# NEW MEXICO
# ENVIRONMENT DEPARTMENT

## *Hazardous Waste Bureau*

**2905 Rodeo Park Drive East, Building 1**
**Santa Fe, New Mexico 87505-6303**
**Phone (505) 476-6000 Fax (505) 476-6030**
***www.nmenv.state.nm.us***

SUSANA MARTINEZ
Governor

JOHN A. SANCHEZ
Lieutenant Governor

DAVE MARTIN
Cabinet Secretary

BUTCH TONGATE
Deputy Secretary

JAMES H. DAVIS, Ph.D
Director
Resource Protection Division


**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

July 27, 2012

Mark Patterson
BRAC Coordinator
Ravenna Army Ammunition Plan
Building 1037
8451 State Route 5
Ravenna, OH 44266

Steve Smith
USACE
CESWF-PER-DD
819 Taylor Street, Room 3B06
PO Box 17300
Fort Worth, TX 76102-0300

**RE: DISAPPROVAL**
**FINAL RCRA FACILITY INVESTIGATION REPORT**
**PARCEL 11**
**FORT WINGATE DEPOT ACTIVITY, NEW MEXICO**
**EPA ID# NM6213820974**
**HWB-FWDA-11-010**

Dear Messrs. Patterson and Smith:

The New Mexico Environment Department (NMED) has received Fort Wingate Depot Activity's (Permittee's) *Final RCRA Facility Investigation Report, Parcel 11* dated July 31, 2011 (Report). NMED reviewed the Report and hereby issues this Notice of Disapproval (NOD) with the following comments.

## GENERAL COMMENTS

### Comment 1

**Appendix C, Cultural Resources Programmatic Agreement** includes copies of the Programmatic Agreement (PA); however all signatures are not on the copy provided in the Report. A signed copy of the Comprehensive Agreement (CA) is not included in the Report. The Permittee must provide the final and signed copies of the PA and CA if copies were signed by all parties.

**Comment 2**
Geophysical surveys were conducted at several sites in Parcel 11. The report is provided as a reference in **Appendix L, FWDA Parcel 11 Geophysics Report**. The results and interpretation of the geophysical survey results must be incorporated into each appropriate section of the revised Report to support the approach to the site specific investigations.

**Comment 3**
Several historical data tables present nearly all of the results (of various constituents) as 1.00E-02 mg/kg and the method detection limit (MDL) as 0.00E+00mg/kg (Tables 3-1, 6-1, 7-1, and 8-1). It is highly unlikely that nearly all the results as well as the MDLs would be so consistent. Furthermore, the reported results are two orders of magnitude less than the MDL and it is improbable that the MDLs for the constituents would be exactly zero. The Permittee must either correct these tables (e.g., rounding error) or provide an explanation for the data and detection limits in the revised Report

**Comment 4**
Throughout the Report concentration data is presented in either milligrams per kilogram (mg/kg) or micrograms per kilogram (µg/kg) on tables as well as in the text, this increases the potential for misinterpretation of data. Report laboratory data in consistent units including referenced soil screening levels. For example: the New Mexico Soil Screening Levels (NMSSLs) and the US Environmental Protection Agency (EPA) Regional Screening Levels (RSLs) present residential soil screening levels (SSL) for contaminants of concern in mg/kg; therefore, present laboratory analytical results mg/kg. Present data in consistent units throughout the revised Report.

***Comment 5***
Laboratory data from the Parcel 11 site investigation are included as Level 4 laboratory reports in Appendix E (Analytical Laboratory Reports). There are a number of electronic files with non-descript file names (e.g., D9J280250). In addition each file contains over 6,000 pages of scanned laboratory reports for Parcel 11. The organization of the laboratory data included in these files is not apparent and no table of contents is provided, making it extremely difficult to find the laboratory report(s) for samples at a particular SWMU. In all future reports, submit laboratory data in a useful format (e.g., using SWMU names instead of non-descript file names). Submit a Level 2 data package with the revised and all future Reports and maintain the Level 4 data at the laboratory or the Permittee's office.

***Comment 6***
The terms "Sample ID", Location ID" and "Boring ID' have been used interchangeably throughout the Report, which makes correlation of data to a particular sample location and depth difficult.

In tables that present sample locations and associated boring identifiers (e.g, **Table 5-3 "Parcel 11 [Solid Waste Management Unit] SWMU6 and [Area of Concern] AOC47: Sample Locations with Associated Boring Identifiers**) the Boring ID (not the Sample ID) are the same

as the Sample ID used in tables presenting detected constituents (e.g., **Table 5-6 Parcel 11 SWMU06: Method 8015M Diesel Range Organics Soil Investigation Detected Constituents Fort Wingate Depot Activity, Gallup, NM**). However, in **Appendix D, Sample Collection Log**, the Local ID is the same as the Sample ID as presented in the tables that present detected constituents .

The term "Sample ID" must be used consistently throughout all future reports to minimize the potential for errors in data analysis and reporting (see Comment 7).

**Comment 7**

Throughout the Parcel 11 investigation there were several instances where there were discrepancies between the chain-of-custody and the samples actually received by the analytical laboratory. These discrepancies include chain-of-custody forms that did not correlate with the analyses requested on the sample labels, samples received by the laboratory that were not listed on a chain-of-custody, and samples that were not received by the lab that are on the chain of custody.

Examples include the following:

1. Samples 1106BLDG11-SS001D-SB and 1106BLDG11-03-002DSB request diesel range organic (DRO)-extended and polychlorinated biphenyl (PCB) analyses on the associated chain of custody. However, the sample labels request 8260 volatile organic compounds (VOCs), 8270 semi-volatile compounds (SVOCs), 8015B gasoline range organics (GRO), 8330 Explosives, 9056 Nitrate, 6860 Perchlorate and 6010/7471 target analyte list (TAL) Metals.
2. Sample 1124BLDG15-SS027D-SO was received by the lab but was not listed on a chain-of-custody.
3. A chain-of-custody form listed a sample ID as 1106BLDG11-SS001D-SB while container labels list the sample ID as 1106BLDG11-05-024D.
4. A chain-of-custody form listed a sample ID as 1106BLDG11-03-002D-SB while container labels list the sample ID as 1106BLDG11-100-025D-SB.

As a result of poor field sample management there is significant potential errors with regard to sample analyses and the potential to omit analyses of contaminants of concern at a particular sample location, resulting in inaccurate characterization or the need to resample a SWMU or AOC. Caution should be taken in future sampling events to avoid confusion and misrepresentation of samples (see Comment 6).

**Comment 8**

It was difficult to determine sampling performed in the field as chain-of-custody forms were not readily available (see Comment 5) or included with the laboratory reports included in Appendix E (Analytical Laboratory Reports). To resolve this issue, the Permittee must include an appendix

which contains only copies of all chain-of-custody forms submitted to the laboratory in all future reports.

**Comment 9**

The text and laboratory data presented in the Report tables indicate that a large number of analytical results are reported as "estimated concentrations" when the detected concentration was above the reporting limit and several sample analytical results were "rejected" due to laboratory errors. The *Quality Control Summary Report* prepared for the U.S. Army Corps of Engineers by the New Mexico Water Science Center, U.S. Geological Survey, dated October 25, 2010 (Data Quality Summary) presented in **Appendix F, Quality Control Summary Report**, addresses these issues. Table 3 of the Data Quality Summary indicates the laboratory achieved 73.1% of its Contract Compliant Results as a result of the large numbers of qualified results related to laboratory quality control issues. The Permittee must provide justification of the validity of the "estimated concentration" data presented in the report.

**Comment 10**

**Conclusions and Recommendations** sections for several sections in the Report contain statements dismissing rejected data which was rejected due to Matrix Spike/Matrix Spike Duplicate (MS/MSD) percent recoveries outside the QC control limits. For example, in **Section 5.6 Conclusions and Recommendations** the Permittee states "[t]he rejected results for mercury in sample 1106BLDG11-SB06-08D does not impact the conclusions of the RFI at the site because mercury is not a significant constituent of concern and concentrations in other samples are well below SSLs." The Permittee must provide a clear explanation to support the assertion that a detected compound is not a COC (e.g., comparison to background concentrations, comparison to detections in other samples at the site). If other samples at the site contain concentrations of the same compound, provide some quantification (e.g., "two orders of magnitude below SSLs") for clarification (see Comment 9). Include this information in all applicable sections of the revised Report.

**Comment 11**

The text of the Report contains no details on groundwater sampling activities performed on groundwater monitoring wells TMW33, TMW34 and TMW35. Field forms regarding groundwater sampling were not included in the Report, as a result no information is available regarding depth to water, depth to bottom of well, groundwater quality parameters at time of sampling, sampling method (e.g., hand bailed, pumped), purge rate, amount of water purged prior to sampling, sample collection methods, etc. Provide details of groundwater sampling activities in the revised Report and include summary tables of field measurements or copies of field sampling forms with all future ground water sampling reports.

**Comment 12**

Data for the three groundwater monitoring well samples (TMW33, TMW34 and TMW35) are not included in the **Appendix D, Sample Collection Log** and **Appendix G, Electronic Database**. Add this information in the revised Report.

**Comment 13**
NMED anticipates that results of the second soil background study at FWDA will be submitted this calendar year and will provided more representative naturally occurring elevated arsenic levels for comparison to the arsenic results provided in the Report. NMED is postponing the evaluation of detected arsenic concentrations until review of the second soil background study is complete.

**Comment 14**
For all sites where polycyclic aromatic hydrocarbons (PAHs) were detected at levels greater than the 2009 Soil Screening Levels (SSLs) and further investigation is required, the new 2012 SSLs must be used. For sites where PAHs were not detected at levels greater than the 2009 SSL the Permittee is not required to re-investigate the site in light of the new SSLs.

**Comment 15**
Additional sampling is proposed for several locations, where analytical concentrations of contaminants of concern (COCs) exceeded cleanup levels, to define the vertical extent of contamination at those locations. The Permittee proposes maximum depths which may not be sufficient to determine vertical extent. NMED recommends sampling to greater depths than proposed to assure that the vertical extent of contamination can be defined without the need for an additional phase of investigation.

**Comment 16**
The Permittee has provided details of recommended future work. NMED will evaluate the details of all proposed future work in the associated work plans(s). Upon approval of this Report NMED will set a date(s) for (all) work plan submittal(s) as appropriate.

**Comment 17**
As stated in the Report and the *Approval with Modifications RCRA Facility Investigation Work Plan for Parcel 11, Fort Wingate Depot Activity* letter dated August 28, 2009 (AWM), further investigation at several sites in Parcel 11 has been deferred, with concurrence by NMED. Include a list of all deferred sites, the reason for deferral, and a schedule for addressing these sites in a separate appendix of the revised Report. The Permittee must also discuss all delayed sampling in the Conclusions and Recommendations sections for each SWMU/AOC in the revised Report.

**SPECIFIC COMMENTS**
**SWMU-5 Building 5**
**Comment 18**
**Section 4.6 Conclusions and Recommendations, page 4-9, last bullet;** the Permittee states "[t]he rejected results for 4,6-Dinitro-2-methylphenol…do not impact the conclusions of the RFI at the site because 4,6-Dinitro-2-methylphenol is not a constituent of concern…" This is an inaccurate statement; 4,6-Dinitro-2-methylphenol is typically used as an insecticide, fungicide, and herbicide as well as a defoliant. Given the historical use of insecticides and herbicides at FWDA site, 4,6-Dinitro-2-methylphenol must be considered a COC. However, because only one

sample had reported results for 4,6-Dinitro-2-methylphenol, and that sample was "rejected" by the laboratory, 4,6-Dinitro-2-methylphenol does not need to be retained as a COC at SWMU-5. See Comment 10.

**SWMU-6 Building 11 and AOC 47 (TPL Photoflash Spill)**

**Comment 19**

In **Appendix D, Sample Collection Log, page D-14** the descriptions in the "Sub-Unit" column do not appear to correspond with the sample location represented by the "Local ID" column. For example, the "Sub Unit" column entries for AOC-47 sample collection indicates that certain AOC-47 samples were collected "with and around" AOC-47, AOC-48, AOC-49, AOC-50, AOC-51, AOC-52 and AOC-53:

1. Stating that AOC-47 samples were collected "with and around AOC-47" is redundant.
2. AOC-51 and AOC-46 are the closest units to AOC-47 (approximately 140 and 165 feet, respectively) yet AOC-46 is not mentioned.
3. AOC-48, AOC-49 and AOC-52 are not located near AOC-47 (AOC-48 is located approximately 800 feet from AOC-47, AOC-52 is located approximately 675 feet from AOC-47 and AOC-49 is located approximately 275-300 feet from AOC-47 ), and AOCs 50 and AOC-53 are not in Parcel 11.

It is not clear why the AOC-47 samples were associated with these other AOCs. Clarify the meaning of the phrase "with and around" as it appears in the "Sub-Unit" column in the **Appendix D Sample Collection Log** and state why the AOC-47 samples were associated with the other AOCs. In future activities, must ensure that care is taken to verify that all sample collection and field data are correct and reported clearly.

**Comment 20**

The *Final Remedial Investigation/Feasibility Study Report & RCRA Corrective Action Program Document* dated November 15, 1997 and provided in **Appendix D, Historical Information for SWMU-06** states "[t]he Fairbanks Morse generator in the electrical room engine pit was found to contain PCB oil." **Section 5.2.3.1.2 Equipment Sampling, bottom of page 5-5 to top of page 5-6** of the Report states "[t]o verify the concentrations of PCBs in the lubrication oils and antifreeze contained in two standby electrical generators, the liquids drained from each generator were sampled. Results from these sample analyses indicated that PCBs were not present in either the oil or antifreeze at reportable concentrations..." In the revised Report, define the term "reportable concentrations".

**Comment 21**

**Appendix B, Record of correspondence regarding sample deviations and RFI Report, bottom of page B-7** includes an email communication from NMED dated October 19, 2009 regarding sampling at SWMU-6 which states "[t]he Permittee must only sample at the locations shown on the attached figure 5-2, the only change is that the Permittee must collect soil samples

at the water table from two locations (shown by the yellow dot) [located at the northwestern and southeastern corners of the trench area] and include PCBs, TAL metals, and DRO extended in the analysis." **Section 5.4.1 Soil Characterization, page 5-14, line 8**; The Permittee states "...except for the water table sample in the southeastern corner and all three samples from the northwestern corner [samples] were analyzed for extended DRO and PCB's only." In the revised Report, provide an explanation for omitting TAL metals analyses for soil samples collected from these locations.

**Comment 22**

**Section 5.4.2 Groundwater characterization, top of page 5-15;** The Permittee states "...a groundwater monitoring well (TMW34) was installed west of former Building 11 and in the vicinity of AOC 47...[t]he well location is northwest of the location originally proposed...to insure that the well location captured potential contaminant migration..." NMED specified the groundwater monitoring well location in Comment 6 and Figure 5-2 of the AWM. TMW34 was installed approximately 75 feet east southeast of NMED's proposed location. No discussion is provided in the Report regarding the change of location for this well. In the revised Report, provide an explanation for the alternate well location.

**Comment 23**

**Section 5.4.2 Groundwater characterization, page 5-15, line 32**; the Permittee states "[o]ne sample from the direct-push cores was analyzed for particle size distribution and geotechnical properties...to characterize the physical properties of the subsurface material." Results of the geotechnical analysis provided in **Table 5-7, Parcel 11 TMW34: Geotechnical Analysis Results, Fort Wingate Depot Activity, Gallup, NM** do not correlate with the geologic boring/well log for TMW34 provided in **Appendix K, Drilling, Completion and Development Records for TMW33, TMW34, and TMW35**. Resolve this discrepancy in the revised Report.

**Comment 24**

**Section 5.6 Conclusions and Recommendations, page 5-17**

NMED agrees that additional work needs to be done. Proposed additional investigation must be included in a future work plan(s) addressing next phase of work (see Comment 15).

**SWMU-10 Sewage Treatment Plant**

**Comment 25**

In **Section 6.2.2 Site Reconnaissance, page 6-3, second paragraph** the Permittee refers to "[t]he Imhoff tank (Structure 63, Photo 6-1)" and "and contact basin Structure 82, Photo 6-2)". These photographs were inadvertently left out of both the hard copy and the electronic copy of the Report. Include photos 6-1 and 6-2 in the revised Report and provide information on the current status of the Imhoff tank. If the Imhoff tank is no longer being used, propose to submit a work plan to remove activities for the Imhoff tank in the revised Report (see Comment 15).

**Comment 26**

In **Section 6.2.2 Site Reconnaissance, page 6-3, lines 23 -24** the Permittee states "[t]he outfall (Structure 745) could not be located." Structure 745 is shown on **Figure 6-1, Structure 745**

**Previous Sample Locations SWMU-10 – Sewage Treatment Plant** and was sampled at two locations during the most recent sampling event, as shown in **Figure 6-3, Soil Sample Locations SWMU-10 – Sewage Treatment Plant**. Correct this discrepancy or provide an explanation in the text of the revised Report.

**Comment 27**
In **Section 6.4.2 Soil Characterization, last paragraph on pages 6-6 through second paragraph 6-7**, the Permittee describes the multi-incremental soil sampling conducted in the area of the incinerator. Provide greater detail on the sampling procedure including marking the 30 unit sub-sampling grid and sampling location for each sub-sample on a separate figure in the revised Report. In addition, include the discreet sampling locations on the figure.

**Comment 28**
In **Section 6.4.2 Soil Characterization, page 6-8, line 11**; the Permittee states "[s]oil samples associated with the outfall pipe discharge locations were collected [at the water table] about 15 ft away from the outfall pipes on the south bank of the river, because the sampling rig could not be safely located at the outfall pipe discharge locations." In the revised Report, provide justification why the data collected 15 ft from the outfall is adequate to characterize discharges from the sewage treatment plant (STP) or propose an alternate sampling method to collect samples at the location of the outfall.

**Comment 29**
In **Section 6.6.2 Soil Characterization, page 6-10, last bullet** the Permittee states "[b]ased on the results of the soil investigation conducted in accordance with the approved RFI Work Plan the Army believes no further action is needed to address soil contamination at SWMU-10 except for the future work specified in section 6.4.3 [Future Evaluations]." NMED concurs; however, **Section 6.4.3 Future Evaluations** does not reference required soil characterization in the stabilization ponds and sludge drying beds, which has been delayed until the sewage treatment plant is no longer in use. Add a discussion of the delayed required sampling to these sections of the revised Report (see comment 16).

**Comment 30**
Not all sample locations are included on **Table 6-5, Parcel 11 SWMU10: Sample Locations with Associated Boring Identifiers, Fort Wingate Depot Army Activity, Gallup, NM** (e.g., SEPTIC-03-033D, DISCHARGE-100-034D, MANE23-SS036D, etc.…). Provide an explanation for the omitted sample locations or include them in the table in the revised Report.

**SWMU-23 Buildings 7 and 8**
**Comment 31**
Not all sample locations are included on **Table 6-5, Parcel 11 SWMU10: Sample Locations with Associated Boring Identifiers, Fort Wingate Depot Army Activity, Gallup, NM**. The Permittee must provide an explanation for the omitted sample locations or include them in the table in the revised Report.

**Comment 32**

In **Section 7.4 Current Investigation (2009-2010), page 7-5, last paragraph** the Permittee describes soil sampling locations in the yard on the eastern side of Building 7. According to this text and **Figure 7-2 Soil Sampling Locations SWMU-23 – Building 7 and Building 8, Fort Wingate Depot Activity, McKinley County, New Mexico** samples were not collected from depths of five feet below ground surface (bgs) at three of the sample locations as required by Comment 32 of *Notice of Disapproval RCRA Facility Investigation Workplan for Parcel 11, Fort Wingate Depot Activity* dated December 23, 2008 (NOD). Propose to collect additional samples at these locations, in accordance with the NOD, in a future work plan.

**Comment 33**

According to **Section 7.6 Conclusions and Recommendations, page 7-7 through 7-8**, several samples exceeded SSLs for DRO extended, benzo(a)pyrene and lead. The Permittee proposes additional work to delineate areas of contamination at the site. While NMED agrees with the general scope of work presented the Permittee must also follow direction provided in Comments 13, 15, and 32.

**SWMU-24 Building 15**

**Comment 34**

In **Section 8.4 Current Investigation (2009-2010),page 8-4, line 15** the Permittee states "…one sample within the probable stain area collected at about 0 to 4 inches…" Direction from NMED given in Comment 38 of the NOD and Comment 10 of the AWM directed the Permittee to collect one sample from a depth of 6 to 12 inches below ground surface (bgs). No explanation for this change to the sampling plan is provided in the Report. Explain why the 6 to 12 inch bgs sample was not collected in the revised Report.

**Comment 35**

In **Section 8.5 Evaluation of Data From Current Investigation (2009-2010) , page 8-5 second paragraph** the Permittee states "[t]he rejected results for antimony…do not impact the conclusions of the RFI as the site because antimony…". Provide a clear explanation to support the assertion that the rejected data will not impact the conclusions of the RFI. See Comments 9 and 10.

**SWMU-37 Building 9**

**Comment 36**

In **Section 9.4.1 Soil Characterization, page 9-5, lines 20 thorough 32** the Permittee describes sampling conducted in the locomotive service pits. Based on the text and figures in the report, the depths of the base of the locomotive service pits is unclear and whether the samples were collected inside the trench or next to the trench (i.e., the depths below ground surface where the samples were collected). Provide clarification in the revised Report.

**Comment 37**

In **Section 9.4.1 Soil Characterization, page 9-5, lines 20 thorough 32** the Permittee describes work done to address NMED's direction in Comment 44 of the NOD. The NOD states "[t]he

Permittee must collect additional samples from soils located on the western edge of the building, specifically around the railroad tracks…" In **Section 9.4.1 Soil Characterization, page 9-5, line 25** the Permittee states "…on the west side of the building outside the roll-up overhead door on the west end of the building (adjacent to the railroad tracks leading to the building)(soil boring SB10)." This was the only soil boring drilled on the western edge of the building in the vicinity of the railroad tracks, this soil boring is also approximately 25 feet from the railroad tracks. The Permittee did not collect samples on the western edge of the building or directly around the railroad tracks to adequately characterize the area. Propose additional sampling in these areas in a work plan (see Comment 16).

**Comment 38**

**Section 9.6 Conclusions and Recommendations, page 9-7, first and second bullets**; The Permittee does not propose additional sampling to define extent of benzo(a)pyrene or cobalt. Propose additional sample locations to the define the vertical and horizontal extent of benzo(a)pyrene and cobalt at SWMU-37 or provide defensible justification for why further characterization is not necessary (see Comment 14).

**Comment 39**

**Section 9.6 Conclusions and Recommendations, page 9-7, last bullet;** the Permittee states "[t]he rejected results for 4,6-Dinitro-2-methylphenol…do not impact the conclusions of the RFI as the site because 4,6-Dinitro-2-methylphenol is not a constituent of concern…" This is an inaccurate statement; 4,6-Dinitro-2-methylphenol is typically used as an insecticide, fungicide, herbicide as well as a defoliant. Given the historical use of insecticides and herbicides at FWDA site, 4,6-Dinitro-2-methylphenol must be considered a COC. See Comments 9 and 10.

**SWMU-40 South Administration Area**
**Structures and Buildings Within Parcel 11**
**Building 10 (Storage Yard and Coal Test *Building*)**
**Comment 40**

In Section **10.4.1.1 Investigations at Building 10 and Storage Yard, page 10-12, line 32**, the Permittee states "[t]he area of the geophysical investigation is approximately 1.6 acres." **Table 2, Parcel 11, Geophysical Survey Data Acquisition dates, Tools, and Areas Investigated** in **Appendix L, FWDA Parcel 11 Geophysics Report** indicates that the area investigated was 0.16 acres. Resolve this discrepancy in the revised Report.

**Comment 41**

In **10.4.1.1 Investigations at Building 10 and Storage Yard, page 10-13, second paragraph**, the Permittee describes the MI soil sampling conducted in the storage yard. Provide greater detail on the sampling procedures including marking the 30 unit sub-sampling grid and sampling location for each sub-sample on a separate figure in the revised Report. In addition, include the discrete sampling locations.

**Comment 42**
In **Section 10.4.1.1 Investigations at Building 10 and Storage Yard, page 10-12, line 42** the Permittee states "[t]hese samples were analyzed for VOCs, SVOCs, explosives, DRO, PCBs, and TAL metals." However, it appears that an inconsistent explosives analytical suite was used and only at five out of 50 locations. In the revised Report, provide an explanation for why all samples were not analyzed for explosives.

**Comment 43**
In **Section 10.2.2.1 SWMU 40 Structures and Buildings within Parcel 11, page 10-6, line 12**; the Permittee states "[m]iscellaneous scrap and debris was observed in the storage yard west of Building 10..." Submit a work plan to clear the debris remaining in the storage yard west of, and around, Building 10 to eliminate potential hazards to future land owners. See Comment 16.

**Comment 44**
**Section 10.5.1.2 Soil Characterization, pages 10-16 through 10-18**; The Permittee does not summarize the analytical results for Building 10 and the Storage Yard in the Report. Summarize these results in the revised Report.

**Buildings 12 and 13 (Inert Storage Warehouses)**
**Comment 45**
In **Section 10.5.1.2 Soil Characterization, pages 10-17, lines 19 through 27**; the Permittee indicates PCBs were detected in excess of the SSL in a single sample location and that the analytical results for two other samples were rejected. In **Section 10.6.2.1.2 Buildings 12 and 13, page 10-21, line 37**; the Permittee states "...it is very unlikely that PCBs exist at a depth of 1 ft at the sample location since PCBs were not found in the sample above. PCBs could exist at a depth of 1 ft underneath clean soil if the soil was disturbed and/or overturned by activities at the site. Propose additional soil sampling in the vicinity of all sampling locations where PCB concentrations exceeded SSLs and/or the lab data was rejected.

**Comment 46**
In **Section 10.6.2.1.2 Buildings 12 and 13, page 10-21, line 31**; the Permittee states "[t]he rejected results for antimony... do not impact the conclusions of the RFI as the site because antimony...." Provide a clear explanation to support the assertion that the rejected data will not impact the conclusions of the RFI. See Comments 9 and 10.

**Building 14 (Inert Storage Warehouse)**
**Comment 47**
In Section **10.4.1.3 Investigations at Building 14, page 10-14, line 12**, the Permittee states "[t]he area of the geophysical investigation is approximately 0.2 acres."
**Table 2, Parcel 11, Geophysical Survey Data Acquisition dates, Tools, and Areas Investigated** in **Appendix L, FWDA Parcel 11 Geophysics Report** indicates that the area investigated was 0.14 acres. Resolve this discrepancy in the revised Report.

In the revised Report the Permittee must also provide a synopsis of the results of the geophysical survey relating to the 2,000 gallon kerosene underground storage tank (UST) which was documented as abandoned in place east of Building 14.

**Comment 48**

In **Section 10.6.2.1.5 SWMU-40 Structures and Buildings Within Parcel 6, page 10-24, line 6**; the Permittee states "[t]he rejected results for 4,6-Dinitro-2-methylphenol in samples mentioned in section 10.5.1.2 [for Building 14 in Parcel 11, **page 10-17, line13**]...do not impact the conclusions of the RFI at the site because 4,6-Dinitro-2-methylphenol is not a constituent of concern..." This is an inaccurate statement; 4,6-Dinitro-2-methylphenol is typically used as an insecticide, fungicide, herbicide as well as a defoliant. Given the historical use of insecticides and herbicides at FWDA site, 4,6-Dinitro-2-methylphenol must be considered a COC. Provide a defensible explanation to support the assertion that the rejected data will not impact the conclusions of the RFI. See Comments 9 and 10.

***Building 29 (Inert Storage Warehouse)***

**Comment 49**

In **Section 10.4.1.4 Investigations at Building 29, page 10-14, first paragraph**; the Permittee states "[a] geophysical investigation performed...to confirm that no possible MEC/MD items are present along the former loading dock at Building 29." The geophysics report is provided as **Appendix L, FWDA Parcel 11 Geophysics Report**; however, there is very little interpretation of the results in the report. Provide an interpretation and discussion of the results of the geophysical investigation in the revised Report.

**Comment 50**

In **Section 10.6.2.1.4 Building 29, page 10-23, last bullet**; the Permittee states "[i]t is very unlikely that the rejected results for the pesticides in sample 1140BLDGTRACT-SS079D-SO...impacts the conclusions of the RFI...." This is an inaccurate statement; 4,6-Dinitro-2-methylphenol is typically used as an insecticide, fungicide, herbicide as well as a defoliant. Given the historical use of insecticides and herbicides at FWDA site, 4,6-Dinitro-2-methylphenol must be considered a COC. Provide a clear explanation to support the assertion that the rejected data will not impact the conclusions of the RFI. See Comments 9, 10, 39, and 48.

***SWMU-40 South Administration Area***

**Structures and Buildings Within Parcel 6**

**Building T-33 (Dunnage Shop)**

**Comment 51**

In **Section 10.6.2.1.5 SWMU-40 Structures and Buildings Within Parcel 6, page 10-24, line 2**; the Permittee states, "[t]he rejected results for antimony...do not impact the conclusions of the RFI...." Provide a clear explanation to support the assertion that the rejected data will not impact the conclusions of the RFI. See Comments 9 and 10.

**Comment 52**
In **Section 10.2.2.2 SWMU-40 Structures and Buildings within Parcel 6, page 10-7, line 39**; the Permittee states "[t]wo floor drains were observed in the restrooms along the northern wall of the building..." No other information is provided concerning the drains in the Report. In the revised Report, provide additional information regarding these drains, from the drains to their discharge location.

**Building 36 (Heating Plant No. 6) and Former UST No. 5**
**Comment 53**
In **Section 10.2.2.2 SWMU-40 Structures and Buildings within Parcel 6, page 10-8, line 6**; the Permittee states "[h]ardened tar was observed on the north side of the building [Building 36] during the site reconnaissance." Samples were not collected from this area. Propose additional sampling on the north side of Building 36 in a work plan (see Comment 16).

**Comment 54**
According to **Figure 10-7 Soil Sample Locations SWMU-40 – Parcel 6, Fort Wingate Depot Activity, McKinley County, New Mexico** it does not appear that samples were collected from native soil beneath the location of the former tank excavation backfill as directed in the NOD. Provide an explanation for not collecting this sample was in the revised Report.

**SWMU-40 South Administration Area**
**Structures and Buildings Within Parcel 7**
**Structure 57 (Coal Chute, Bin and Trestle)**
**Comment 55**
Comment 52 of the NOD states "...the Permittee must remove residual coal from the site." The Report does not address the disposition of the residual coal mentioned in the NOD. In the revised Report, provide details regarding the disposition of the residual coal.

***SWMU-45 Building 6***
**Comment 56**
According to **Figure 11-4, Soil Sampling Locations, SWMU-45 – Building 6, Fort Wingate Depot Activity, McKinley Country, New Mexico** soil borings were not placed at the northern or the southeastern extent of the former UST excavation area, as proposed in the approved work plan. In the revised Report, explain why these boring were not completed in accordance with the approved work plan.

***Comment 57***
According to information provided in **Section 11.4 Current Investigation (2009-2010), pages 11-9 through 11-10** the underground piping and valve box were not removed and the soils were not investigated in accordance with the approved work plan. Submit a scope of work to remove underground piping, valve box and complete investigation activities (outlined above) at SWMU-45 in a future work plan (see Comments 16 and 58).

**Comment 58**
In **Section 11.6.1 SWMU45 (Building 6, Gas Station), page 11-3, line 11**; the Permittee states "[w]ell TMW33 will be incorporated into the depot-wide semi-annual monitoring program." In light of the historical detections of PCBs in MW-20, as reported in **Table 11-4, Summary of Detected Constituents in Ground Water, SWMU-45, Parcel 11 RFI Work Plan, Fort Wingate Depot Activity, McKinley Country, New Mexico, page 3 of 6**, add analyses for PCBs for wells located within Parcel 11 to the facility-wide semi-annual monitoring program for 2013.

**Comment 59**
In **Section 11.6.1 SWMU45 (Building 6, Gas Station), page 11-13, line 14**; the Permittee indicates additional work will be done at this site to characterize soils. The Permittee did not complete the scope of work outlined in the approved Work Plan. Submit a scope of work to remove underground piping, valve box and complete investigation activities at SWMU-45 in a future work plan (see Comments 16 and 56).

**AOC 46 (AST)**
**Comment 60**
In **Section 11.6.2 AOC46 (Structure 65, former AST), page 11-13, first bullet**; the Permittee states "[t]he rejected results for 2,4-Dintrophenol in samples…do not impact the conclusions of the RFI because 2,4 Dintitrophenol is not a constituent of concern…." The Permittee must determine if 2,4 Dinitrophenol could have been used at AOC-46 and provide a clear explanation to support the assertion that the rejected data will not impact the conclusions of the RFI. See Comments 9, 10, 39, 48 and 50.

**Comment 61**
In **Section 11.6.2 AOC46 (Structure 65, former AST), page 11-13, second bullet**; the Permittee states that DRO concentrations greater than the SSL were detected in SB-10 and DRO was detected in SB-11 and "…suggest a release from the diesel lines or AOC51…" To determine if there has been a release from AOC-46, propose to install additional soil borings within in the footprint of AOC-46 in a future work plan (see Comment 16).

**AOC 51 (Former UST Serving Structure 64)**
**Comment 62**
In **Section 11.4.1 Soil Characterization, page 11-10, line 27**; the Permittee states "[a] New Mexico certified tank remover will uncover the suspected UST at AOC 51. Action regarding soil sampling will be carried out after the tanks are removed…" The Permittee must address UST removal and associated investigation activities at AOC-51 in a future work plan (see Comment 16).

**AOC 48 Structure 34**
**Comment 63**
In **Section 13.4 Current Investigation (2009-2010), bottom of page 13-3 top of page 13-4**; the Permittee indicates sampling was not completed at AOC 48 during the current investigation. In the revised Report, provide the explanation for deferring the work (see also Comment 17).

**Comment 64**

In **Section 13.4 Current Investigation (2009-2010), page 13-4, 7**; the Permittee states "[t]he location of the soil sample collected at the water table near storm sewer manhole A-1…was moved approximately 30 ft west of the proposed location near the manhole to avoid impacting the water main…" **Figure 13-1 Soil Sample Locations, AOC 48 – Building 34, Fort Wingate Depot Activity, McKinley County, New Mexico** does not indicate the depth at which this sample was collected. Add this depth to Figure 13-1 in the revised Report.

**Comment 65**

Aroclor 1254 was detected at concentrations exceeding the SSLs in the sediment sample collected from manhole A1. In **Section 13.6 Conclusions and Recommendations, page 13-5, line 15**; the Permittee states "[t]he Army concludes that the PCB detected…was from a very minimal quantity of sediment at the bottom of a manhole and poses minimal risk…." In the revised Report, discuss the possible sources of PCBs in manhole A1 including drainage sources to the manhole. Propose additional soil sampling to determine the extent of the PCB contamination found in manhole A1 (see Comment 16).

**AOC 49 Structure 38 and 39**

**Comment 66**

In **Section 14.2.2 Site Reconnaissance, page 14-2, line 21**; the Permittee states "[e]ach dock had two access panels to their respective crawl spaces, however nothing of significance (e.g., piping, stains, containers) was observed at any of the access points." It is unclear if the access panels were opened and the interior of these crawl spaces were observed for anything of significance. Provide a more detailed description of the inspection of these access ports and crawl spaces in the revised Report.

**Comment 67**

On **Figure 14-2, TAL Metals, Screening Criteria Exceedances, AOC 49 – Structure 38 and Structure 39, Fort Wingate Depot Activity, McKinley County, New Mexico** Structure 38 is inadvertently labeled B036. Correct this error in the revised Report.

**Comment 68**

In **Section 14.4 Evaluation of Data From Current Investigation (2009-2010), page 14-3, third paragraph**; the Permittee states "PBCs were detected in two of the nine samples analyzed. Results from one of the two samples [SB-01 at 1 foot bgs]…were rejected because the sample was re-extracted and reanalyzed outside of the PCB method hold time criteria due to a surrogate recovery failure on the initial run…" Because the results of the shallower sample were rejected (see Comment 9) and PCBs were detected at the same sampling location [SB-01] in the deepest sample [5 feett bgs], propose re-sampling this location in the revised Report.

**Comment 69**

Figures for AOC 49 do not have all the pertinent information. Revise the figures associated with AOC-49 to includes location of access covers mentioned in Comment 65, the steel rail car bumpers, sloped areas, and slope direction of the docks.

**AOC 52 Building 79 and 80 (Storage Vaults)**

**Comment 70**

In **Section 15.4 Current Investigation (2009-2010), page 15-2, line 33**; the Permittee states "[t]he Work Plan specifies that the coal ash used for road bed material would be removed, characterized, and disposed of at an offsite landfill…[t]his action is outside the USGS scope of services for the present investigation…. [o]n-site observation did not detect ash on the surface at this site." However, in **Section 15.2.2 Site Reconnaissance Findings, page 15-2, line 9** the Permittee states "[c]oal ash was observed on the ground surface around Building 79, most likely placed as an access road." and **Photo 15-3, "AOC, Building 79, showing coal ash driveway."** shows coal ash road bed materials on the surface at the site. Resolve this discrepancy in the revised Report and propose additional work to remove, characterize and dispose of the coal ash in a future work plan (see Comment 16).

**Comment 71**

In **Section 15.4 Current Investigation (2009-2010), page 15-3, line 4**; the Permittee states "[m]inor changes in sampling locations were coordinated with NMED through USACE personnel. Deviations from the locations originally designated in the approved Work Plan, along with the reason for the deviations, are summarized in Table 15-1." In both the hard copy and electronic copy of the Report, **Table 15-1 (Parcel 11 AOC52: Method 8260 Volatile Organic Compounds Soil Investigation Detected Constituents, Fort Wingate Depot Activity, Gallup, NM)** includes only detections of VOCs and does not include information on sampling deviations from the approved work plan. In the revised Report, include the table that summarizes deviations from the locations originally designated in the approved Work Plan, along with the reason for the deviations.

**Comment 72**

In **Section 15.4 Current Investigation (2009-2010), page 15-3, line 19**; the Permittee states "[b]ecause…[Building 80] is located within SWMU-3 [Fenced Storage Yard], the soil sampling data from that portion of SWMU-3 will also be used to characterize [Building] 80." **Figure 15-1 (Soil sample Locations AOC-52 – Buildings 79 and 80, Fort Wingate Depot Activity, McKinley County, NM)** does not include the soil sampling locations for Building 80. Include sample locations and applicable results for Building 80 on all AOC-52 figures in the revised Report.

**Comment 73**

According to **Figure 3-2 Soil Sampling Locations, SWMU-3 – Fenced Storage Yard, Fort Wingate Depot Activity, McKinley County, NM**, characterization is not complete at Building 80. Propose additional sampling locations on the east side of Building 80 as part of the next phase of work for AOC-52. See Comment 16.

**AOC 75 Former Electrical Transformers**

**Comment 74**

According to **Section 16.3 Evaluation of Data From Previous Investigations, page 16-6, second paragraph**; Structure 81(main substation) was not sampled in accordance with

Comment 86 of the NOD and the Permittee's *Response to Comments* dated December 23, 2008. In **Section 16.3 Evaluation of Data From Previous Investigations, page 16-6, line 7**; the Permittee states "[t]hese locations will be addressed in accordance with Toxic Substances Control Act (TSCA) and Army requirements prior to land transfer. Because NMED does not have TSCA primacy and does not have a screening level for PCBs on porous surfaces, the appropriate response action will likely require coordination with USEPA Region 6." Because AOC-75 is listed on the FWDA RCRA Permit as requiring corrective action, the Permittee must collect samples at Structure 81 in accordance with the approved Work Plan. In addition, PCBs are listed as hazardous constituents in 40 CFR 261 Appendix VIII and 264 Appendix IX and are therefore also subject to the corrective action requirements of RCRA Subtitle C and the FWDA RCRA Permit.

**Comment 75**

**Sections 16.4.1 Vault A, Building 15, 16.4.2 Vault B, Section Building 34, and 16.4.3 Building 2, pages 16-6 through 16-7**; indicates that natives soils beneath the vaults were only collected at a frequency of one sample per vault, rather than two samples as indicated in Comment 87 of NOD and Permittee's *Response to Comments* dated December 23, 2008. In the revised Report, explain why only one sample per vault was collected instead of two, as proposed.

**Comment 76**

According to **Figure 16-2 Soil Sample Locations, AOC 75, Fort Wingate Deport Activity, McKinley County, NM**, due to the scale of the figure it is difficult to determine if the correct locations beneath the transformer vaults were sampled. In the revised Report the Permittee must submit figures with an appropriate scale to clearly show the locations of the transformers and drains as well as the position of sample locations relative to the vaults.

**Comment 77**

According to **Sections 16.4.1 Vault A, Building 15, 16.4.2 Vault B, Section Building 34, and 16.4.3 Building 2, pages 16-6 through 16-7**, samples were not collected in native soils beneath floor drains as specified in Comment 88 of the NOD, instead samples were obtained from accumulated materials in the drains. In the revised Report, provide an explanation why the native soils beneath the floor drains were not sampled.

**Comment 78**

In **Section 16.5 Evaluation of Data From Current Investigation (2009-2010), page 16-7, line 34**; the Permittee states "Table 16-2 summarizes detected PCB concentrations...." The table is mislabeled. **Table 16-1, Parcel 11 AOC75: Method 8082 Polychlorinated Biphenyls Soil Investigation Detected Constituents, Fort Wingate Deport Activity, Gallup, NM** summarizes detected PCB concentrations. Correct this error typographical in the revised Report.

**Comment 79**

**Table 16-1 (Parcel 11 AOC75: Method 8082 Polychlorinated Biphenyls Soil Investigation Detected Constituents, Fort Wingate Deport Activity, Gallup, NM)** indicates that the laboratory's reporting limit (RL) was greater than the SSL for Vault A, furthermore, the

laboratory's MDL and RL were both above the SSL for the samples in Vault B and C. It is possible that PCBs exceeded the SSLs in other samples collected from AOC-75 but were not able to be detected due to the laboratory's high MDL. In addition, for all detected concentrations of PCBs presented on **Table 16-1**, the data was qualified as estimated concentrations, despite being one order of magnitude above the RL. In the revised Report, provide justification for the acceptability of the analytical PCB data for AOC-75 or propose further sampling.

**Comment 80**

In **Section 16.6 Conclusions and Recommendations, page 16-8, first bullet**; the Permittee states "[t]he Army concludes that the extent of Aroclor 1260 contamination is confined to a small quantity of sediment in the floor drain.... The floor drains are not connected to the storm sewer or sanitary sewer, therefore, migration potential is minimized. The Army proposes no additional investigation at AOC-75 within Parcel 11." PCB concentrations exceeding SSLs were detected in a sample obtained from manhole A1 as well as detected in groundwater samples associated with SWMU-45. Propose additional investigation activities to determine nature and extent of PCB contamination associated with AOC-75 within Parcel 11 (see Comment 16).

The Permittee must address all comments in this NOD and submit a revised Report. The revised Report must be accompanied with a response letter that details where all revisions have been made, cross-referencing NMED's numbered comments. In addition, an electronic version of the revised Report must be submitted identifying where all changes were made in red-line strikeout format. The revised Report must be submitted to NMED no later than January 15, 2013.

If you have questions regarding this letter, please contact Lane Andress of my staff at (505) 476-6059.

Sincerely,

John E. Kieling
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
N. Dhawan, NMED HWB
S. Duran, NMED HWB
Christy Esler, USACE
Laurie King, U.S EPA Region 6
Chuck Hendrickson, U.S. EPA Region 6
Tony Perry, Navajo Nation
Franklin Jishie, Navajo Nation
Jason John, Navajo Nation
Eugenia Quintana, Navajo Nation
Steve Beran, Zuni Pueblo
Darrell Tsabetsaye, Zuni Pueblo
Kirk Bemis, Zuni Pueblo
Clayton Seoutewa, Southwest Region BIA
Rose Duwyenie, Navajo BIA
Judith Wilson, BIA
Eldine Stevens, BIA
Barbara Davis, BIA
Katherine Nunan, BIA

File: FWDA 2012 and Reading
FWDA-11-010