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**TRANSMITTAL OF RESPONSES TO THE SECOND
ROUND OF USEPA AND OEPA COMMENTS ON
THE OU5 RI/FS WORK PLAN ADDENDA
OCTOBER 1993**

07/27/93

**DOE-FN/EPA
11
RESPONSES
OU5**



Department of Energy
Fernald Environmental Management Project
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JUL 27 1993

DOE-2550-93

Mr. James A. Saric, Remedial Project Director
 U.S. Environmental Protection Agency
 Region V - 5HRE-8J
 77 W. Jackson Boulevard
 Chicago, Illinois 60604-3590

Mr. Graham E. Mitchell, Project Manager
 Ohio Environmental Protection Agency
 40 South Main Street
 Dayton, Ohio 45402-2086

Dear Mr. Saric and Mr. Mitchell:

TRANSMITTAL OF RESPONSES TO THE SECOND ROUND OF UNITED STATES ENVIRONMENTAL PROTECTION AGENCY AND OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE OPERABLE UNIT 5 REMEDIAL INVESTIGATION FEASIBILITY STUDY WORK PLAN ADDENDA, OCTOBER 1992

- References: 1) Letter, J. A. Saric to J. R. Craig, "Approval of the OU 5 Work Plan Addenda, Response to Comments," dated December 2, 1992
- 2) Letter, G. E. Mitchell to J. R. Craig, "Conditional Approval of the OU 5 Work Plan Addenda," dated November 24, 1992

Enclosed for your review are the subject responses. The work plan will be revised once final resolution of these comments is achieved.

If you or your staff have any questions regarding the responses, please contact Pete Yerace at (513) 648-3161.

Sincerely,

Johnny W. Rensing

for
 Jack R. Craig
 Fernald Remedial Action
 Project Manager

FN:Yerace

Enclosure: As Stated

4647

cc w/enc:

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Response: DOE agrees that collection and analysis of duplicate samples may be sound scientific practice relative to clearly defined project objectives and analytical requirements. Sampling and analytical protocol in this Work Plan Addenda is governed by the RI/FS QAPP. Given that the RI/FS QAPP and RI/FS Work Plan have received prior approval from both Ohio EPA and U.S. EPA, that neither document specifies this requirement, and that hand-auger soil sampling has already been completed in all OU5 Work Plan Addenda areas, this request cannot be met within the approved schedule and budget. The new soil sampling for OU5 being completed this summer (and future soil sampling programs) is governed by the SCQ which was approved this spring. The SCQ specifies duplicate analyses; therefore, duplicate analyses will be completed on soil samples collected in the new and future programs, as specified in the SCQ.

Action: No revision to the Work Plan is required.

3. Commenting Organization: U.S. EPA Commentor: J. Saric
Page # Section #

Comment: Original Comment 6: The schedule provided in the RI/FS monthly report does not specifically establish schedules for each of the sampling programs included in the work plan addenda. In addition, the schedule lists only start and end dates. A schedule that includes dates and time frames for field activities, laboratory analyses, data validation, and interim reporting should be developed and provided in the revised work plan addenda and updated in the monthly reports.

Response: DOE agrees with this comment. These scheduling documents have already been developed and are periodically updated.

Action: The Work Plan will be revised to incorporate a detailed schedule for each Work Plan area of investigation.

4. Commenting Organization: U.S. EPA Commentor: J. Saric
Page # Section #

Comment: New Comment: Review of the data presented for the Plant 1 Pad Area indicates that a significant data gap exists. The data gap involves the extent of groundwater contamination in the Plant 1 Pad Area. Although DOE's proposal to conduct two rounds of groundwater sampling and analysis for full hazardous substance list (HSL) parameters, full radiological parameters, and general groundwater quality parameters is acceptable, DOE proposes to sample only four wells in this area. DOE should investigate the extent of groundwater contamination west and southwest (the directions of groundwater flow) of the Plant 1 Pad. In addition, DOE should investigate the extent of groundwater contamination north of the Plant 1 Pad to determine whether the Plant 1 Pad is the source or an upgradient source exists.

Response: DOE agrees that additional data would be useful in characterizing the area.

Action: DOE refers the U.S. EPA to Specific Technical Comment # 1 of this submittal.

5. Commenting Organization: Ohio EPA Commentor: G. Mitchell
Page # Section #

Comment Comment # 29 (original Ohio EPA Comment # 2): DOE's response to comment # 19 fails to address a number of points discussed in Ohio EPA's comment. Integration with the RCRA program was not addressed nor was the fact that the piezometers were intended for one sampling event but will be used for at least three. Additionally, DOE must define the circumstances or conditions which they believe will necessitate replacing PVC with stainless steel.

Response: It has always been DOE's intent to transfer data analyses between the RI/FS and RCRA/CERCLA programs in order to more fully achieve the objectives of each program. RI/FS and RCRA staff are aware of each of the ongoing programs. The OU5 Work Plan Addenda has been prepared to primarily meet RI/FS sampling requirements and objectives in specific areas. Due to varying schedule and technical requirements in specific areas, DOE has elected to provide distinct work plans for each program, but share acquired analytical data where possible for interpretation and evaluation. DOE believes that the programmatic function of integrating the RI/FS and RCRA investigations is an administrative process beyond the scope of a specific technical work plan.

Standard practices used by industry in RCRA/CERCLA investigations accept initial groundwater sampling from 2" diameter piezometers. RI/FS approved procedures at the FEMP allow for the installation of shallow 2" piezometers to monitor and sample perched water in the glacial overburden, and 4" monitoring wells in the Great Miami Aquifer. Installation procedures are essentially equivalent and the integrity of the piezometers has been shown to provide reliable analytical data over multiple sampling events. Based on the dependability and longevity of these piezometers, DOE plans to continue their use, as stated in our response # 19 to U.S. EPA concerns.

DOE recognizes that VOC concentrations may have a detrimental affect on PVC casing used in piezometers and monitoring wells. Information available to DOE has shown that VOC impact on the integrity of PVC casing is a problem only where high concentrations of some VOCs are present in the zone being monitored. DOE has defined areas of known or suspected volatile organic contamination at the FEMP, and has agreed to use stainless steel where necessary, as stated in our response # 19 to U.S. EPA concerns. Considering the commonly quoted "Ohio EPA Inter-Office Correspondence" favoring PVC use in most cases, the fact that high concentrations of VOC contamination are not

wide-spread at FEMP, and those VOCs found at FEMP are typically found in low concentrations. DOE holds that blanket use of stainless-steel riser/screen is not justified. If new areas of VOC concern are identified, stainless-steel will be used as necessary.

Action: The Work Plan will be modified to incorporate the above responses concerning piezometers and stainless steel into Section 5.3.

6. Commenting Organization: Ohio EPA Commentor: G. Mitchell
Page # Section #

Comment: Comment # 47 (original Ohio EPA Comment # 3, KC-2 Warehouse, etc.): In DOE's response they stated that field screening technologies would be used for the selection of sampling locations. The use of field screening technologies is not discussed within the revised work plan. Ohio EPA still believes that both PCB and radiological field screening would enhance this sampling effort.

Response: DOE agrees with the comment. DOE has identified the primary potential contaminant source and surface water runoff areas from that source. DOE has proposed initial soil sampling to confirm the suspected presence of HSL, radiological and PCB contaminants. It is DOE's intent to conduct follow-on radiological and PCB field screening to define areas of contamination emanating from any point-sources identified in the soil sampling phase.

A Removal Action is presently in progress for the Scrap Metal Pile. Results of sampling conducted as part of this Removal Action will be reviewed for potential inclusion in the OU5 RI report

Action: Section 4.1 of the Work Plan will be modified to clarify DOE's plan to conduct follow-on radiological and PCB field surveying as part of the OU5 RI/FS if warranted by the results of initial soil sampling. A reference to the ongoing Removal Action at the Scrap Metal Pile as a potential data source for the OU5 RI/FS will also be incorporated into Section 4.1.

Specific Technical Comments

1. Commenting Organization: U.S. EPA

Commentor: J. Saric

Page #

Section #

Comment: Original Comment 8: DOE's response, which proposes conducting two rounds of groundwater sampling and analysis for HSL parameters, full radiological parameters, and general groundwater quality parameters is acceptable. However, DOE's proposal to sample only four wells is not acceptable for the following three reasons. First, DOE's response states that wells 1337, 1343(1341), and 1347 have been abandoned because of maintenance activities along the west side of the Plant 1 Pad. Because the groundwater flow is to the southwest, wells downgradient of the Plant 1 Pad in the area of the abandoned wells (and slightly farther west) are critical in defining the nature and extent of contamination in the Plant 1 Pad Area. Second, the highest levels of radionuclide contamination in the Plant 1 Pad Area were found in samples collected from wells 1337 and 1339 along the northern portion of the Plant 1 Pad. Groundwater samples should be collected from the wells upgradient (north) of the northern portion of the Plant 1 Pad to determine the source of the perched groundwater contamination. Third, the groundwater quality data that DOE has collected to date (as presented in the work plan addenda) represents an incomplete data set. The expanded groundwater sampling program should include sampling groundwater from all wells in the Plant 1 Pad Area and analysis for full HSL parameters, full radiological parameters, and general groundwater quality parameters. This sampling should include wells 1333 through 1350, and replacement wells for wells 1337, 1343(1341), and 1347.

Response: DOE agrees that additional sampling would more fully characterize the area, and that to more completely address the issue, wells 1351 through 1360 to the south of the pad should have been included in the U.S. EPA recommended list. However, DOE believes that groundwater sampling with a full suite of recommended analyses on an additional 27 existing wells, and the installation of three new wells is impractical considering the RI/FS objectives, budget and schedule, and represents a substantial under-utilization of existing analytical data. Therefore, DOE proposes to research existing analytical data from surrounding wells and to sample those existing wells completed in the known sand body which passes from northeast to southwest under the pad. DOE will also install and sample replacement wells for the wells plugged as part of the Plant 1 Pad Removal Action.

Action: The Work Plan will be revised to incorporate the above response. The additional sampling will be completed as part of the Addenda or a future sampling program to be completed this summer (i.e., Snapshot Sampling and Additional Well Installation Programs).

2. Commenting Organization: U.S. EPA
Page # Section #

Commentor: J. Saric

Comment: Original Comment 11: DOE responded to this comment by stating that ten additional soil samples were collected, that the buildover criterion of 35 picocuries per gram was met, and that additional soil or groundwater sampling in the vicinity of locations 05455 and 05458 is not warranted. This response is not acceptable for two reasons. First, DOE does not provide the location where the ten additional soil samples were collected or the sample analytical results. Since these samples were analyzed by Westinghouse Environmental Management Company of Ohio as part of its plant maintenance and operation, the analytical results may not meet RI/FS requirements for data quality. Second, groundwater contamination in the perched zone appears to be pervasive in the study area, and soils from locations 05455 and 05458 exhibit the highest total uranium concentrations among those collected in the area. DOE should investigate the level of groundwater contamination in a potential source area.

Response: DOE agrees that the ten additional sampling points and tabulated data should be shown, and that Analytical Support Levels and validation criteria should also be included. Pre-construction excavation between the Services and Health and Safety Buildings has removed the most contaminated soils, as confirmed by buildover sampling and analyses. The Production Area as a whole is considered to be a source area as a result of air deposition, spills, transportation, etc. DOE agrees that "groundwater contamination in the perched water zone appears to be pervasive in the study area." As stated in the OU5 Work Plan Addenda, the objectives of the proposed work are to: "further investigate the extent of soil and perched groundwater contamination in the southern portion of the southeast quadrant of the Production Area...define the downgradient limits of the perched groundwater contamination south of the Production Area and determine if the subsurface soils and perched groundwater underlying the administration/services area are contaminated." DOE believes that the proposed investigations will meet the RI/FS objectives.

Action: The Work Plan will be revised to include the additional WEMCO sampling points in Figure 1 and the tabulated data from those samples in Section 2.2. Also, DOE is reviewing the groundwater results of the OU5 Work Plan Addenda. The data are plotted on contaminant occurrence and distribution maps as they are received from the laboratory. These figures (based on unvalidated data) will be completed as soon as all Addenda data are available and forwarded to the U.S. EPA and Ohio EPA. Figures with radiological data available to date are enclosed. (Note that groundwater data were collected from several wells in the southeast corner of the Production Area.) The Addenda data and groundwater monitoring data collected during the "Groundwater Snapshot" (not yet available) will be reviewed (along with other RI data) in light of the EPA comment to assure that perched groundwater in the study area has been adequately characterized for RI purposes. (The results of the "Groundwater Snapshot" will also be plotted on a figure and forwarded as soon as they are received).

6. Commenting Organization: Ohio EPA Commentor: G. Mitchell
Page # 3 Section # 1.2

Comment: Section 1.2: DOE should have done a better job of integrating information gained from the Plant 1 Pad Removal Action into this work plan. The data gained should have been included in the discussion and any additional data gaps should be addressed. One would think that the amount of data from the RA would have addressed some concerns or possibly created new ones to be addressed, yet no less or more work is proposed.

Response: See response to Specific Technical Comment # 1.

Action: DOE refers Ohio EPA to the "Action" proposed under Specific Technical Comment # 1 of this submittal.

7. Commenting Organization: Ohio EPA Commentor: G. Mitchell
Page # 38 Section # 2.3 Paragraph # 4

Comment: Section 2.3, 4th Paragraph: DOE should provide a better description of the buildover sampling results. Additionally, it should be noted that the buildover criteria are not final remediation concentrations and may not be low enough. The goal of the investigation is to determine the extent of contamination, not to determine that contamination is below the buildover criteria.

Response: See response to Specific Technical Comment # 2.

Action: Refer to "Action" for Specific Technical Comment # 2.

8. Commenting Organization: Ohio EPA Commentor: G. Mitchell
Page # 124 Section # Appendix C

Comment: Appendix B, Table A-4: Define "N".

Response: This comment is to Appendix C, Table A-4 rather than Appendix B. DOE agrees with this comment.

Action : The Work Plan will be revised to define "N" as "Not Analyzed" in Appendix C.

9. Commenting Organization: Ohio EPA
Page # 125 Section # Appendix C

Commentor: G. Mitchell

Comment: Appendix B. Figure 3: Locations 238 and 239 are not included in the figure.
Please revise.

Response: This comment is to Appendix C. Figure 3 rather than Appendix B. DOE agrees
with this comment.

Action: The Work Plan will be revised to correct the map shown as Figure 3 in
Appendix C.

Attachment: Two figures depicting radiological results from perched water sampling conducted as part
of the OU5 Addenda. Results received as of 6-10-93.