, soon to be codified at 10 Code of Federal Regulations (CFR) 834.

Action: None.