Department of
Fernald Environmental Management Project
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SEP 2 1 1992

DOE-2755-92

3747

Mr. James A. Saric, Remedial Project Director
U.S. Environmental Protection Agency
Region V - 5HR-12
230 South Dearborn Street
Chicago, Illinois 60604

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

Dear Mr. Saric and Mr. Mitchell:

RESPONSES TO COMMENTS PERTAINING TO THE OPERABLE UNIT (OU) 2 TREATABILITY STUDY REPORT

Enclosed are the responses to the United States Environmental Protection Agency (U.S. EPA) comments on the Operable Unit (OU) 2 Treatability Study Report. As agreed upon, after your review and evaluation, the proposed change pages will be generated and submitted as an addendum and attachment to the document.

If you or your staff have any questions, please contact Johnny Reising at FTS/Commercial 513-738-9083.

Sincerely,

Johnny Reising

for Jack R. Craig
Fernald Remedial Action
Project Manager

FN:Reising

Enclosure: As Stated

cc w/enc.:

3747

J. J. Fiore, EM-42, TREV
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Comment Responses on the

OPERABLE UNIT 2 TREATABILITY STUDY REPORT

SEPTEMBER 1992

3747

RESPONSES TO COMMETNS PERTAINING TO THE OPERABLE UNIT (OU) 2 TREATABILITY STUDY REPORT

09-21-92

DOE-2755-92
DOE-FN/EPA
2
LETTER

SUMMARY OF COMMENTS/RESPONSES
Draft Treatability Study Report
Operable Unit 2
Technical Review Comments

Date Document Issued August 21, 1992
Date Comments Due September 17, 1992 /Received _____
Date Responses Due NA
Date Report Due _____

Codes

M = Major issue that needs to be addressed.

C = Clarification or additional information needed; response may be in Summary of Comment Responses and/or next version of document.

E = Editorial comments will be noted and corrected but may be dropped from the Summary of Comment Responses.

GENERAL COMMENTS

1 **Commenting Organization:** **Commentor:**
Section #: General Comments **Pg. #:** **Line #:** **Code:** C
Original Comment #:

Comment: The report, as well as the data contained in it, is presented in a manner that is very hard to understand and follow, partly because of the large amount of data collected during the study and partly because of the manner in which the data is presented in the report. Many apparent inconsistencies exist between tables and between tables and text. Also, see specific comments below. For example, Tables 4-17 through 4-21 present data that compares the 95 percent upper confidence limits (UCL) to toxicity characteristic (TC) criteria. However, the text only includes a discussion comparing individual sample results to TC criteria. The tables should present easily understandable and accurate summaries of the data and the text should describe the data in the tables.

Response: Inconsistencies will be corrected. The report, as presented, is organized in accordance with the EPA's Guide for Conducting Treatability Studies Under CERCLA. The report contains a tremendous volume of highly complex technical information, which is best presented in two and three dimensional graphical form. Interpretation and explanation of the graphs are presented in the text and the body of raw data used to develop the graphs is presented in the appendices.

Action: Text will be revised as required.

2 **Commenting Organization:** **Commentor:**
Section #: General Comments **Pg. #:** **Line #:** **Code:** C
Original Comment #:

4

Comment: The treatability study report indicates that all treated waste samples appear to meet preestablished TC criteria. However, all untreated samples also apparently meet TC criteria. This finding should be discussed in the report.

Response: Disagree. This discussion is not within the scope of the Treatability Study but should be covered in the Feasibility Study.

Action: None required.

3 **Commenting Organization:** **Commentor:**
Section #: General Comments **Pg. #:** **Line #:** **Code:** C
Original Comment #:

Comment: In Tables 4-23 through 4-32, more analytes were apparently present in treated waste samples than in untreated samples. Some analytes were found at higher concentrations in the treated than untreated waste samples. The significance of this finding should be specifically discussed in the discussion or conclusions.

Also, the treatability study report states (on page 2-1) that the increase in volume resulting from cement stabilization was substantial. The report should explain whether or not dilution of the treated waste samples by reagent addition was taken into account when percent reductions were calculated for Tables 4-29 through 4-32 4-38, and 4-39 (see Specific Comment No. 20).

Response: The concentration in the TCLP extract of a treated waste may be higher than that of the untreated waste for several reasons. Sample heterogeneity may lead to the treated waste having higher concentrations of contaminants than the specific untreated waste sample analyzed. In addition, the pH, ionic strength, and extraction fluid (TCLP type 1 or 2 fluids) of the two sets of samples may be different. These extraction fluid parameters may cause the solubility of an analyte in the treated waste to increase or decrease relative to the untreated waste.

Some of the analytes found at a higher concentrations in the treated waste were common laboratory contaminants such as acetone, methylene chloride, and toluene. The compound, 2-butanone, also is found frequently in volatile blanks. Very high acetone and methylene chloride concentrations were found in most of the TCLP analyses of treated material and are potentially laboratory contaminants.

Action: These issues will be addressed in the report addendum.

4 **Commenting Organization:** **Commentor:**
Section #: General Comments **Pg. #:** **Line #:** **Code:** C
Original Comment #:

Comment: The report presents modified TCLP results and TCLP results. The report should discuss whether or not an attempt was made to compare the modified TCLP results with the TCLP results.

Response: The MTCLP method is a screening technique to determine which formulations to use in subsequent testing along with the UCS test. This is identified in Figure 3-4 of the Treatability Report.

5

Action: None required.

5 **Commenting Organization:** **Commentor:**
Section #: General Comments **Pg. #:** **Line #:** **Code:** C
Original Comment #:

Comment: The data presented in the tables and appendices in Section 4 are suspect. First, some data have the wrong measurement units (see Specific Comment No. 24). Second, the U.S. Department of Energy (DOE) apparently did not follow the methods presented in this report for statistically reducing data. The report states on page 4-12, line 29, that data reported as nondetected would be assigned a value equal to the sample quantitation limit (SQL) when calculating the UCL and lower confidence limit (LCL). However, this procedure does not appear to have been used. For example, Table A-9 reports a frequency of detection for arsenic of 1/1. However, Table A-2 indicates that arsenic was analyzed for twelve times. Table A-9 presents statistics for the only sample that was detected. The treatability study report should clearly state the methods used to calculate the UCL and LCL, and the methods should be followed. In addition, the data in the appendices should be reviewed to ensure its accuracy.

Response: See the Specific Comment Number 24 for response to that comment. Answer to the statistical comments follows: Lines 29 to 30 of page 4-12 contain a typographical error. These lines should read, "Data reported as nondetects will be assigned a value of SQL/2 for the purpose of calculating the UCL and LCL." Throughout this report, data reported as nondetected were assigned a value of SQL/2 in all statistical calculations, as requested by EPA Region V.

Table A-2 reports the values for 12 arsenic samples taken in the Solid Waste Landfill; however, all 11 nondetected values were rejected based on a comparison to the Contract Required Quantitation Limit (CRQL) and the Risk Based Quantitation Limit (RBQL). If a nondetect observation was reported with a SQL above the CRQL, it was then compared to the RBQL. If the reported SQL was also greater than the RBQL, the observation was excluded from the statistical analysis. In the case where no RBQL value was available, a value of 2 times CRQL was assigned for the RBQL for the purpose of this comparison.

In the case of the arsenic values reported in Table A-9, the nondetect values were erroneously excluded because of a units mistake.

Action: A full description of the treatment of nondetect values will be included in the report addendum.

All reported units for data will be reviewed before submission of the report addendum.

SPECIFIC COMMENTS

1 **Commenting Organization:** **Commentor:**
Section #: 1.2 **Pg. #:** 1-7 **Line #:** 17 to 20 **Code:** C
Original Comment #:

Comment: The chemicals and waste areas of Operable Unit 2 presented in Table 1-1 on pages 1-8 through 1-11 should all be included in Appendix A, but are not. For example, the treatability study report states that Table A-1 contains the TCLP radiological results. This table is not included in Appendix A.

Response: Agree.

Action: Table A-1 will be included in the report addendum.

2 **Commenting Organization:** **Commentor:**
Section #: 2.1 **Pg. #:** 2-1 **Line #:** 12 **Code:** C
Original Comment #:

Comment: This line discusses contaminants of "current or proposed potential concern." The meaning of "current or proposed potential concern" should be explained.

Response: DOE agrees that the sentence needs to be rephrased to explain the meaning of "contaminants of potential concern."

Action: The first sentence of the second paragraph of Section 2.1 will be revised to read as follows:

"Leaching tests performed on stabilized waste samples showed that the concentrations of contaminants of potential concern (i.e., site-related chemicals in the waste samples) were below, and generally well below, the TC and leachate action level criteria, with the exception of beryllium."

3 **Commenting Organization:** **Commentor:**
Section #: 2.1 **Pg. #:** 2-1 **Line #:** 13 **Code:** C
Original Comment #:

Comment: This section presents conclusions concerning beryllium. However, beryllium is not discussed in Section 4 (Results and Discussion). A discussion of the analytical results for beryllium should be included in Section 4.

Response: Agree.

Action: Discussion of the significance of beryllium analytical results will be included in Section 4 of the report addendum.

4 **Commenting Organization:** **Commentor:**
Section #: 2.1 **Pg. #:** 2-1 **Line #:** 15 **Code:** C
Original Comment #:

Comment: The treatability study report states that certain metals that exceeded TC limits were effectively treated through stabilization. However, Tables A-2 and A-4 to A-6 in Appendix A (Untreated Waste Analytical Results) do not contain any results that exceed the TC limit. The reference to untreated wastes exceeding TC limits should be removed or explained.

Response: Agree.

Action: Text will be revised in the report addendum as indicated in the comment.

5 **Commenting Organization:** **Commentor:**
Section #: 3.1.3.1 **Pg. #:** 3-11 **Line #:** 7 to 8 **Code:** C
Original Comment #:

Comment: It is not clear why rubber and metallic fragments were removed prior to ashing. The report should discuss whether or not these materials will also be removed if stabilization is the chosen remedy for the solid waste landfill.

Response: The debris was removed from the waste as indicated in the EPA approved FEMP Operable Unit 2 Treatability Study Work Plan. On the small scale of these experiments, debris, such as rubber and metallic fragments, would have an inappropriately large influence on the results. During a full-scale operation, the debris would represent a smaller fraction of the total mass of waste to be stabilized than in the treatability study. It is beyond the scope of the treatability study to determine if the debris will be removed prior to stabilization of the waste during the full-scale operations.

Action: None required.

6 **Commenting Organization:** **Commentor:**
Section #: 3.8.2 **Pg. #:** 3-41 **Line #:** 9 to 12 **Code:** C
Original Comment #:

Comment: During the treatability study, DOE evaluated the unconfined compressive strength (UCS) of several samples after a 90 day period. The report should discuss the basis for choosing a 90-day period. The report should also discuss why DOE believes a 90-day period is long enough to assess the long-term detrimental effects of sulfate on a stabilized waste matrix that is expected to maintain its integrity for many years.

Response: The 90-day aging period for the treated waste sample was limited by schedule restraints. The 90-day test did provide additional information on the compressive strength development for a curing period longer than the 28 days typically used in this program. The UCS increased with longer curing.

Action: None required.

7 **Commenting Organization:** **Commentor:**
Section #: 3.6.3 **Pg. #:** 3-41 **Line #:** 15 **Code:** C
Original Comment #:

Comment: In Section 3.1.3.2, the treatability study report states that leachability testing conducted during the treatability study will be used for evaluating overall protection of human health and the environment and compliance with applicable or relevant and appropriate regulations in the feasibility study. However, the report also states that U.S. Environmental Protection Agency (EPA) has specified new preliminary remediation goals (PRG) that are not based on leachate concentrations. Because DOE has not demonstrated that the stabilization technology can meet these new PRGs, Section 2.2 (Conclusions and Recommendations) should contain a recommendation that additional testing of the stabilized waste be conducted to ensure that stabilization can meet the PRGs and is protective of human health and the environment.

Response: According to U.S. EPA guidance, PRGs are not derived for leachate from treated wastes (EPA 1991). Therefore, there are no PRGs to which measured leachate concentrations can be compared for evaluating the overall protection of human health. In order to evaluate protection of human health, measured leachate concentrations are compared to "leachate action levels."

Leachate action levels are developed in two stages. The first stage requires the development of acceptable drinking water concentrations (PRGs) using the new U.S. EPA guidance for developing PRGs. The second stage consists of multiplying the drinking water PRGs by a dilution attenuation factor to obtain leachate action levels. The second stage follows the method used by U.S. EPA to develop Toxicity Characteristic Regulatory Levels for TCLP leachate tests (EPA 1990b).

Action: The following paragraph will be inserted as the first paragraph of Section 3.1.4:

"According to U.S. EPA guidance, PRGs are not derived for leachate from treated wastes (EPA 1991). Therefore, there are no PRGs to which measured leachate concentrations can be compared for evaluating the overall protection of human health. In order to evaluate overall protection of human health, measured leachate concentrations are compared to 'Leachate Action Levels.'"

8 **Commenting Organization:** **Commentor:**
Section #: Section 4, Table 4-3 **Pg. #:** 4-3 **Line #:** **Code:** C
Original Comment #:

Comment: The value for the minimum percent clinoptilolite should be added to this table.

Response: Agree.

Action: This value will be included in Table 4-3 in the report addendum.

9 **Commenting Organization:** **Commentor:**
Section #: 4.1.1.8 **Pg. #:** 4-12 **Line #:** 29 **Code:** C
Original Comment #:

Comment: The treatability study report assigns data reported as nondetected a value equal to the SQL when calculating the UCL and LCL. DOE should provide a rationale for assigning these values. As stated in Section 4.1.1.7, EPA recommends assigning a value equal to one-half the SQL for risk assessments. This value may also be appropriate when calculating the UCL and LCL. The report should also discuss how qualified data were used when calculating UCLs and LCLs.

Response: Lines 29 to 30 of page 4-12 contain a typographical error. These lines should read, "Data reported as nondetects will be assigned a value of SQL/2 for the purpose of calculating the UCL and LCL." Throughout this report, data reported as nondetected were assigned a value of SQL/2 in all statistical calculations, as requested by EPA Region V.

DOE agrees that there should be a discussion of how qualified data will be used when calculating UCLs and LCLs.

Action: Lines 29 to 30 of page 4-12 will be corrected in the report addendum.

The following will be added after line 30 of page 4-12:

"Qualified data used for calculating UCLs and LCLs will be included in accordance with U.S. EPA guidance for use of qualified data (EPA 1989a). Specifically, all data will be used except for data having a laboratory qualifier 'A' or a validation qualifier 'R'."

10 **Commenting Organization:** **Commentor:**
Section #: 4.1.1 **Pg. #:** 4-14 **Line #:** 22 **Code:** C
Original Comment #:

Comment: The treatability study report states that untreated waste from all three areas met or exceeded TC regulatory limits. As stated in Specific Comment No. 5, no wastes exceeded TC limits. This statement should be removed from the report or explained.

Response: Agree.

Action: This statement will be removed in the report addendum.

11 **Commenting Organization:** **Commentor:**
Section #: Table 4-16 **Pg. #:** 4-21 **Line #:** **Code:** C
Original Comment #:

Comment: No data are reported in this table. The data should be added.

Response: Agree.

Action: These data were inadvertently omitted from the original report and were included in an errata that the commentor apparently did not receive. These data will be submitted in the report addendum.

12 **Commenting Organization:** **Commentor:**
Section #: 4.1.2.1 **Pg. #:** 4-22 **Line #:** 31 **Code:** C
Original Comment #:

Comment: The treatability study report presents tables that compare the percentage of the UCL concentrations of constituents of concern to the TC and leachate action levels. However, the report does not discuss these data. The significance of these data, especially UCL that exceeded the TC and leachate action levels, should be discussed.

Response: A comparison was presented in the text in the treatability study report, pages 4-22 and 4-29. The following change will be added to the text: "Therefore, all concentrations of contaminants in the TCLP leachates were less than the regulatory or 10^{-6} risk concern, except for the one Ra-226 analysis."

Action: Text will be revised in the report addendum.

13 **Commenting Organization:** **Commentor:**
Section #: Table 4-17 **Pg. #:** 4-23 **Line #:** **Code:** C
Original Comment #:

Comment: Table D-2 in Appendix D indicates that the beryllium concentration in the leachate of treated samples from the solid waste landfill exceeds the 10^{-6} leachate action level. Table 4-17 should indicate this result and the beryllium concentrations should be discussed in text.

Response: Agree. This comment will be answered by the actions under Specific Comment Number 3.

Action: See Specific Comment Number 3.

14 **Commenting Organization:** **Commentor:**
Section #: Table 4-21 **Pg. #:** 4-27 **Line #:** **Code:** C
Original Comment #:

Comment: The footnote in this table indicates that the UCL for one constituent, silver, was calculated both with and without outliers. The procedure for determining outliers should be given. The text should also note that the data reported for silver concentrations in samples taken from the South Field (see Specific Comment No. 24) were reported using incorrect units.

Response: The following discussion is in answer to the statistical portion of the comment. An outlier test was employed to address the concern that one (or more) extreme observation(s) in a data set with a low number of observations would cause the data set to appear lognormally distributed when, in fact, the set was normally distributed. It must be stressed that if an observation was identified as a statistical outlier, it was

not excluded unless it could be identified as a truly erroneous datum (through a transcription or typographical error, for example). Therefore, results for the data set both with and without the outlier included, were reported for informational purposes.

The outlier test employed consisted of the following steps:

1) Designate the most extreme value as x_n.
2) Calculate the mean, m, and standard deviation, s, of the data including all measurements.
3) Compute the statistic, T_n:
   $T_n = (X_n\text{-}m)/s$
4) If T_n exceeds the critical value of $\alpha = 0.05$, the observation is designated a suspected outlier.
5) Determine the distribution of the data set with the suspected outlier excluded. Because this test is based on the assumption of normality, the suspect observation will only be confirmed to be a true statistical outlier if the distribution of the data set with the suspected outlier excluded is normal. If, on the other hand, the distribution is not normal, then the suspect observation cannot be called an outlier based on this test.
6) If one or more statistical outliers is identified, report the results for the data set with the outlier excluded, as well as for the complete data set.

Action: A detailed description of the methods used to identify statistical outliers will be included in the report addendum.

The units associated with silver in this table will be reviewed and corrected as required.

15 **Commenting Organization:** **Commentor:**
Section #: 4.1.2.1 **Pg. #:** 4-29 **Line #:** 19 to 23 and Tables 4-23 to 4-32 **Code:** C
Original Comment #:

Comment: Tetrachloroethene and lead in the solid waste landfill were detected in the characterization (untreated waste) samples, but not in the treated waste samples. These two analytes should also be included in Table 4-29. Conversely, analytes detected in the treated waste samples but not in the characterization samples should also be included in Tables 4-29 to 4-32 and 4-38 to 4-39. In addition, the text should discuss the significance of these findings.

Response: Some analytes, such as lead, were reduced to undetectable levels in the treatability samples. Tables 4-23 through 4-28 will be revised to show which compounds fall into this category. Tables 4-29 to 4-32, 4-38, and 4-39 compare compounds that were detected in both characterization and treatability samples.

Please note that the same contaminants were not necessarily analyzed for in both characterization and treatability samples. For example, inorganics analysis on most of the characterization samples were for the eight toxicity characteristic metals. The treatability samples were analyzed for the Contract Laboratory Procedure list, which includes 24 inorganics. The text will discuss the content of the tables.

Action: Text will be revised in the report addendum as indicated above.

16 **Commenting Organization:** **Commentor:**
Section #: 4 **Pg. #:** 4-29 **Line #:** 23 to 24 **Code:** C
Original Comment #:

Comment: The report states that differences in leachate concentrations of several constituents before and after stabilization are probably due to sample heterogeneity. Evidence to support this conclusion should be included in the treatability study report.

Response: Agree.

Action: Text will be revised in the report addendum as follows:

"These differences are possibly due to sample heterogeneity. The concentration in TCLP extract of a treated waste may be higher than that of the untreated waste for several reasons. Sample heterogeneity may lead to the treated waste having higher concentrations of the contaminants in the TCLP extract than the specific untreated waste sample analyzed. In addition, the pH, ionic strength, and extraction fluid (TCLP type 1 or 2 fluids) of the two sets of samples may be different. These extraction fluid parameters may cause the solubility of an analyte in treated waste to increase or decrease relative to the untreated waste."

17 **Commenting Organization:** **Commentor:**
Section #: Table 4-23 **Pg. #:** 4-30 **Line #:** **Code:** C
Original Comment #:

Comment: The median values presented for benzoic acid, phenol, and toluene and the mean values for benzoic acid and toluene are greater than the maximum values. This is not possible because, by definition, the median value is the middle value in a sample population and the mean value is equal to the sum of all the values divided by the number of samples. The median and mean values should be corrected.

Response: The maximum value presented in the range of detection column is the maximum detected (not U qualified) concentration. However, the calculation of the median, mean, and the rest of the statistics presented includes the nondetect observations (with the concentrations taken to be 1/2 the reported SQL for each observation). Because SQLs vary from sample to sample, the reported SQLs for a given sample are greater than the detected concentrations of another given sample. If the median happens to be a nondetect for which 1/2 the SQL is larger than the greatest detected concentration, the median reported will be larger than the maximum detected concentration. This logic also explains how the mean could be greater than the maximum detected concentration. This was the case with each of the instances cited above.

Action: A full description of the treatment of nondetect values will be included in the report addendum. This description will address possible effects on calculated statistical quantities.

18 **Commenting Organization:** **Commentor:**
Section #: Table 4-26 **Pg. #:** 4-33 **Line #:** **Code:** C
Original Comment #:

Comment: The table should either clarify why each contaminant detected is listed twice, or list each contaminant only once. Also, the median and mean values for toluene exceed the maximum value presented. The median and mean values should be corrected.

Response: Agree.

Action: Table 4-26 will be corrected and included in the report addendum.

19 **Commenting Organization:** **Commentor:**
Section #: Tables 4-29 to 4-32 **Pg. #:** 4-36 to 4-39 **Line #:** **Code:** C
Tables 4-38 and 4-39 4-46 and 4-47
Original Comment #:

Comment: The report does not indicate whether or not the addition of reagents and additives, which result in a mass increase, is corrected for when the median percent reduction of contaminants is calculated. This information should be included in the report.

Response: Disagree. The titles of each table indicate which treatability data are compared to untreated data. Dilution corrected treatability data are corrected for dilution of reagents and additives. The report also discusses this correction factor on page 4-22, lines 14 to 16.

Action: None required.

20 **Commenting Organization:** **Commentor:**
Section #: Table 4-29 to 4-32 **Pg. #:** 4-36 to 4-39 **Line #:** **Code:** C
Original Comment #:

Comment: These tables report a "median percent reduction." This term should be defined.

Response: Agree.

Action: A definition of "median percent reduction" will be provided in the report addendum.

21 **Commenting Organization:** **Commentor:**
Section #: Table 4-33 **Pg. #:** 4-40 **Line #:** **Code:** C
Original Comment #:

Comment: The median and mean value for total uranium exceed the maximum value presented for total uranium. The median and mean values should be corrected.

Response: The maximum value presented in the range of detection column is the maximum detected (not U qualified) concentration. However, the calculation of the median, mean, and the rest of the statistics presented includes the nondetect observations (with the concentrations taken to be 1/2 the reported SQL for each observation). Because SQLs vary from sample to sample, the reported SQLs for a given sample are greater than the detected concentrations of another given sample. If the median happens to be

a nondetect for which 1/2 the SQL is larger than the greatest detected concentration, the median reported will be larger than the maximum detected concentration. This logic also explains how the mean could be greater than the maximum detected concentration. This was the case with each of the instances cited above.

Action: A full description of the treatment of nondetect values will be included in the report addendum. This description will address possible effects on calculated statistical quantities.

22 **Commenting Organization:** **Commentor:**
Section #: 4.1.2.3 **Pg. #:** 4-58 **Line #:** 15 and 16 **Code:** C
Original Comment #:

Comment: The treatability study report states that UCS and bulking factor are the parameters used to determine the recommended formulation of stabilizing agents. Because cost is a feasibility study criterion, cost should also be considered when determining the recommended formulation of binding agents. Fly ash may be cheaper to use for stabilization than cement because fly ash is readily available on site.

Response: The DOE concurs that during the Feasibility Study, the cost of reagents should be included in the criteria for the evaluation of the reagents when determining the recommended formulations of binding agents. This is outside the scope of work of the Treatability Study.

Action: None required.

23 **Commenting Organization:** **Commentor:**
Section #: Appendix A, Table A-2 **Pg. #:** **Line #:** **Code:** C
Original Comment #:

Comment: The units for the analytical data reported for Fernald Environmental Management Project (FEMP) Samples No. 067016, 067021, 067025, 061319, 061324, 061329, 061334, 067335, 067360, 067361, and 067362 taken from the Inactive Flyash Pile and South Field appear to be wrong. The detection limits for inorganic analytes are approximately three orders of magnitude less than the detection limits listed in Table C-2. The units apparently should be milligrams per liter. This table, as well as other tables that cite data from this table, should be corrected.

Response: Agree.

Action: The data will be reviewed along with the detection limits listed in Table C-2. All tables that reference Table A-2 will be corrected as required in the report addendum.

24 **Commenting Organization:** **Commentor:**
Section #: Appendix A, Table A-6 **Pg. #:** **Line #:** **Code:** C
Original Comment #:

Comment: The title for this table is "Fernald Environmental Management Project Pesticide/PCB Data"; however, the table does not present any polychlorinated biphenyl (PCB) data. These data should be included in the table.

Response: Agree.

Action: The table will be revised in the report addendum.

25 **Commenting Organization:** **Commentor:**
Section #: Appendix B, Table B-1 Data Information (Part 2 of 2) **Pg. #:** **Line #:** **Code:** C
Original Comment #:

Comment: The report should explain why information and dates are missing in this report.

Response: Agree.

Action: This page is included in the "Clipper" software but the information was not pertinent to Operable Unit 2. This explanation will be included in the addendum to the report.

26 **Commenting Organization:** **Commentor:**
Section #: Appendix D, Table D-1 **Pg. #:** 4 **Line #:** **Code:** C
Original Comment #:

Comment: An error exists in the risk-based action levels for 1,1-dichloroethene. The limits presented for the 10^{-5} and 10^{-6} action levels should differ by a factor of 10. However, the table presents values that differ by a factor of 6. This error should be corrected.

Response: Agree. This error was due to a rounding of the data.

Action: This table will be corrected in the report addendum.