DATA VALIDATION REPORT
FOR
FT. WINGATE B530 SAMPLING EVENT
Red Rock, New Mexico

Samples Collected on September 16, 2010

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ACRONYMS AND ABBREVIATIONS

µg/kg	micrograms per kilogram
%D	percent difference
%RSD	percent relative standard deviation
ALS	ALS Laboratory Group
AMEC	AMEC Earth & Environmental, Inc.
CCV	continuing calibration verification
COC	chain of custody
DoD	Department of Defense
EPA	United States Environmental Protection Agency
ICAL	initial calibration
ICV	initial calibration verification
ID	sample identification
IS	internal standard
LCS/LCSD	laboratory control sample/laboratory control sample duplicate
MDL	method detection limit
MS/MSD	matrix spike/matrix spike duplicate
PDS	post-digestion spike
QC	quality control
RF	response factor
RL	reporting limit
RPD	relative percent difference
SVOCs	semivolatile organic compounds
TestAmerica	TestAmerica Laboratories, Inc.
VOCs	volatile organic compounds

1.0 INTRODUCTION

This data validation report covers eight soil samples (including one field duplicate) from the Fort Wingate site located in Red Rock, New Mexico. Samples were collected on September 16, 2010 and submitted to TestAmerica Laboratories, Inc. (TestAmerica) in North Canton, Ohio, on September 17, 2010. The samples were assigned sample delivery group number A0I170498 and analyzed for the following:

- Metals by US Environmental Protection Agency (EPA) SW846 Methods 6010B and 7471A;
- Semivolatile Organic Compounds (SVOCs) by EPA SW846 Method 8270C; and
- Volatile Organic Compounds (VOCs) by EPA SW846 Method 8260B.

TestAmerica in West Sacramento, California analyzed the samples for the following:

- Nitrocellulose by TestAmerica Laboratory-Standard Operating Procedure (TAL-SOP) WS-WC-0050 and Nitroaromatics and nitramines by EPA SW846 Method 8330.

The samples were also delivered to ALS Laboratory Group (ALS) in Salt Lake City, Utah where they were analyzed for white phosphorus by EPA SW-846 Method 7580.

A list of these samples by field sample identification (ID) and TestAmerica sample ID is presented in Table 1.

2.0 EXECUTIVE SUMMARY

The data validation completed by AMEC Earth & Environmental, Inc. (AMEC) chemists indicate that the data from this event are generally usable and of acceptable quality with the following exceptions.

The nondetected 2,4-dinitrophenol result from sample 2172B530T1SS-1-SO1was rejected because of a very low matrix spike (MS) recovery.

The methylene chloride results from samples 2172B530T1SS-1-SO1, 2172B530T2SS-1-SO1, 2172B530T3SS-1-SO1, 2172B530AP1SB-1-SO1, 2172B530AP1SB-5-SO1, 2172B530AP2SB-1-SO1, and 2172B530AP2SB-5-SO1and the 1,2,4-trichlorobenzene

result from sample 2172B530T2SS-1-SO1were qualified as nondetected because of apparent contamination.

Please note that a number of results, while considered usable, were qualified due to minor quality control (QC) anomalies. Specifically, portions of the VOC, SVOC, metal, and nitrocellulose data were qualified as estimated because of calibration issues, low laboratory control sample (LCS) recoveries, low and high MS recoveries, low surrogate recoveries, suboptimal interference, field duplicate imprecision, and results reported between the method detection limit (MDL) and reporting limit (RL).

As stated above, these minor QC anomalies did not render the data unusable for use in site characterization or cleanup, but should be considered in the context of a data quality assessment if the data do not fall within expected ranges.

3.0 DATA VALIDATION METHODOLOGY

This data validation was performed by AMEC with reference to the requirements in EPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (6/08), EPA Contract Laboratory Program National Functional Guidelines for Superfund Inorganic Methods Data Review (1/10), the analytical methods referenced by the laboratory, and AMEC data validation procedures. Level III Validation includes an assessment of the following:

- Chain of custody (COC) compliance
- Sample receipt
- Holding time compliance
- Reporting limits
- Calibrations
- Method blank results
- Surrogate Recoveries
- LCS/LCS duplicate (LCSD) recoveries and precision
- MS/matrix spike duplicate (MSD) recoveries and precision
- Field QC results
- Internal Standard (IS) recoveries

Data that underwent data validation are indicated on Table 1.

In general, it is important to recognize that no analytical data are guaranteed to be correct, even if all QC audits are passed. Strict QC serves to increase confidence in data, but any reported value may potentially contain error.

4.0 EXPLANATION OF DATA QUALITY INDICATORS

Summary explanations of the specific data quality indicators reviewed during this data validation are presented in the following table:

Data Quality Indicator	Description
LCS Recoveries	LCSs are aliquots of analyte-free water or clean solid matrix that are spiked with the analytes of interest for an analytical method, or a representative subset of those analytes. The spiked water or solid matrix is then processed through the same extraction, concentration, cleanup, and/or analytical procedures as the samples they accompany. LCS recovery is an indication of a laboratory's ability to successfully perform an analytical method in an interference-free matrix.
MS Recoveries	MSs and MSDs are prepared by adding known amounts of the analytes of interest for an analytical method, or a representative subset of those analytes, to an aliquot of sample. The spiked sample is then processed through the same extraction, concentration, cleanup, and analytical procedures as the unspiked samples in an analytical batch. MS recovery and precision are an indication of a laboratory's ability to successfully recover an analyte in the matrix of a specific sample or closely related sample matrices. It is important not to apply MS results for any specific sample to other samples without understanding how the sample matrices are related.
Surrogate Spike Recoveries	Surrogate spikes are used to evaluate accuracy, method performance, and extraction efficiency in each individual sample. Surrogate compounds are compounds not normally found in environmental samples, but which are similar to target analytes in chemical composition and behavior in the analytical process.

Data Quality Indicator	Description
Blank Concentrations	Blank samples are aliquots of analyte free water or clean solid matrix that are used as negative controls to verify that the sample collection, storage, preparation, and analysis system does not produce false positive results. Laboratory blanks are processed by the laboratory using exactly the same procedures as the field samples. Target analytes should not be found in laboratory blanks. When target analytes are detected in blanks, analyte concentrations in associated samples greater than the RL but less than five times the concentration detected in the blank, or ten times the concentration detected in the blank for common laboratory contaminants, will be U qualified. Analyte concentrations between the MDL and RL, and less than five times (or again, ten times for common lab contaminants) the concentration detected in the blank will be U qualified at the RL concentration.
Laboratory Duplicates	Laboratory duplicate analysis verifies acceptable method precision by the laboratory at the time of preparation and analysis.
Internal Standards	IS are compounds that are added to a sample or extract after all preparatory steps are completed and before instrumental analysis. These compounds serve as standards for qualitative analysis using relative retention time and quantitative analysis using relative response factors (RFs). Methods that use IS calibration include requirements for changes in response to the IS relative to the initial calibration (ICAL). For EPA Methods 8260B and 8270C, IS response must fall between 50% and 200% of the response in the initial calibration.
Calibration	Instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. Calibration is verified at the beginning of the analytical run and on an ongoing basis.

5.0 CHAIN OF CUSTODY AND SAMPLE RECEIPT CONDITION DOCUMENTATION

All samples were received at TestAmerica and ALS in good condition at temperatures less than the EPA-recommended 6 degrees Celsius maximum.

Trip Blank 217B530T1SS-1-SO4 was listed on the chain of custody; however, no vials were received at the laboratory. Therefore, the potential effects of contamination from shipping could not be evaluated.

The laboratory misidentified samples 2172B530T1SS-1-SO1, 2172B530T2SS-1-SO1, 2172B350T2SS-1-SO2, and 2172B530T3SS-1-SO1 as "2172B530T1SS-1-S01", "2172B530T2SS-1-S01", "2172B350T2SS-1-S02", and "2172B530T3SS-1-S01" throughout the data package and associated electronic data deliverable.

6.0 SPECIFIC DATA VALIDATION FINDINGS FOR EACH ANALYTICAL METHOD

Sections 6.1 through 6.6 contain narrative descriptions of the data validation findings and data quality limitations. Definitions of data qualifiers added during data validation and summaries of specific qualifiers added to each affected sample as a result of the data validation findings are presented in Table 2.

6.1 Volatile Organic Compounds by EPA Method 8260B

VOC results generated by TestAmerica may be considered usable with the limitations described in Sections 6.1.1 through 6.1.10.

6.1.1 Holding Times

All VOC samples were analyzed within the maximum recommended holding time of 14 days from collection for preserved soil samples.

6.1.2 Initial Calibration

Initial calibrations (ICALs) met the method-specified criteria of ≤ 15% relative standard deviation (%RSD) in response factor between levels, or coefficient of determination or correlation coefficients ≥0.990.

6.1.3 Initial Calibration Verification

Initial calibration verification (ICV) standard recoveries were within the 80% to 120% guidance limits for unqualified data.

6.1.4 Continuing Calibration

Continuing calibration verification (CCV) percent differences (%Ds) were outside the method-specified ±20% limits are listed in the following table.

CCV	Analyte	Difference	Effects on Data Usability
UX86587	Dichlorodifluoromethane	37%, bias low	AMEC UJ qualified the nondetected results for these analytes from the following samples because of potential low analytical bias: 2172B530T1SS-1-SO1 2172B530T2SS-1-SO1 2172B530T3SS-1-SO1 2172B530AP1SB-1-SO1 2172B530AP1SB-5-SO1 2172B530AP2SB-1-SO1 2172B530AP2SB-5-SO1
	Chloromethane	27%, bias low	
	Acetone	36%, bias low	
	2-Butanone	34%, bias low	
	1,2-Dichloroethane	23%, bias low	
UX86622	Dichlorodifluoromethane	42%, bias low	AMEC UJ qualified the nondetected results for these analytes from sample 2172B350T2SS-1-SO2 because of potential low analytical bias.
	Chloromethane	26%, bias low	
	Acetone	22%, bias low	
	2-Butanone	22%, bias low	

6.1.5 Laboratory Blanks

VOCs detected at concentrations above the MDL in the laboratory blanks associated with these samples are outlined in the following table:

Blank	Analyte	Concentration (micrograms per kilogram [µg/kg])	Effects on Data Usability
L7N981AA	Methylene chloride	1.4*	AMEC U qualified the detected methylene chloride results from the following samples because the sample concentrations were less than 10 times the method blank concentration indicating possible contamination: 2172B530T1SS-1-SO1 2172B530T2SS-1-SO1 2172B530T3SS-1-SO1 2172B530AP1SB-1-SO1 2172B530AP1SB-5-SO1 2172B530AP2SB-1-SO1 2172B530AP2SB-5-SO1
	1,2,4-Trichlorobenzene	0.68*	AMEC U qualified the detected 1,2,4-trichlorobenzene result from sample 2172B530T2SS-1-SO1 because the sample concentration was less than five times the method blank concentration indicating possible contamination.

Blank	Analyte	Concentration (micrograms per kilogram [µg/kg])	Effects on Data Usability
L7N991AA	1,2,4-Trichlorobenzene	0.67*	This analyte was not detected in the associated sample and data usability is not adversely affected by the potential contamination.

*Concentration is less than the RL.

6.1.6 Laboratory Control Sample Recoveries and RPDs

Relative percent differences (RPDs) between LCS and LCSD results were within the 30% (40% for soils) guidance limits for unqualified data. LCS recoveries outside the 80% to 120% guidance limits for unqualified data are described in the following table:

LCS	Analyte	Recovery	Effects on Data Usability
L7N981AC/D	Acetone	63%/69%	AMEC UJ qualified the nondetected results from the following samples because of potential low analytical bias: 2172B530T1SS-1-SO1 2172B530T2SS-1-SO1 2172B530T3SS-1-SO1 2172B530AP1SB-1-SO1 2172B530AP1SB-5-SO1 2172B530AP2SB-1-SO1 2172B530AP2SB-5-SO1
	2-Butanone	66%/71%	
	Dichlorodifluoromethane	71%/71%	
L7PAA1AC/D	2-Butanone	69%/66%	AMEC UJ qualified the nondetected results for these analytes from sample 2172B350T2SS-1-SO2 because of potential low analytical bias.
	Chloromethane	71%/70%	
	Dichlorodifluoromethane	61%/58%	
	Acetone	63%/63%	

6.1.7 Matrix Spike/Matrix Spike Duplicate Recoveries and RPDs

RPDs between MS/MSD results were less than the 40% (for soil samples) maximum guidance limit for unqualified data. MS/MSD recoveries outside the 70% to 130% guidance limits are described the following table:

Spiked Sample ID	Analyte	Recoveries	Effects on Data Usability
2172B530T1SS-1-S01	Acetone	50%/62%	AMEC UJ qualified the nondetected results for these analytes from the associated sample because of potential low analytical bias.
	2-Butanone	61%MS	
	Chloromethane	63%MS	
	Dichlorodifluoromethane	59%/64%	
	1,2-Dichloroethane	65%MS	

6.1.8 Surrogate Recoveries

Surrogate recoveries were within the 70% to 130% guidance limits for unqualified data.

6.1.9 Internal Standard Recoveries

IS recoveries were within the method-specified 50% to 200% limits for unqualified data.

6.1.10 Analytical Procedures

The laboratory J qualified detected results with concentrations between the RL and MDL. AMEC concurs that these results are quantitative estimates and J qualified these results unless they were U qualified because of associated blank results.

Methylene chloride was detected in sample 2172B350T2SS-1-SO2 at a concentration of 4.8 µg/kg. Methylene chloride was not detected in the associated method blank; however, it was detected in the method blank analyzed during the sequence prior to the sequence this sample was analyzed. The methylene chloride detection is most likely laboratory contamination and the data user should use the result with caution.

6.2 Semivolatile Organic Compounds by EPA Method 8270C

SVOC results generated by TestAmerica may be considered usable with the limitations described in Sections 6.2.1 through 6.2.10.

6.2.1 Holding Times

All samples were extracted within the maximum holding time for soil samples of 14 day from collection to extraction and were analyzed within the maximum holding time of 40 days from extraction to analysis.

6.2.2 Initial Calibration

ICALs met the method-specified criteria of ≤ 15%RSD in response factor between levels, or coefficient of determination or correlation coefficients ≥0.990.

6.2.3 Initial Calibration Verification

ICV standard recoveries were within the 70% to 130% guidance limits for unqualified data.

6.2.4 Continuing Calibration

CCV standard recoveries were within the 80% to 120% guidance limits for unqualified data.

6.2.5 Laboratory Blank

SVOCs were not detected in the laboratory blank associated with these samples.

6.2.6 Surrogate Recoveries

Surrogate recoveries outside the 70% to 130% guidance limits for unqualified data are described in the following table:

Sample	Surrogate	Recovery	Effects on Data Usability
2172B530T1SS-1-SO1	Phenol-d_5	69%	AMEC J qualified detected SVOC results and UJ qualified nondetected SVOC results from these samples because of potential low analytical bias.
	2,4,6-Tribromophenol	58%	
	Nitrobenzene-d_5	65%	
2172B530T2SS-1-SO1	2,4,6-Tribromophenol	61%	
	Nitrobenzene-d_5	67%	
2172B350T2SS-1-SO2	2-Fluorobiphenyl	69%	
	2-Fluorophenol	64%	
	Phenol-d_5	63%	
	2,4,6-Tribromophenol	59%	
	Nitrobenzene-d_5	62%	
2172B530AP1SB-1-SO1	2-Fluorobiphenyl	68%	
	2-Fluorophenol	65%	
	Phenol-d_5	61%	
	2,4,6-Tribromophenol	45%	
	Nitrobenzene-d_5	60%	
2172B530AP1SB-5-SO1	2,4,6-Tribromophenol	54%	
	Nitrobenzene-d_5	66%	
2172B530AP2SB-1-SO1	2,4,6-Tribromophenol	68%	
	Nitrobenzene-d_5	67%	
2172B530AP2SB-5-SO1	2,4,6-Tribromophenol	59%	
	Nitrobenzene-d_5	69%	

6.2.7 Laboratory Control Sample Recoveries and RPDs

All RPDs between LCS and LCSD results were less than the 40% (for soils) maximum guidance limits for unqualified data. LCS recoveries outside the 70% to 130% guidance limits for unqualified data are described in the following table:

LCS	Analyte	Recovery	Effects on Data Usability
L7C311AC	Pentachlorophenol	37%	AMEC UJ qualified the nondetected results for these analytes from all samples because of potential low analytical bias.
	4-Chloroaniline	68%	
	3,3'-Dichlorobenzidine	60%	
	2,4-Dimethylphenol	58%	
	2,4-Dinitrophenol	62%	
	2,4,6-Trichlorophenol	68%	

6.2.8 Matrix Spike/Matrix Spike Duplicate Recoveries and RPDs

RPDs between MS/MSD results were less than the 40% maximum guidance limits for unqualified data. MS/MSD recoveries outside the 70% to 130% guidance limits for the SVOC analysis are described in the following table:

Spiked Sample	Analyte	Recovery	Effects on Data Usability
2172B530T1SS-1-SO1	2,4-Dinitrophenol	0%/0%	AMEC R qualified and rejected the nondetected 2,4-dintrophenol result from this sample because of the very low (<10%) recovery.
	Benzo(k)fluoranthene	61%/61%	AMEC UJ qualified the nondetected results for these analytes from sample 2172B530T1SS-1-SO1 because of possible low analytical bias.
	Bis(2-Chloroethyl)ether	69%MSD	
	4-Chloroaniline	59%/60%	
	3,3'-Dichlorobenzidine	60%/57%	
	4,6-Dinitro-2-methylphenol	65%MS	
	Hexachlorobutadiene	68%/65%	
	Hexachloroethane	68%/68%	
	Isophorone	69%/68%	
	Naphthalene	69%MS	
	4-Nitrophenol	58%/68%	
	2,4,6-Trichlorophenol	64%/65%	
	Pentachlorophenol	25%/30%	

6.2.9 Internal Standard Recoveries

IS recoveries were within the method-specified 50% to 200% limits.

6.2.10 Analytical Procedures

The laboratory J qualified detected results with concentrations between the RL and MDL. AMEC concurs that these results are quantitative estimates and J qualified these results.

Low-level (<RL) concentrations of phthalates were detected in a few samples outlined in the table below. Phthalates are considered common field and laboratory contaminants. The data user should use these results with caution.

Sample	Phthalate	Concentration
2172B530T1SS-1-SO1	Bis(2-Ethylhexyl) phthalate	26 µg/kg
2172B530T2SS-1-SO1	Butylbenzylphthalate	41 µg/kg
2172B350T2SS-1-SO2	Di-n-butyl phthalate	22 µg/kg
2172B530T3SS-1-SO1	Di-n-butyl phthalate	18 µg/kg
2172B530AP1SB-5-SO1	Bis(2-Ethylhexyl) phthalate	22 µg/kg
	Di-n-butyl phthalate	31 µg/kg

6.3 Total Metals by EPA Methods 6010B and 7470A

Metal results generated by TestAmerica may be considered usable with the limitations described in Sections 6.3.1 through 6.3.11.

6.3.1 Holding Times

All samples were analyzed for metals within the technical holding time of 180 days (28 days for mercury).

6.3.2 Initial Calibration

ICALs associated with the analysis of these samples were within the method-specified limits.

6.3.3 Initial and Continuing Calibration Verification

All ICVs and CCVs associated with the analysis of these samples were within the method-specified limits.

6.3.4 Contract Required Quantitation Limit Check Standard

All contract-required quantitation limit check standards associated with the analysis of these samples were within the 50% to 150% guidance limits for unqualified data.

6.3.5 Blanks

Target analytes were not detected at concentrations greater than the RL in laboratory calibration and method blanks associated with the metals analyses.

6.3.6 Inductively Coupled Plasma Interference Check Sample

All interference check samples recoveries were within the 80% to 120% guidance limits for unqualified data.

Non-interferent elements arsenic, cobalt, and manganese were detected above the MDL in the ICSA associated with these samples. Additionally, interferent elements were detected in samples 2172B530T1SS-1-SO1 and 2172B350T2SS-1-SO2 at concentrations greater than the ICSA. Specific limitations include the following:

- AMEC J qualified the detected arsenic results from samples 2172B530T1SS-1-SO1 and 2172B350T2SS-1-SO2 and the detected cobalt result from sample 2172B350T2SS-1-SO2 because of possible high analytical bias due to potential sub-optimal interferences.
- Manganese concentrations in these samples were greater than 10 times the ICSA concentration and data usability is not adversely affected by the potential high analytical bias.

6.3.7 Laboratory Control Sample Recovery

LCS recoveries were within the 80% to 120% guidance limits for unqualified data.

6.3.8 Matrix Spike/Matrix Spike Duplicate Recoveries and RPDs

RPDs between MS/MSD results were within the 20% maximum guidance limit for unqualified data. MS/MSD recoveries outside the 75% to 125% guidance limits are described in the following table:

Sample ID	Analytes	Recovery	Effects on Data Usability
2172B530T1SS-1-SO1	Lead	134%MSD	AMEC J qualified the detected results for
	Cadmium	136%MSD	

Sample ID	Analytes	Recovery	Effects on Data Usability
	Copper	146%/136%	these analytes because of possible high analytical bias.
	Mercury	242%/316%	
	Zinc	127%/124%	
	Antimony	46%/47%	AMEC UJ qualified the nondetected antimony result from this sample because of possible low analytical bias.
	Aluminum	Not reported	The sample concentrations were greater than 4 times the spike concentration added; therefore, data usability could not be fully evaluated. Qualification is not warranted.
	Calcium		
	Iron		
	Magnesium		
	Manganese		

6.3.9 Post-digestion Spikes

Post-digestion spike (PDS) recoveries outside the 75% to 125% guidance limits for unqualified data are described as follows.

Potassium (127%) and silver (65%) recoveries were outside the guidance limits in the PDS of sample 2172B530T1SS-1-SO1. Specific limitations include the following:

- AMEC J qualified the detected potassium results from this sample because of possible high analytical bias.
- AMEC J qualified the detected silver result from this sample because of possible low analytical bias.

6.3.10 ICP Serial Dilution

All analytes met the method-specified criteria of less than 10 percent difference for analytes with concentrations greater than 50-times the MDL.

6.3.11 Analytical Procedures

The laboratory J qualified detected results with concentrations between the RL and MDL. AMEC concurs that these results are quantitative estimates and J qualified these results.

6.4 Nitrocellulose by TestAmerica SOP WS-WC-0050

Nitrocellulose results generated by TestAmerica may be considered usable with the limitations described in Sections 6.6.1 through 6.6.4.

6.4.1 Blanks

Nitrocellulose was not detected at concentrations greater than the RL in laboratory method blanks.

6.4.2 Laboratory Control Sample Recovery

LCS recoveries were within the 34% to 154% laboratory-established limits for unqualified data.

6.4.3 Matrix Spike/Matrix Spike Duplicate Samples

MS/MSD recoveries were within the 34% to 115% laboratory-established limits for unqualified data.

6.4.4 Analytical Procedures

The laboratory B qualified detected results with concentrations between the RL and MDL. AMEC concurs that these results are quantitative estimates and J qualified these results.

6.5 White Phosphorus by EPA SW-846 Method 7580

White Phosphorus results generated by ALS may be considered usable without qualification.

6.5.1 Initial Calibration

ICALs associated with the analysis of these samples were within the method-specified limits.

6.5.2 Initial and Continuing Calibration Verification

All ICVs and CCVs associated with the analysis of these samples were within the method-specified limits.

6.5.3 Blanks

Target analytes were not detected at concentrations greater than the RL in laboratory blanks.

6.5.4 Laboratory Control Sample Recovery

LCS recoveries were within the 75% to 125% guidance limits for unqualified data.

6.5.5 Matrix Spike/Matrix Spike Duplicate Samples

MS/MSD recoveries were within the 75% to 125% guidance limits for unqualified data.

6.6 Nitroaromatics and Nitramines by EPA SW-846 Method 8330

Nitroaromatic and nitramine results generated by TestAmerica may be considered usable without qualification.

6.6.1 Holding Times

Samples were extracted for nitroaromatics and nitramines within the method-specified maximum holding time of 14 days from collection, for soils, and analyzed within 40 days of extraction.

6.6.2 Initial Calibration

ICALs met the method-specified %RSD criteria of ≤15%.

6.6.3 Initial Calibration Verification

ICV standard recoveries were within the method-specified 70% to 130% acceptance limits for unqualified data.

6.6.4 Continuing Calibration

All CCV standard recoveries were within the method-specified 80% to 120% acceptance limits for unqualified data.

6.6.5 Blanks

Nitroaromatics and nitramines were not detected in the laboratory blank associated with these samples.

6.6.6 Matrix Spike/Matrix Duplicate Recoveries and RPDs

RPDs between MS/MSD results were within the 40% guidance limits for unqualified data. MS/MSD recoveries were within the 70% to 130% limits for unqualified data.

6.6.7 Laboratory Control Sample Recovery

LCS recoveries were within the 70% to 130% guidance limits for unqualified data.

6.6.8 Surrogate Recoveries

Surrogate recoveries were within the 70% to 130% guidance limits for unqualified data

7.0 FIELD DUPLICATES

Samples collected as field duplicates are listed in Table 1. Field duplicate detected results are found in Table 3. The samples were labeled blindly, so the laboratory was not aware which samples were submitted in duplicate. Primary and duplicate results and the RPDs for the field duplicates are summarized in Table 3. With the exceptions listed in Table 3, precision values met the guidance limits for data usability of less than 40% RPD for soil for concentrations greater than five times their RL or ± the RL for sample concentrations less than the five times their RL.

8.0 SUMMARY AND CONCLUSIONS

AMEC's review indicates the data from this event are generally usable. The types of qualifications applied to the dataset include rejected, (R), estimated (J or UJ) and nondetected (U) and results. Results that were U qualified were not further qualified due to minor QC outliers.

Rejected Data. The nondetected 2,4-dinitrophenol result from sample 2172B530T1SS-1-SO1was R qualified and rejected because of a very low matrix spike recovery.

Nondetected Data. The methylene chloride results from the majority of samples and the 1,2,4-trichlorobenzene result from sample 2172B530T2SS-1-SO1were U qualified as nondetected because of apparent contamination.

Estimated Data. Portions of the VOC, SVOC, metal, and nitrocellulose data were qualified as estimated because of calibration issues, low LCS recoveries, low and high MS recoveries, low surrogate recoveries, suboptimal interference, field duplicate imprecision, and results reported between the MDL and RL.

Data Completeness Assessment. AMEC reviewed 1,232 data records during the data validation. AMEC U qualified eight (0.6%) records as nondetected; and J or UJ qualified 559 (45%) records as estimated concentrations.

The white phosphorus and nitroaromatics and nitramines data did not require qualification.

One data record (<0.1%) was rejected exceeding a 90% completeness goal which is sufficient for most projects.

REFERENCES

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EPA, 2010. EPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, OSWER 9240.1-51, EPA 540-R-10-011.

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EPA, 2007. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846 Final Update IV Revision 6, February 2007.

LIMITATIONS

This report was prepared exclusively for the PIKA International, Inc. by AMEC. The quality of information, conclusions, and estimates contained herein is consistent with the level of effort involved in AMEC services and based on: i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. This Data Validation/Review Report is intended to be used by the PIKA International, Inc. for the Fort Wingate site in Red Rock, New Mexico only, subject to the terms and conditions of its contract with AMEC. Any other use of, or reliance on, this report by any third party is at that party's sole risk.

TABLES

Appendix D– All Detections Tables

(Located on the included Compact Disc)

Building 522 Summary of Detected Constituents in Soil

Ft. Wingate Depot Activity

Client Sample Id	Analysis Method	Analyte	Result	Unit	Flag	EPA RSL (mg/kg)	NMED SSG (mg/kg)	RL High Limit	High Limit Type	Low Limit (MDL)	Validation qualifier	Reason code
2160B522DW01SS-1-SO1	8330	2,4-Dinitrotoluene	0.11	mg/kg	J	1.6	15.7	0.26	RL	0.02		
2160B522DW01SS-1-SO1	8260B	Methylene chloride	0.0015	mg/kg	J	11	199	5.5	RL	1.4		
2160B522DW01SS-1-SO1	8260B	Toluene	0.00084	mg/kg	J	5000	5570	5.5	RL	0.32		
2160B522DW01SS-1-SO1	8270C	Anthracene	0.051	mg/kg	J	17000	17200	70	RL	35		
2160B522DW01SS-1-SO1	8270C	Fluoranthene	0.18	mg/kg		2300	2290	70	RL	35		
2160B522DW01SS-1-SO1	8270C	2-Methylnaphthalene	0.35	mg/kg		310		70	RL	35		
2160B522DW01SS-1-SO1	8270C	Naphthalene	0.13	mg/kg		3.6	45	70	RL	35		
2160B522DW01SS-1-SO1	8270C	Benzo(a)anthracene	0.096	mg/kg		0.15	6.21	70	RL	35		
2160B522DW01SS-1-SO1	8270C	Benzo(b)fluoranthene	0.16	mg/kg		0.15	6.21	70	RL	35		
2160B522DW01SS-1-SO1	8270C	Phenanthrene	0.27	mg/kg			1830	70	RL	35		
2160B522DW01SS-1-SO1	8270C	Pyrene	0.18	mg/kg		1700	1720	70	RL	35		
2160B522DW01SS-1-SO1	8270C	Chrysene	0.13	mg/kg		15	621	70	RL	12		
2160B522DW01SS-1-SO1	8270C	Dibenzofuran	0.12	mg/kg	J	78		530	RL	35		
2160B522DW01SS-1-SO1	8270C	Di-n-butyl phthalate	0.34	mg/kg	J	6100	6110	530	RL	160		
2160B522DW01SS-1-SO1	160.3 MOD	Percent Solids	95.2	%				10	RL	10		
2160B522DW01SS-1-SO1	NS-WC-005	Nitrocellulose	22.9	mg/kg		180000000		5.3	RL	0.82		
2160B522DW01SS-1-SO1	160.3 MOD	Percent Solids	95	%				10	RL	10		
2160B522DW02SS-1-SO1	8330	2,4-Dinitrotoluene	0.76	mg/kg		1.6	15.7	0.24	RL	0.02		
2160B522DW02SS-1-SO1	8270C	2,4-Dinitrotoluene	1.3	mg/kg		1.6	15.7	420	RL	57		
2160B522DW02SS-1-SO1	8270C	Fluoranthene	0.027	mg/kg		2300	2290	14	RL	7		
2160B522DW02SS-1-SO1	8270C	2-Methylnaphthalene	0.022	mg/kg		310		14	RL	7		
2160B522DW02SS-1-SO1	8270C	Naphthalene	0.016	mg/kg		3.6	45	14	RL	7		
2160B522DW02SS-1-SO1	8270C	Benzo(a)anthracene	0.039	mg/kg		0.15	6.21	14	RL	7		
2160B522DW02SS-1-SO1	8270C	N-Nitrosodiphenylamine	0.13	mg/kg		99	993	110	RL	44		
2160B522DW02SS-1-SO1	8270C	Benzo(b)fluoranthene	0.038	mg/kg		0.15	6.21	14	RL	7		
2160B522DW02SS-1-SO1	8270C	Benzo(ghi)perylene	0.023	mg/kg				14	RL	7		
2160B522DW02SS-1-SO1	8270C	Phenanthrene	0.032	mg/kg			1830	14	RL	7		
2160B522DW02SS-1-SO1	8270C	Pyrene	0.025	mg/kg		1700	1720	14	RL	7		
2160B522DW02SS-1-SO1	8270C	bis(2-Ethylhexyl) phthalate	0.1	mg/kg	J B	35	347	110	RL	40		
2160B522DW02SS-1-SO1	8270C	Chrysene	0.03	mg/kg		15	621	14	RL	2.3		
2160B522DW02SS-1-SO1	8270C	Di-n-butyl phthalate	1.9	mg/kg		6100	6110	110	RL	32		

Building 522 Summary of Detected Constituents in Soil

Ft. Wingate Depot Activity

Client Sample Id	Analysis Method	Analyte	Result	Unit	Flag	EPA RSL (mg/kg)	NMED SSG (mg/kg)	RL High Limit	High Limit Type	Low Limit (MDL)	Validation qualifier	Reason code
2160B522DW02SS-1-SO1	160.3 MOD	Percent Solids	94.9	%				10	RL	10		
2160B522DW02SS-1-SO1	WS-WC-0050	Nitrocellulose	39.1	mg/kg		180000000		5.3	RL	0.82		
2160B522DW03SS-1-SO1	8330	2,4-Dinitrotoluene	0.34	mg/kg		1.6	15.7	0.25	RL	0.02		
2160B522DW03SS-1-SO1	8330	4-Amino-2,6-dinitrotoluene	0.086	mg/kg	J	150		0.25	RL	0.02	J	DL
2160B522DW03SS-1-SO1	8260B	Toluene	0.00078	mg/kg	J	5000	5570	5.2	RL	0.3	J	DL
2160B522DW03SS-1-SO1	8270C	2,4-Dinitrotoluene	0.2	mg/kg	J	1.6	15.7	1000	RL	140	J	DL
2160B522DW03SS-1-SO1	8270C	Fluoranthene	0.047	mg/kg		2300	2290	35	RL	17		
2160B522DW03SS-1-SO1	8270C	Indeno(1,2,3-cd)pyrene	0.037	mg/kg		0.15	6.21	35	RL	17	U	BC
2160B522DW03SS-1-SO1	8270C	2-Methylnaphthalene	0.051	mg/kg		310		35	RL	17		
2160B522DW03SS-1-SO1	8270C	Benzo(b)fluoranthene	0.096	mg/kg		0.15	6.21	35	RL	17	U	BC
2160B522DW03SS-1-SO1	8270C	Benzo(ghi)perylene	0.039	mg/kg				35	RL	17		
2160B522DW03SS-1-SO1	8270C	Benzo(a)pyrene	0.044	mg/kg		0.015	0.621	35	RL	17		
2160B522DW03SS-1-SO1	8270C	Phenanthrene	0.05	mg/kg			1830	35	RL	17		
2160B522DW03SS-1-SO1	8270C	Pyrene	0.049	mg/kg		1700	1720	35	RL	17		
2160B522DW03SS-1-SO1	8270C	bis(2-Ethylhexyl) phthalate	0.11	mg/kg	J B	35	347	260	RL	99	U	MB
2160B522DW03SS-1-SO1	8270C	Butyl benzyl phthalate	0.14	mg/kg	J	260		260	RL	52	J	DL
2160B522DW03SS-1-SO1	8270C	Chrysene	0.06	mg/kg		15	621	35	RL	5.7		
2160B522DW03SS-1-SO1	8270C	Di-n-butyl phthalate	0.69	mg/kg		6100	6110	260	RL	78		
2160B522DW03SS-1-SO1	160.3 MOD	Percent Solids	95.9	%				10	RL	10		
2160B522DW03SS-1-SO1	WS-WC-0050	Nitrocellulose	25.8	mg/kg		180000000		5.2	RL	0.81		
2160B522DW03SS-1-SO2	8330	2,4-Dinitrotoluene	0.48	mg/kg		1.6	15.7	0.25	RL	0.02		
2160B522DW03SS-1-SO2	8260B	Toluene	0.00037	mg/kg	J	5000	5570	5.5	RL	0.32	J	DL
2160B522DW03SS-1-SO2	8270C	2,4-Dinitrotoluene	0.43	mg/kg	J	1.6	15.7	1000	RL	140	J	DL
2160B522DW03SS-1-SO2	8270C	Fluoranthene	0.043	mg/kg		2300	2290	35	RL	17		
2160B522DW03SS-1-SO2	8270C	2-Methylnaphthalene	0.04	mg/kg		310		35	RL	17		
2160B522DW03SS-1-SO2	8270C	Benzo(b)fluoranthene	0.055	mg/kg		0.15	6.21	35	RL	17	U	BC
2160B522DW03SS-1-SO2	8270C	Phenanthrene	0.044	mg/kg			1830	35	RL	17		
2160B522DW03SS-1-SO2	8270C	Pyrene	0.04	mg/kg		1700	1720	35	RL	17		
2160B522DW03SS-1-SO2	8270C	Chrysene	0.046	mg/kg		15	621	35	RL	5.7		
2160B522DW03SS-1-SO2	8270C	Di-n-butyl phthalate	0.83	mg/kg		6100	6110	260	RL	78		
2160B522DW03SS-1-SO2	160.3 MOD	Percent Solids	96.4	%				10	RL	10		
2160B522DW03SS-1-SO2	WS-WC-0050	Nitrocellulose	21.5	mg/kg		180000000		5.2	RL	0.81		

Building 522 Summary of Detected Constituents in Soil

Ft. Wingate Depot Activity

Client Sample Id	Analysis Method	Analyte	Result	Unit	Flag	EPA RSL (mg/kg)	NMED SSG (mg/kg)	RL High Limit	High Limit Type	Low Limit (MDL)	Validation qualifier	Reason code
2160B522DW04SS-1-SO1	8330	2,4-Dinitrotoluene	0.66	mg/kg		1.6	15.7	0.25	RL	0.02		
2160B522DW04SS-1-SO1	8330	1,3,5-Trinitrobenzene	0.18	mg/kg	J	2200		0.25	RL	0.02	J	DL
2160B522DW04SS-1-SO1	8330	2,4,6-Trinitrotoluene	0.87	mg/kg		19	35.9	0.25	RL	0.02		
2160B522DW04SS-1-SO1	8330	RDX	0.075	mg/kg	J	5.5	44.2	0.25	RL	0.04	J	DL
2160B522DW04SS-1-SO1	8330	4-Amino-2,6-dinitrotoluene	1.1	mg/kg		150		0.25	RL	0.02		
2160B522DW04SS-1-SO1	8330	2-Amino-4,6-dinitrotoluene	0.95	mg/kg		150		0.3	RL	0.099		
2160B522DW04SS-1-SO1	8270C	2,4-Dinitrotoluene	0.43	mg/kg	J	1.6	15.7	850	RL	110	J	DL, LS
2160B522DW04SS-1-SO1	8270C	Fluoranthene	0.058	mg/kg		2300	2290	28	RL	14	J	LS
2160B522DW04SS-1-SO1	8270C	2-Methylnaphthalene	0.061	mg/kg		310		28	RL	14	J	LS
2160B522DW04SS-1-SO1	8270C	Benzo(a)anthracene	0.044	mg/kg		0.15	6.21	28	RL	14	UJ	BC, LS
2160B522DW04SS-1-SO1	8270C	N-Nitrosodiphenylamine	0.43	mg/kg		99	993	210	RL	89	J	LS
2160B522DW04SS-1-SO1	8270C	Benzo(b)fluoranthene	0.062	mg/kg		0.15	6.21	28	RL	14	J	LS
2160B522DW04SS-1-SO1	8270C	Benzo(ghi)perylene	0.034	mg/kg				28	RL	14	J	LS
2160B522DW04SS-1-SO1	8270C	Benzo(a)pyrene	0.03	mg/kg		0.015	0.621	28	RL	14	J	LS
2160B522DW04SS-1-SO1	8270C	Phenanthrene	0.082	mg/kg			1830	28	RL	14	J	LS
2160B522DW04SS-1-SO1	8270C	Pyrene	0.059	mg/kg		1700	1720	28	RL	14	J	LS
2160B522DW04SS-1-SO1	8270C	bis(2-Ethylhexyl) phthalate	0.18	mg/kg	J B	35	347	210	RL	81	UJ	MB, LS
2160B522DW04SS-1-SO1	8270C	Chrysene	0.046	mg/kg		15	621	28	RL	4.7	J	LS
2160B522DW04SS-1-SO1	8270C	Di-n-butyl phthalate	3.3	mg/kg		6100	6110	210	RL	64	J	LS
2160B522DW04SS-1-SO1	160.3 MOD	Percent Solids	94.2	%				10	RL	10		
2160B522DW04SS-1-SO1	NS-WC-005	Nitrocellulose	49.2	mg/kg		180000000		5.3	RL	0.83		
2160B522DW05SS-1-SO1	8330	2,4-Dinitrotoluene	1.5	mg/kg		1.6	15.7	0.25	RL	0.02		
2160B522DW05SS-1-SO1	8330	4-Amino-2,6-dinitrotoluene	0.16	mg/kg	J	150		0.25	RL	0.02		
2160B522DW05SS-1-SO1	8330	2-Amino-4,6-dinitrotoluene	0.17	mg/kg	J	150		0.3	RL	0.099		
2160B522DW05SS-1-SO1	8270C	2,4-Dinitrotoluene	0.65	mg/kg	J	1.6	15.7	1100	RL	140		
2160B522DW05SS-1-SO1	8270C	Fluoranthene	0.063	mg/kg		2300	2290	36	RL	18		
2160B522DW05SS-1-SO1	8270C	2-Methylnaphthalene	0.07	mg/kg		310		36	RL	18		
2160B522DW05SS-1-SO1	8270C	Benzo(a)anthracene	0.036	mg/kg		0.15	6.21	36	RL	18		
2160B522DW05SS-1-SO1	8270C	Benzo(b)fluoranthene	0.069	mg/kg		0.15	6.21	36	RL	18		
2160B522DW05SS-1-SO1	8270C	Benzo(ghi)perylene	0.094	mg/kg				36	RL	18		
2160B522DW05SS-1-SO1	8270C	Benzo(a)pyrene	0.046	mg/kg		0.015	0.621	36	RL	18		
2160B522DW05SS-1-SO1	8270C	Phenanthrene	0.094	mg/kg			1830	36	RL	18		

Building 522 Summary of Detected Constituents in Soil

Ft. Wingate Depot Activity

Client Sample Id	Analysis Method	Analyte	Result	Unit	Flag	EPA RSL (mg/kg)	NMED SSG (mg/kg)	RL High Limit	High Limit Type	Low Limit (MDL)	Validation qualifier	Reason code
2160B522DW05SS-1-SO1	8270C	Pyrene	0.06	mg/kg		1700	1720	36	RL	18		
2160B522DW05SS-1-SO1	8270C	bis(2-Ethylhexyl) phthalate	0.11	mg/kg	J B	35	347	270	RL	100		
2160B522DW05SS-1-SO1	8270C	Chrysene	0.059	mg/kg		15	621	36	RL	5.9		
2160B522DW05SS-1-SO1	8270C	Di-n-butyl phthalate	2.1	mg/kg		6100	6110	270	RL	80		
2160B522DW05SS-1-SO1	160.3 MOD	Percent Solids	93.3	%				10	RL	10		
2160B522DW05SS-1-SO1	MS-WC-005	Nitrocellulose	62.1	mg/kg		180000000		5.4	RL	0.84		
2160B522DW06SS-1-SO1	8330	2,4-Dinitrotoluene	0.25	mg/kg		1.6	15.7	0.24	RL	0.02		
2160B522DW06SS-1-SO1	8330	4-Amino-2,6-dinitrotoluene	0.06	mg/kg	J	150		0.24	RL	0.02		
2160B522DW06SS-1-SO1	8260B	Methylene chloride	0.0027	mg/kg	J	11	199	8.2	RL	2.1		
2160B522DW06SS-1-SO1	8270C	Fluoranthene	0.073	mg/kg		2300	2290	29	RL	14		
2160B522DW06SS-1-SO1	8270C	2-Methylnaphthalene	0.12	mg/kg		310		29	RL	14		
2160B522DW06SS-1-SO1	8270C	Naphthalene	0.053	mg/kg		3.6	45	29	RL	14		
2160B522DW06SS-1-SO1	8270C	Benzo(a)anthracene	0.032	mg/kg		0.15	6.21	29	RL	14		
2160B522DW06SS-1-SO1	8270C	Benzo(b)fluoranthene	0.061	mg/kg		0.15	6.21	29	RL	14		
2160B522DW06SS-1-SO1	8270C	Phenanthrene	0.1	mg/kg			1830	29	RL	14		
2160B522DW06SS-1-SO1	8270C	Pyrene	0.063	mg/kg		1700	1720	29	RL	14		
2160B522DW06SS-1-SO1	8270C	bis(2-Ethylhexyl) phthalate	0.083	mg/kg	J B	35	347	210	RL	82		
2160B522DW06SS-1-SO1	8270C	Chrysene	0.053	mg/kg		15	621	29	RL	4.7		
2160B522DW06SS-1-SO1	8270C	Dibenzofuran	0.04	mg/kg	J	78		210	RL	14		
2160B522DW06SS-1-SO1	8270C	Di-n-butyl phthalate	0.44	mg/kg		6100	6110	210	RL	64		
2160B522DW06SS-1-SO1	160.3 MOD	Percent Solids	93.2	%				10	RL	10		
2160B522DW06SS-1-SO1	MS-WC-005	Nitrocellulose	30.2	mg/kg		180000000		5.4	RL	0.84		
2160B522DW07SS-1-SO1	8330	2,4-Dinitrotoluene	0.85	mg/kg		1.6	15.7	0.25	RL	0.02		
2160B522DW07SS-1-SO1	8330	HMX	0.076	mg/kg	J	3800	3060	0.25	RL	0.03		
2160B522DW07SS-1-SO1	8330	RDX	0.22	mg/kg	J	5.5	44.2	0.25	RL	0.04		
2160B522DW07SS-1-SO1	8330	4-Amino-2,6-dinitrotoluene	0.17	mg/kg	J	150		0.25	RL	0.02		
2160B522DW07SS-1-SO1	8330	2-Amino-4,6-dinitrotoluene	0.16	mg/kg	J	150		0.3	RL	0.1		
2160B522DW07SS-1-SO1	8260B	Methylene chloride	0.0035	mg/kg	J	11	199	6.3	RL	1.6		
2160B522DW07SS-1-SO1	8260B	Toluene	0.0015	mg/kg	J	5000	5570	6.3	RL	0.36		
2160B522DW07SS-1-SO1	8270C	2,4-Dinitrotoluene	0.58	mg/kg		1.6	15.7	560	RL	76		
2160B522DW07SS-1-SO1	8270C	Fluoranthene	0.067	mg/kg		2300	2290	19	RL	9.3		
2160B522DW07SS-1-SO1	8270C	2-Methylnaphthalene	0.084	mg/kg		310		19	RL	9.3		

Building 522 Summary of Detected Constituents in Soil

Ft. Wingate Depot Activity

Client Sample Id	Analysis Method	Analyte	Result	Unit	Flag	EPA RSL (mg/kg)	NMED SSG (mg/kg)	RL High Limit	High Limit Type	Low Limit (MDL)	Validation qualifier	Reason code
2160B522DW07SS-1-SO1	8270C	Naphthalene	0.045	mg/kg		3.6	45	19	RL	9.3		
2160B522DW07SS-1-SO1	8270C	Benzo(a)anthracene	0.033	mg/kg		0.15	6.21	19	RL	9.3		
2160B522DW07SS-1-SO1	8270C	N-Nitrosodiphenylamine	0.088	mg/kg	J	99	993	140	RL	59		
2160B522DW07SS-1-SO1	8270C	Benzo(b)fluoranthene	0.073	mg/kg		0.15	6.21	19	RL	9.3		
2160B522DW07SS-1-SO1	8270C	Benzo(a)pyrene	0.03	mg/kg		0.015	0.621	19	RL	9.3		
2160B522DW07SS-1-SO1	8270C	Phenanthrene	0.071	mg/kg			1830	19	RL	9.3		
2160B522DW07SS-1-SO1	8270C	Pyrene	0.063	mg/kg		1700	1720	19	RL	9.3		
2160B522DW07SS-1-SO1	8270C	bis(2-Ethylhexyl) phthalate	0.13	mg/kg	J B	35	347	140	RL	54		
2160B522DW07SS-1-SO1	8270C	Benzaldehyde	0.1	mg/kg	J	7800		280	RL	34		
2160B522DW07SS-1-SO1	8270C	4-Chloroaniline	0.16	mg/kg	J	2.4		420	RL	48		
2160B522DW07SS-1-SO1	8270C	Chrysene	0.056	mg/kg		15	621	19	RL	3.1		
2160B522DW07SS-1-SO1	8270C	Dibenzofuran	0.0033	mg/kg	J	78		140	RL	9.3		
2160B522DW07SS-1-SO1	8270C	Di-n-butyl phthalate	1.1	mg/kg		6100	6110	140	RL	42		
2160B522DW07SS-1-SO1	160.3 MOD	Percent Solids	88.5	%				10	RL	10		
2160B522DW07SS-1-SO1	NS-WC-005	Nitrocellulose	36.1	mg/kg		180000000		5.6	RL	0.88		
2160B522DW08SS-1-SO1	8330	2,4-Dinitrotoluene	2.4	mg/kg		1.6	15.7	0.25	RL	0.02		
2160B522DW08SS-1-SO1	8330	2,6-Dinitrotoluene	0.13	mg/kg	J	61	61.2	0.25	RL	0.03		
2160B522DW08SS-1-SO1	8260B	Methylene chloride	0.0017	mg/kg	J	11	199	5.1	RL	1.3		
2160B522DW08SS-1-SO1	8260B	Toluene	0.00035	mg/kg	J	5000	5570	5.1	RL	0.3		
2160B522DW08SS-1-SO1	8270C	2,4-Dinitrotoluene	4.5	mg/kg		1.6	15.7	840	RL	110		
2160B522DW08SS-1-SO1	8270C	2,6-Dinitrotoluene	0.22	mg/kg	J	61	61.2	840	RL	88		
2160B522DW08SS-1-SO1	8270C	N-Nitrosodiphenylamine	0.31	mg/kg		99	993	210	RL	88		
2160B522DW08SS-1-SO1	8270C	bis(2-Ethylhexyl) phthalate	0.47	mg/kg	B	35	347	210	RL	80		
2160B522DW08SS-1-SO1	8270C	Di-n-butyl phthalate	2.8	mg/kg		6100	6110	210	RL	63		
2160B522DW08SS-1-SO1	160.3 MOD	Percent Solids	95.2	%				10	RL	10		
2160B522DW08SS-1-SO1	NS-WC-005	Nitrocellulose	83.5	mg/kg		180000000		10.5	RL	1.6		
2160B522DW09SS-1-SO1	8260B	Toluene	0.34	mg/kg	J	5000	5570	4.7	RL	0.27		
2160B522DW09SS-1-SO1	8270C	bis(2-Ethylhexyl) phthalate	0.072	mg/kg	J B	35	347	120	RL	44		
2160B522DW09SS-1-SO1	8270C	Di-n-butyl phthalate	0.069	mg/kg	J	6100	6110	120	RL	35		
2160B522DW09SS-1-SO1	160.3 MOD	Percent Solids	85.8	%				10	RL	10		
2160B522DW09SS-1-SO1	NS-WC-005	Nitrocellulose	1.1	mg/kg	B	180000000		5.8	RL	0.91		
2160B522DW09SS-1-SO2	8260B	Methylene chloride	0.0013	mg/kg	J	11	199	5.1	RL	1.3		

Building 522 Summary of Detected Constituents in Soil
Ft. Wingate Depot Activity

Client Sample Id	Analysis Method	Analyte	Result	Unit	Flag	EPA RSL (mg/kg)	NMED SSG (mg/kg)	RL High Limit	High Limit Type	Low Limit (MDL)	Validation qualifier	Reason code
2160B522DW09SS-1-SO2	8260B	Toluene	0.00036	mg/kg	J	5000	5570	5.1	RL	0.3		
2160B522DW09SS-1-SO2	160.3 MOD	Percent Solids	85.7	%				10	RL	10		
2160B522DW09SS-1-SO2	NS-WC-005	Nitrocellulose	1.1	mg/kg	B	180000000		5.8	RL	0.91		
2160B522DW09SS-1-SO2 DUP	160.3 MOD	Percent Solids	87.1	%				10	RL	10		
2160B522DW10SS-1-SO1	8260B	Methylene chloride	0.0018	mg/kg	J	11	199	5.1	RL	1.3		
2160B522DW10SS-1-SO1	8260B	Toluene	0.0029	mg/kg	J	5000	5570	5.1	RL	0.29		
2160B522DW10SS-1-SO1	160.3 MOD	Percent Solids	90.9	%				10	RL	10		
2160B522DW10SS-1-SO1	NS-WC-005	Nitrocellulose	0.0011	mg/kg	B	180000000		5.5	RL	0.86		
2160B522DW11SS-1-SO1	8260B	Methylene chloride	0.0018	mg/kg	J	11	199	4.4	RL	1.2		
2160B522DW11SS-1-SO1	8260B	Toluene	0.0012	mg/kg	J	5000	5570	4.4	RL	0.26		
2160B522DW11SS-1-SO1	8270C	Di-n-butyl phthalate	0.074	mg/kg	J	6100	6110	220	RL	67		
2160B522DW11SS-1-SO1	160.3 MOD	Percent Solids	89	%				10	RL	10		
2160B522DW11SS-1-SO1	NS-WC-005	Nitrocellulose	0.95	mg/kg	B	180000000		5.6	RL	0.88		
2160B522DW11SS-1-SO1 DUP	160.3 MOD	Percent Solids	88	%				10	RL	10		
2160B522DW12SS-1-SO1	8330	2,4-Dinitrotoluene	0.042	mg/kg	J	1.6	15.7	0.24	RL	0.019		
2160B522DW12SS-1-SO1	8260B	Methylene chloride	0.0022	mg/kg	J B	11	199	5.1	RL	1.3		
2160B522DW12SS-1-SO1	8260B	Toluene	0.00051	mg/kg	J	5000	5570	5.1	RL	0.29		
2160B522DW12SS-1-SO1	160.3 MOD	Percent Solids	93.8	%				10	RL	10		
2160B522DW12SS-1-SO1	NS-WC-005	Nitrocellulose	13.6	mg/kg		180000000		5.3	RL	0.83		
2160B522DW13SS-1-SO1	160.3 MOD	Percent Solids	94	%				10	RL	10		
2160B522DW13SS-1-SO1	NS-WC-005	Nitrocellulose	1.7	mg/kg	B	180000000		5.3	RL	0.83		
2160B522DW14SS-1-SO1	8330	2,4-Dinitrotoluene	0.024	mg/kg	J	1.6	15.7	0.25	RL	0.02		
2160B522DW14SS-1-SO1	8260B	Methylene chloride	0.0014	mg/kg	J B	11	199	4.2	RL	1.1		
2160B522DW14SS-1-SO1	8260B	Toluene	0.00027	mg/kg	J	5000	5570	4.2	RL	0.25		
2160B522DW14SS-1-SO1	8270C	2,4-Dinitrotoluene	1.1	mg/kg		1.6	15.7	850	RL	110		
2160B522DW14SS-1-SO1	8270C	N-Nitrosodiphenylamine	0.00009	mg/kg	J	99	993	210	RL	89		
2160B522DW14SS-1-SO1	8270C	Di-n-butyl phthalate	0.0027	mg/kg		6100	6110	210	RL	64		
2160B522DW14SS-1-SO1	160.3 MOD	Percent Solids	94.3	%				10	RL	10		
2160B522DW14SS-1-SO1	NS-WC-005	Nitrocellulose	27.5	mg/kg		180000000		5.3	RL	0.83		
2160B522DW15SS-1-SO1	8330	2,4-Dinitrotoluene	0.62	mg/kg		1.6	15.7	0.24	RL	0.019		
2160B522DW15SS-1-SO1	8330	HMX	0.036	mg/kg	J	3800	3060	0.24	RL	0.029		
2160B522DW15SS-1-SO1	8330	RDX	0.092	mg/kg	J	5.5	44.2	0.24	RL	0.038		

Building 522 Summary of Detected Constituents in Soil

Ft. Wingate Depot Activity

Client Sample Id	Analysis Method	Analyte	Result	Unit	Flag	EPA RSL (mg/kg)	NMED SSG (mg/kg)	RL High Limit	High Limit Type	Low Limit (MDL)	Validation qualifier	Reason code
2160B522DW15SS-1-SO1	8260B	Toluene	0.0018	mg/kg	J	5000	5570	5	RL	0.29		
2160B522DW15SS-1-SO1	8270C	bis(2-Ethylhexyl) phthalate	0.084	mg/kg	J B	35	347	200	RL	78		
2160B522DW15SS-1-SO1	8270C	Di-n-butyl phthalate	0.68	mg/kg		6100	6110	200	RL	61		
2160B522DW15SS-1-SO1	160.3 MOD	Percent Solids	98	%				10	RL	10		
2160B522DW15SS-1-SO1	NS-WC-005(	Nitrocellulose	40.3	mg/kg		180000000		5.1	RL	0.8		
2160B522ER1SS-1-SO1	8260B	Toluene	0.0031	mg/kg	J	5000	5570	4.3	RL	0.25		
2160B522ER1SS-1-SO1	8270C	bis(2-Ethylhexyl) phthalate	0.046	mg/kg	J B	35	347	56	RL	21		
2160B522ER1SS-1-SO1	8270C	Caprolactam	0.052	mg/kg	J	31000		370	RL	41		
2160B522ER1SS-1-SO1	8270C	Di-n-butyl phthalate	0.096	mg/kg		6100	6110	56	RL	17		
2160B522ER1SS-1-SO1	160.3 MOD	Percent Solids	89.2	%				10	RL	10		
2160B522ER1SS-1-SO1	NS-WC-005(	Nitrocellulose	1.4	mg/kg	B	180000000		5.6	RL	0.87		
2160B522ER1SS-1-SO2	8260B	Methylene chloride	0.0014	mg/kg	J B	11	199	4.5	RL	1.2		
2160B522ER1SS-1-SO2	8260B	Toluene	0.0034	mg/kg	J	5000	5570	4.5	RL	0.26		
2160B522ER1SS-1-SO2	8270C	bis(2-Ethylhexyl) phthalate	0.045	mg/kg	J B	35	347	58	RL	22		
2160B522ER1SS-1-SO2	8270C	Di-n-butyl phthalate	0.064	mg/kg		6100	6110	58	RL	17		
2160B522ER1SS-1-SO2	160.3 MOD	Percent Solids	86.9	%				10	RL	10		
2160B522ER1SS-1-SO2	WS-WC-0050	Nitrocellulose	1.3	mg/kg	B	180000000		5.8	RL	0.9		
2160B522WR1SS-1-SO1	8260B	Methylene chloride	0.0016	mg/kg	J B	11	199	4.5	RL	1.2		
2160B522WR1SS-1-SO1	8260B	Toluene	0.00031	mg/kg	J	5000	5570	4.5	RL	0.26		
2160B522WR1SS-1-SO1	8270C	bis(2-Ethylhexyl) phthalate	0.047	mg/kg	J B	35	347	55	RL	21		
2160B522WR1SS-1-SO1	8270C	Di-n-butyl phthalate	0.083	mg/kg		6100	6110	55	RL	17		
2160B522WR1SS-1-SO1	8270C	bis(2-Ethylhexyl) phthalate	0.026	mg/kg	J	35	347	55	RL	21		
2160B522WR1SS-1-SO1	8270C	Di-n-butyl phthalate	0.04	mg/kg	J B	6100	6110	55	RL	17		
2160B522WR1SS-1-SO1	160.3 MOD	Percent Solids	90.8	%				10	RL	10		
2160B522ED1SS-1-SO1	8330	2,4-Dinitrotoluene	8.8	mg/kg		1.6	15.7	0.25	RL	0.02	J	HD
2160B522ED1SS-1-SO1	8330	2,6-Dinitrotoluene	0.64	mg/kg		61	61.2	0.25	RL	0.03		
2160B522ED1SS-1-SO1	8260B	Methylene chloride	0.0024	mg/kg	J B	11	199	5.5	RL	1.4	U	MB
2160B522ED1SS-1-SO1	8260B	Toluene	0.00047	mg/kg	J	5000	5570	5.5	RL	0.32	J	DL
2160B522ED1SS-1-SO1	8270C	2,4-Dinitrotoluene	1.6	mg/kg		1.6	15.7	210	RL	28	J	LS
2160B522ED1SS-1-SO1	8270C	Fluoranthene	0.035	mg/kg		2300	2290	7	RL	3.5	J	LS
2160B522ED1SS-1-SO1	8270C	Indeno(1,2,3-cd)pyrene	0.024	mg/kg		0.15	6.21	7	RL	3.5	J	LM, LS
2160B522ED1SS-1-SO1	8270C	Benzo(a)anthracene	0.33	mg/kg		0.15	6.21	7	RL	3.5	J	LS

Building 522 Summary of Detected Constituents in Soil

Ft. Wingate Depot Activity

Client Sample Id	Analysis Method	Analyte	Result	Unit	Flag	EPA RSL (mg/kg)	NMED SSG (mg/kg)	RL High Limit	High Limit Type	Low Limit (MDL)	Validation qualifier	Reason code
2160B522ED1SS-1-SO1	8270C	N-Nitrosodiphenylamine	0.31	mg/kg		99	993	53	RL	22	J	LM, LS
2160B522ED1SS-1-SO1	8270C	Benzo(b)fluoranthene	0.044	mg/kg		0.15	6.21	7	RL	3.5	J	LS
2160B522ED1SS-1-SO1	8270C	Benzo(k)fluoranthene	0.017	mg/kg		1.5	62.1	7	RL	3.5	UJ	BC, LS
2160B522ED1SS-1-SO1	8270C	Benzo(ghi)perylene	0.031	mg/kg				7	RL	3.5	J	LM, LS
2160B522ED1SS-1-SO1	8270C	Benzo(a)pyrene	0.03	mg/kg		0.015	0.621	7	RL	3.5	J	LM, LS
2160B522ED1SS-1-SO1	8270C	Pyrene	0.038	mg/kg		1700	1720	7	RL	3.5	J	LS
2160B522ED1SS-1-SO1	8270C	bis(2-Ethylhexyl) phthalate	0.028	mg/kg	J B	35	347	53	RL	20	UJ	MB, LS
2160B522ED1SS-1-SO1	8270C	Chrysene	0.034	mg/kg		15	621	7	RL	1.2	J	LM, LS
2160B522ED1SS-1-SO1	8270C	Di-n-butyl phthalate	0.064	mg/kg	B	6100	6110	53	RL	16	UJ	MB, LS
2160B522ED1SS-1-SO1	160.3 MOD	Percent Solids	95	%				10	RL	10		
2160B522ED1SS-1-SO1	WS-WC-0050	Nitrocellulose	10.4	mg/kg		180000000		5.3	RL	0.82	R	SE
2160B522ED1SS-1-SO1	WS-WC-0050	Nitrocellulose	205	mg/kg		180000000		52.6	RL	8.2		
2160B522ED1SS-1-SO1	160.3 MOD	Percent Solids	95.8	%				10	RL	10		
2160B522ED2SS-1-SO1	8330	2,4-Dinitrotoluene	0.065	mg/kg	J	1.6	15.7	0.24	RL	0.02		
2160B522ED2SS-1-SO1	8260B	Toluene	0.00028	mg/kg	J	5000	5570	4.4	RL	0.25		
2160B522ED2SS-1-SO1	8270C	Caprolactam	0.067	mg/kg	J	31000		350	RL	40		
2160B522ED2SS-1-SO1	8270C	Di-n-butyl phthalate	0.11	mg/kg	B	6100	6110	53	RL	16		
2160B522ED2SS-1-SO1	160.3 MOD	Percent Solids	93.7	%				10	RL	10		
2160B522ED2SS-1-SO1	WS-WC-0050	Nitrocellulose	10.8	mg/kg		180000000		5.3	RL	0.83		
2160B522WE1SS-1-SO1	8260B	Toluene	0.00033	mg/kg	J	5000	5570	5.1	RL	0.29		
2160B522WE1SS-1-SO1	8270C	bis(2-Ethylhexyl) phthalate	0.00036	mg/kg	J B	35	347	55	RL	21		
2160B522WE1SS-1-SO1	8270C	Di-n-butyl phthalate	0.067	mg/kg	B	6100	6110	55	RL	17		
2160B522WE1SS-1-SO1	160.3 MOD	Percent Solids	90.7	%				10	RL	10		
2160B522WE1SS-1-SO1	WS-WC-0050	Nitrocellulose	2.9	mg/kg	B	180000000		5.5	RL	0.86		
2160B522SE1SS-1-SO1	8270C	2,4-Dinitrotoluene	0.1	mg/kg	J	1.6	15.7	210	RL	28		
2160B522SE1SS-1-SO1	8270C	Fluoranthene	0.013	mg/kg		2300	2290	7	RL	3.5		
2160B522SE1SS-1-SO1	8270C	Naphthalene	0.017	mg/kg		3.6	45	7	RL	3.5		
2160B522SE1SS-1-SO1	8270C	Phenanthrene	0.012	mg/kg			1830	7	RL	3.5		
2160B522SE1SS-1-SO1	8270C	Pyrene	0.013	mg/kg		1700	1720	7	RL	3.5		
2160B522SE1SS-1-SO1	8270C	bis(2-Ethylhexyl) phthalate	0.07	mg/kg	B	35	347	53	RL	20		
2160B522SE1SS-1-SO1	8270C	Di-n-butyl phthalate	0.23	mg/kg	B	6100	6110	53	RL	16		
2160B522SE1SS-1-SO1	160.3 MOD	Percent Solids	94.9	%				10	RL	10		

Building 522 Summary of Detected Constituents in Soil

Ft. Wingate Depot Activity

Client Sample Id	Analysis Method	Analyte	Result	Unit	Flag	EPA RSL (mg/kg)	NMED SSG (mg/kg)	RL High Limit	High Limit Type	Low Limit (MDL)	Validation qualifier	Reason code
2160B522SE1SS-1-SO1	MS-WC-005(	Nitrocellulose	46.3	mg/kg		180000000		5.3	RL	0.82		
2160B522EW1SS-1-SO1	8330	2,4-Dinitrotoluene	0.15	mg/kg	J	1.6	15.7	0.23	RL	0.019		
2160B522EW1SS-1-SO1	8260B	Toluene	0.44	mg/kg	J	5000	5570	7.5	RL	0.43		
2160B522EW1SS-1-SO1	8270C	2,4-Dinitrotoluene	0.25	mg/kg	J	1.6	15.7	850	RL	110		
2160B522EW1SS-1-SO1	8270C	Fluoranthene	0.07	mg/kg		2300	2290	28	RL	14		
2160B522EW1SS-1-SO1	8270C	2-Methylnaphthalene	0.044	mg/kg		310		28	RL	14		
2160B522EW1SS-1-SO1	8270C	Naphthalene	0.031	mg/kg		3.6	45	28	RL	14		
2160B522EW1SS-1-SO1	8270C	Benzo(a)pyrene	0.045	mg/kg		0.015	0.621	28	RL	14		
2160B522EW1SS-1-SO1	8270C	Phenanthrene	0.057	mg/kg			1830	28	RL	14		
2160B522EW1SS-1-SO1	8270C	Pyrene	0.065	mg/kg		1700	1720	28	RL	14		
2160B522EW1SS-1-SO1	8270C	bis(2-Ethylhexyl) phthalate	0.13	mg/kg	J B	35	347	210	RL	80		
2160B522EW1SS-1-SO1	8270C	Chrysene	0.067	mg/kg		15	621	28	RL	4.7		
2160B522EW1SS-1-SO1	8270C	Di-n-butyl phthalate	0.31	mg/kg	B	6100	6110	210	RL	64		
2160B522EW1SS-1-SO1	160.3 MOD	Percent Solids	94.5	%				10	RL	10		
2160B522EW1SS-1-SO1	ws-wc-0050	Nitrocellulose	8.7	mg/kg		180000000		5.3	RL	0.83		
2160B522EW2SS-1-SO1	8330	2,4-Dinitrotoluene	0.23	mg/kg	J	1.6	15.7	0.25	RL	0.02		
2160B522EW2SS-1-SO1	8260B	Methylene chloride	1.6	mg/kg	J B	11	199	5.7	RL	1.5		
2160B522EW2SS-1-SO1	8270C	2,4-Dinitrotoluene	0.14	mg/kg	J	1.6	15.7	210	RL	28		
2160B522EW2SS-1-SO1	8270C	Anthracene	0.007	mg/kg		17000	17200	7	RL	3.5		
2160B522EW2SS-1-SO1	8270C	Fluoranthene	0.037	mg/kg		2300	2290	7	RL	3.5		
2160B522EW2SS-1-SO1	8270C	Indeno(1,2,3-cd)pyrene	0.026	mg/kg		0.15	6.21	7	RL	3.5		
2160B522EW2SS-1-SO1	8270C	2-Methylnaphthalene	0.031	mg/kg		310		7	RL	3.5		
2160B522EW2SS-1-SO1	8270C	Naphthalene	0.02	mg/kg		3.6	45	7	RL	3.5		
2160B522EW2SS-1-SO1	8270C	Benzo(b)fluoranthene	0.071	mg/kg		0.15	6.21	7	RL	3.5		
2160B522EW2SS-1-SO1	8270C	Benzo(k)fluoranthene	0.034	mg/kg		1.5	62.1	7	RL	3.5		
2160B522EW2SS-1-SO1	8270C	Phenanthrene	0.04	mg/kg			1830	7	RL	3.5		
2160B522EW2SS-1-SO1	8270C	Pyrene	0.031	mg/kg		1700	1720	7	RL	3.5		
2160B522EW2SS-1-SO1	8270C	bis(2-Ethylhexyl) phthalate	0.041	mg/kg	J B	35	347	52	RL	20		
2160B522EW2SS-1-SO1	8270C	Dibenzofuran	0.015	mg/kg	J	78		52	RL	3.5		
2160B522EW2SS-1-SO1	8270C	Di-n-butyl phthalate	0.39	mg/kg	B	6100	6110	52	RL	16		
2160B522EW2SS-1-SO1	160.3 MOD	Percent Solids	95.6	%				10	RL	10		
2160B522EW2SS-1-SO1	ws-wc-0050	Nitrocellulose	20.4	mg/kg		180000000		5.2	RL	0.82		

Building 522 Summary of Detected Constituents in Soil

Ft. Wingate Depot Activity

Client Sample Id	Analysis Method	Analyte	Result	Unit	Flag	EPA RSL (mg/kg)	NMED SSG (mg/kg)	RL High Limit	High Limit Type	Low Limit (MDL)	Validation qualifier	Reason code
2160B522EW3SS-1-SO1	8330	2,4-Dinitrotoluene	0.4	mg/kg		1.6	15.7	0.25	RL	0.02		
2160B522EW3SS-1-SO1	8330	4-Amino-2,6-dinitrotoluene	0.086	mg/kg	J	150		0.25	RL	0.02		
2160B522EW3SS-1-SO1	8260B	Toluene	0.00036	mg/kg	J	5000	5570	5.7	RL	0.33		
2160B522EW3SS-1-SO1	8270C	2,4-Dinitrotoluene	0.13	mg/kg	J	1.6	15.7	840	RL	110		
2160B522EW3SS-1-SO1	8270C	Fluoranthene	0.052	mg/kg		2300	2290	28	RL	14		
2160B522EW3SS-1-SO1	8270C	2-Methylnaphthalene	0.069	mg/kg		310		28	RL	14		
2160B522EW3SS-1-SO1	8270C	Naphthalene	0.03	mg/kg		3.6	45	28	RL	14		
2160B522EW3SS-1-SO1	8270C	Phenanthrene	0.081	mg/kg			1830	28	RL	14		
2160B522EW3SS-1-SO1	8270C	Pyrene	0.049	mg/kg		1700	1720	28	RL	14		
2160B522EW3SS-1-SO1	8270C	bis(2-Ethylhexyl) phthalate	0.081	mg/kg	J B	35	347	210	RL	79		
2160B522EW3SS-1-SO1	8270C	Di-n-butyl phthalate	0.48	mg/kg	B	6100	6110	210	RL	63		
2160B522EW3SS-1-SO1	WS-WC-0050	Nitrocellulose	21.3	mg/kg		180000000		5.2	RL	0.82		
2160B522EW4SS-1-SO1	8330	2,4-Dinitrotoluene	0.45	mg/kg		1.6	15.7	0.24	RL	0.019		
2160B522EW4SS-1-SO1	8260B	Methylene chloride	0.0042	mg/kg	J B	11	199	7.3	RL	1.9		
2160B522EW4SS-1-SO1	8270C	2,4-Dinitrotoluene	0.61	mg/kg	J	1.6	15.7	950	RL	130		
2160B522EW4SS-1-SO1	8270C	Fluoranthene	0.033	mg/kg		2300	2290	32	RL	16		
2160B522EW4SS-1-SO1	8270C	2-Methylnaphthalene	0.059	mg/kg		310		32	RL	16		
2160B522EW4SS-1-SO1	8270C	Phenanthrene	0.072	mg/kg			1830	32	RL	16		
2160B522EW4SS-1-SO1	8270C	Pyrene	0.034	mg/kg		1700	1720	32	RL	16		
2160B522EW4SS-1-SO1	8270C	bis(2-Ethylhexyl) phthalate	0.12	mg/kg	J B	35	347	240	RL	90		
2160B522EW4SS-1-SO1	8270C	Di-n-butyl phthalate	0.88	mg/kg	B	6100	6110	240	RL	71		
2160B522EW4SS-1-SO1	160.3 MOD	Percent Solids	84.2	%				10	RL	10		
2160B522EW4SS-1-SO1	WS-WC-0050	Nitrocellulose	28.8	mg/kg		180000000		5.9	RL	0.93		
2160B522EW5SS-1-SO1	8260B	Toluene	0.0003	mg/kg	J	5000	5570	5	RL	0.29		
2160B522EW5SS-1-SO1	8270C	Anthracene	0.025	mg/kg		17000	17200	6.9	RL	3.4		
2160B522EW5SS-1-SO1	8270C	Fluoranthene	0.011	mg/kg		2300	2290	6.9	RL	3.4		
2160B522EW5SS-1-SO1	8270C	Indeno(1,2,3-cd)pyrene	0.031	mg/kg		0.15	6.21	6.9	RL	3.4		
2160B522EW5SS-1-SO1	8270C	Benzo(ghi)perylene	0.045	mg/kg				6.9	RL	3.4		
2160B522EW5SS-1-SO1	8270C	Benzo(a)pyrene	0.028	mg/kg		0.015	0.621	6.9	RL	3.4		
2160B522EW5SS-1-SO1	8270C	Phenanthrene	0.01	mg/kg			1830	6.9	RL	3.4		
2160B522EW5SS-1-SO1	8270C	Pyrene	0.011	mg/kg		1700	1720	6.9	RL	3.4		
2160B522EW5SS-1-SO1	8270C	bis(2-Ethylhexyl) phthalate	0.048	mg/kg	J B	35	347	52	RL	20		

Building 522 Summary of Detected Constituents in Soil

Ft. Wingate Depot Activity

Client Sample Id	Analysis Method	Analyte	Result	Unit	Flag	EPA RSL (mg/kg)	NMED SSG (mg/kg)	RL High Limit	High Limit Type	Low Limit (MDL)	Validation qualifier	Reason code
2160B522EW5SS-1-SO1	8270C	Butyl benzyl phthalate	0.017	mg/kg	J	260		52	RL	10		
2160B522EW5SS-1-SO1	8270C	Di-n-butyl phthalate	0.069	mg/kg	B	6100	6110	52	RL	16		
2160B522EW5SS-1-SO1	160.3 MOD	Percent Solids	96.5	%				10	RL	10		
2160B522EW5SS-1-SO1	ws-wc-0050	Nitrocellulose	4.4	mg/kg	B	180000000		5.2	RL	0.81		
2160B522EW6SS-1-SO1	8330	2,4-Dinitrotoluene	0.09	mg/kg	J	1.6	15.7	0.26	RL	0.02		
2160B522EW6SS-1-SO1	8260B	Toluene	0.00063	mg/kg	J	5000	5570	5.4	RL	0.31		
2160B522EW6SS-1-SO1	8270C	Di-n-butyl phthalate	0.15	mg/kg	J B	6100	6110	260	RL	77		
2160B522EW6SS-1-SO1	160.3 MOD	Percent Solids	78.3	%				10	RL	10		
2160B522EW6SS-1-SO1	ws-wc-0050	Nitrocellulose	335	mg/kg	q	180000000		63.9	RL	10		
2160B522EW7SS-1-SO1	8330	2,4-Dinitrotoluene	0.41	mg/kg		1.6	15.7	0.25	RL	0.02		
2160B522EW7SS-1-SO1	8260B	Methylene chloride	0.0017	mg/kg	J	11	199	5	RL	1.3		
2160B522EW7SS-1-SO1	8260B	Toluene	0.00038	mg/kg	J	5000	5570	5	RL	0.29		
2160B522EW7SS-1-SO1	8270C	Di-n-butyl phthalate	0.64	mg/kg	B	6100	6110	540	RL	160		
2160B522EW7SS-1-SO1	160.3 MOD	Percent Solids	93.4	%				10	RL	10		
2160B522EW7SS-1-SO1	ws-wc-0050	Nitrocellulose	26.5	mg/kg		180000000		5.4	RL	0.83		

Legend

Sample Number Nomenclature:

2160B522EW7SS-1-SO1

21 - Parcel

60 - AOC

B522 - Building 522

Sample Location

S5 - subsurface soil, SB - soil boring

1- depth of sample

Laboratory Qualifier Codes

Validation Qualifiers:

J = The associated result is quantitatively uncertain.

U = The associated analyte is considered not detected.

B = Blank, Samples that contained concentrations of target analytes at a reportable level in the Method Blank were flagged with B

q = elevated reporting limit in Nitrocellulose analysis

Reason Codes

DL - result reported between method detection limit and reporting limit

FD - field duplicate imprecision

Building 530 All Results Table
Fort Wingate Depot Activity

Client Sample Id	Analysis Method	Analyte	Result	Unit	EPA RSL (mg/kg)	NMED SSG (mg/kg)	FWDA BKG	Flag	RL High Limit	High Limit Type	MDL Low Limit	Data Validation Qualifiers	Reason Codes
2172B530T1SS-1-SO1	7471A	Mercury	0.1	mg/kg	5.6	7.71	0.03	J	0.11	RL	0.016	J	HM, DL
2172B530T1SS-1-SO1	8260B	Methylene chloride	0.005	mg/kg	11	199		J B	5	RL	1.3	U	MB
2172B530T1SS-1-SO1	8270C	bis(2-Ethylhexyl) phthalate	0.026	mg/kg	35	347		J	56	RL	21	J	LS, DL
2172B530T1SS-1-SO1	6010B	Arsenic	2.4	mg/kg	0.39	3.9	3.69		2.2	RL	0.42	J	II
2172B530T1SS-1-SO1	6010B	Lead	30.3	mg/kg	400	400	12.4		1.1	RL	0.26	J	HM
2172B530T1SS-1-SO1	6010B	Iron	7340	mg/kg	55000	54800	22600		56.2	RL	12.4		
2172B530T1SS-1-SO1	6010B	Magnesium	66200	mg/kg			1058		562	RL	10.6		
2172B530T1SS-1-SO1	6010B	Manganese	518	mg/kg	1800	10700			1.7	RL	0.31		
2172B530T1SS-1-SO1	6010B	Barium	201	mg/kg	15000	15600	482		22.5	RL	0.43		
2172B530T1SS-1-SO1	6010B	Nickel	10.8	mg/kg	1500	1560	19.5		4.5	RL	0.37		
2172B530T1SS-1-SO1	6010B	Potassium	1070	mg/kg			3950		562	RL	30.4	J	HM
2172B530T1SS-1-SO1	6010B	Beryllium	0.39	mg/kg	160	156	1.49	J	0.56	RL	0.057	J	DL
2172B530T1SS-1-SO1	6010B	Silver	0.39	mg/kg	390	391	0.13	J	1.1	RL	0.17	J	LM, DL
2172B530T1SS-1-SO1	6010B	Sodium	311	mg/kg			2526	J	562	RL	95.6	J	DL
2172B530T1SS-1-SO1	6010B	Zinc	88.7	mg/kg	23000	23500	49.2		5.6	RL	1.7	J	HM
2172B530T1SS-1-SO1	6010B	Chromium	12.2	mg/kg		113000	18.1		1.1	RL	0.25		
2172B530T1SS-1-SO1	6010B	Cadmium	7.7	mg/kg	70	77.9	0.224		0.56	RL	0.033	J	HM
2172B530T1SS-1-SO1	6010B	Cobalt	5	mg/kg	23		6.82		1.1	RL	0.12		
2172B530T1SS-1-SO1	6010B	Copper	37.2	mg/kg	3100	3130	18.4		2.8	RL	0.51	J	HM
2172B530T1SS-1-SO1	6010B	Aluminum	3490	mg/kg	77000	78100	23340		33.7	RL	7.9		
2172B530T1SS-1-SO1	6010B	Vanadium	15.3	mg/kg	5.5	391	27.2		1.1	RL	0.13		
2172B530T1SS-1-SO1	6010B	Calcium	135000	mg/kg			91760		2810	RL	276		
2172B530T1SS-1-SO1	160.3 MOD	Percent Solids	88.9	%					10	RL	10		
2172B530T1SS-1-SO1	WS-WC-0050	Nitrocellulose	1.1	mg/kg	1.8E+08			B	5.6	RL	0.88	J	DL
2172B530T2SS-1-SO1	7471A	Mercury	0.72	mg/kg	5.6	7.71	0.03		0.11	RL	0.015		
2172B530T2SS-1-SO1	8260B	Methylene chloride	0.0044	mg/kg	11	199		J B	4.4	RL	1.1	U	MB
2172B530T2SS-1-SO1	8260B	1,2,4-Trichlorobenzene	0.0044	mg/kg	22	143		J B	4.4	RL	0.28	U	MB
2172B530T2SS-1-SO1	8270C	Fluoranthene	0.023	mg/kg	2300	2290			7.3	RL	3.6	J	LS, FD
2172B530T2SS-1-SO1	8270C	Indeno(1,2,3-cd)pyrene	0.0088	mg/kg	0.15				7.3	RL	3.6	J	LS
2172B530T2SS-1-SO1	8270C	Benzo(a)anthracene	0.013	mg/kg	0.15	6.21			7.3	RL	3.6	J	LS
2172B530T2SS-1-SO1	8270C	Benzo(b)fluoranthene	0.02	mg/kg	0.15	6.21			7.3	RL	3.6	J	LS
2172B530T2SS-1-SO1	8270C	Benzo(ghi)perylene	0.011	mg/kg					7.3	RL	3.6	J	LS
2172B530T2SS-1-SO1	8270C	Benzo(a)pyrene	0.012	mg/kg	0.015	0.621			7.3	RL	3.6	J	LS
2172B530T2SS-1-SO1	8270C	Phenanthrene	0.013	mg/kg		1830			7.3	RL	3.6	J	LS
2172B530T2SS-1-SO1	8270C	Pyrene	0.021	mg/kg	1700	1720			7.3	RL	3.6	J	LS, FD

Building 530 All Results Table
Fort Wingate Depot Activity

Client Sample Id	Analysis Method	Analyte	Result	Unit	EPA RSL (mg/kg)	NMED SSG (mg/kg)	FWDA BKG	Flag	RL High Limit	High Limit Type	MDL Low Limit	Data Validation Qualifiers	Reason Codes
2172B530T2SS-1-SO1	8270C	Butyl benzyl phthalate	0.041	mg/kg	260			J	55	RL	11	J	LS, DL
2172B530T2SS-1-SO1	8270C	Chrysene	0.012	mg/kg	15	621			7.3	RL	1.2	J	LS
2172B530T2SS-1-SO1	6010B	Arsenic	1.5	mg/kg	0.39	3.9	3.69	J	2.2	RL	0.4	J	DL
2172B530T2SS-1-SO1	6010B	Lead	18.3	mg/kg	400	400	12.4		1.1	RL	0.25	J	FD
2172B530T2SS-1-SO1	6010B	Thallium	0.98	mg/kg		5.16	0.213	J	3.3	RL	0.83	J	DL
2172B530T2SS-1-SO1	6010B	Iron	12500	mg/kg	55000	54800	22600		54.6	RL	12		
2172B530T2SS-1-SO1	6010B	Magnesium	7250	mg/kg			1058		546	RL	10.3	J	FD
2172B530T2SS-1-SO1	6010B	Manganese	550	mg/kg	1800	10700			1.6	RL	0.31		
2172B530T2SS-1-SO1	6010B	Barium	568	mg/kg	15000	15600	482		21.8	RL	0.41		
2172B530T2SS-1-SO1	6010B	Nickel	13	mg/kg	1500	1560	19.5		4.4	RL	0.36		
2172B530T2SS-1-SO1	6010B	Potassium	2640	mg/kg			3950		546	RL	29.5	J	FD
2172B530T2SS-1-SO1	6010B	Beryllium	0.55	mg/kg	160	156	1.49		0.55	RL	0.056		
2172B530T2SS-1-SO1	6010B	Sodium	375	mg/kg			2526	J	546	RL	92.8	J	DL
2172B530T2SS-1-SO1	6010B	Zinc	30.7	mg/kg	23000	23500	49.2		5.5	RL	1.6		
2172B530T2SS-1-SO1	6010B	Chromium	11.6	mg/kg		113000	18.1		1.1	RL	0.24		
2172B530T2SS-1-SO1	6010B	Cadmium	0.63	mg/kg	70	77.9	0.224		0.55	RL	0.032	J	FD
2172B530T2SS-1-SO1	6010B	Calcium	35500	mg/kg			91760		546	RL	53.5	J	FD
2172B530T2SS-1-SO1	6010B	Cobalt	4.8	mg/kg	23		6.82		1.1	RL	0.12		
2172B530T2SS-1-SO1	6010B	Copper	7	mg/kg	3100	3130	18.4		2.7	RL	0.49	J	FD
2172B530T2SS-1-SO1	6010B	Aluminum	14900	mg/kg	77000	78100	23340		32.8	RL	7.7	J	FD
2172B530T2SS-1-SO1	6010B	Vanadium	19.7	mg/kg	5.5	391	27.2		1.1	RL	0.13		
2172B530T2SS-1-SO1	160.3 MOD	Percent Solids	91.6	%					10	RL	10		
2172B350T2SS-1-SO2	7471A	Mercury	0.76	mg/kg	5.6	7.71	0.03		0.11	RL	0.016		
2172B350T2SS-1-SO2	8260B	Methylene chloride	0.0049	mg/kg	11	199			4.8	RL	1.2		
2172B350T2SS-1-SO2	8260B	Toluene-d8 (surr)	0.047	mg/kg									
2172B350T2SS-1-SO2	8270C	Acenaphthene	0.0077	mg/kg	3400	3440			7.5	RL	3.7	J	LS
2172B350T2SS-1-SO2	8270C	Anthracene	0.0079	mg/kg	17000	17200			7.5	RL	3.7	J	LS
2172B350T2SS-1-SO2	8270C	Fluoranthene	0.011	mg/kg	2300	2290			7.5	RL	3.7	J	LS, FD
2172B350T2SS-1-SO2	8270C	Indeno(1,2,3-cd)pyrene	0.0097	mg/kg	0.15				7.5	RL	3.7	J	LS
2172B350T2SS-1-SO2	8270C	2-Methylnaphthalene	0.01	mg/kg	310				7.5	RL	3.7	J	LS
2172B350T2SS-1-SO2	8270C	Benzo(a)anthracene	0.011	mg/kg	0.15	6.21			7.5	RL	3.7	J	LS
2172B350T2SS-1-SO2	8270C	Benzo(b)fluoranthene	0.013	mg/kg	0.15	6.21			7.5	RL	3.7	J	LS
2172B350T2SS-1-SO2	8270C	Benzo(ghi)perylene	0.012	mg/kg					7.5	RL	3.7	J	LS
2172B350T2SS-1-SO2	8270C	Benzo(a)pyrene	0.0082	mg/kg	0.015	0.621			7.5	RL	3.7	J	LS
2172B350T2SS-1-SO2	8270C	Phenanthrene	0.013	mg/kg		1830			7.5	RL	3.7	J	LS
2172B350T2SS-1-SO2	8270C	Pyrene	0.01	mg/kg	1700	1720			7.5	RL	3.7	J	LS, FD

Building 530 All Results Table
Fort Wingate Depot Activity

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2172B350T2SS-1-SO2	8270C	Chrysene	0.01	mg/kg	15	621			7.5	RL	1.2	J	LS
2172B350T2SS-1-SO2	8270C	Di-n-butyl phthalate	0.022	mg/kg	6100	6110		J	56	RL	17	J	LS, DL
2172B350T2SS-1-SO2	6010B	Arsenic	2.1	mg/kg	0.39	3.9	3.69	J	2.3	RL	0.42	J	II, DL
2172B350T2SS-1-SO2	6010B	Lead	11.6	mg/kg	400	400	12.4		1.1	RL	0.26	J	FD
2172B350T2SS-1-SO2	6010B	Iron	8620	mg/kg	55000	54800	22600		56.4	RL	12.4		
2172B350T2SS-1-SO2	6010B	Magnesium	19100	mg/kg			1058		564	RL	10.6	J	FD
2172B350T2SS-1-SO2	6010B	Manganese	499	mg/kg	1800	10700			1.7	RL	0.32		
2172B350T2SS-1-SO2	6010B	Barium	516	mg/kg	15000	15600	482		22.5	RL	0.43		
2172B350T2SS-1-SO2	6010B	Nickel	9.1	mg/kg	1500	1560	19.5		4.5	RL	0.37		
2172B350T2SS-1-SO2	6010B	Potassium	1480	mg/kg			3950		564	RL	30.4	J	FD
2172B350T2SS-1-SO2	6010B	Beryllium	0.46	mg/kg	160	156	1.49	J	0.56	RL	0.057	J	DL
2172B350T2SS-1-SO2	6010B	Sodium	394	mg/kg			2526	J	564	RL	95.8	J	DL
2172B350T2SS-1-SO2	6010B	Zinc	41.3	mg/kg	23000	23500	49.2		5.6	RL	1.7		
2172B350T2SS-1-SO2	6010B	Chromium	8.5	mg/kg		113000	18.1		1.1	RL	0.25		
2172B350T2SS-1-SO2	6010B	Cadmium	1.9	mg/kg	70	77.9	0.224		0.56	RL	0.033	J	FD
2172B350T2SS-1-SO2	6010B	Cobalt	3.4	mg/kg	23		6.82		1.1	RL	0.12	J	II
2172B350T2SS-1-SO2	6010B	Copper	14.5	mg/kg	3100	3130	18.4		2.8	RL	0.51	J	FD
2172B350T2SS-1-SO2	6010B	Aluminum	5940	mg/kg	77000	78100	23340		33.8	RL	7.9	J	FD
2172B350T2SS-1-SO2	6010B	Vanadium	16.4	mg/kg	5.5	391	27.2		1.1	RL	0.14		
2172B350T2SS-1-SO2	6010B	Calcium	69200	mg/kg			91760		2820	RL	276	J	FD
2172B350T2SS-1-SO2	160.3 MOD	Percent Solids	88.7	%					10	RL	10		
2172B350T2SS-1-SO2	NS-WC-0050	Nitrocellulose	1	mg/kg	1.8E+08			B	5.6	RL	0.88	J	DL
2172B530T3SS-1-SO1	8260B	Methylene chloride	0.0047	mg/kg	11	199		J B	4.7	RL	1.2	U	MB
2172B530T3SS-1-SO1	8270C	Di-n-butyl phthalate	0.018	mg/kg	6100	6110		J	57	RL	17	J	DL
2172B530T3SS-1-SO1	6010B	Arsenic	1.8	mg/kg	0.39	3.9	3.69	J	2.3	RL	0.42	J	DL
2172B530T3SS-1-SO1	6010B	Lead	6.7	mg/kg	400	400	12.4		1.1	RL	0.26		
2172B530T3SS-1-SO1	6010B	Iron	7930	mg/kg	55000	54800	22600		56.9	RL	12.5		
2172B530T3SS-1-SO1	6010B	Magnesium	6290	mg/kg			1058		569	RL	10.7		
2172B530T3SS-1-SO1	6010B	Manganese	330	mg/kg	1800	10700			1.7	RL	0.32		
2172B530T3SS-1-SO1	6010B	Barium	399	mg/kg	15000	15600	482		22.8	RL	0.43		
2172B530T3SS-1-SO1	6010B	Nickel	6	mg/kg	1500	1560	19.5		4.6	RL	0.38		
2172B530T3SS-1-SO1	6010B	Potassium	1220	mg/kg			3950		569	RL	30.7		
2172B530T3SS-1-SO1	6010B	Beryllium	0.42	mg/kg	160	156	1.49	J	0.57	RL	0.058	J	DL
2172B530T3SS-1-SO1	6010B	Sodium	132	mg/kg			2526	J	569	RL	96.8	J	DL
2172B530T3SS-1-SO1	6010B	Zinc	39.2	mg/kg	23000	23500	49.2		5.7	RL	1.7		
2172B530T3SS-1-SO1	6010B	Chromium	5.7	mg/kg		113000	18.1		1.1	RL	0.25		

Building 530 All Results Table
Fort Wingate Depot Activity

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2172B530T3SS-1-SO1	6010B	Cadmium	0.17	mg/kg	70	77.9	0.224	J	0.57	RL	0.033	J	DL
2172B530T3SS-1-SO1	6010B	Calcium	25100	mg/kg			91760		569	RL	55.8		
2172B530T3SS-1-SO1	6010B	Cobalt	2.7	mg/kg	23		6.82		1.1	RL	0.13		
2172B530T3SS-1-SO1	6010B	Copper	4.9	mg/kg	3100	3130	18.4		2.8	RL	0.51		
2172B530T3SS-1-SO1	6010B	Aluminum	6080	mg/kg	77000	78100	23340		34.2	RL	8		
2172B530T3SS-1-SO1	6010B	Vanadium	14.4	mg/kg	5.5	391	27.2		1.1	RL	0.14		
2172B530T3SS-1-SO1	160.3 MOD	Percent Solids	87.8	%					10	RL	10		
2172B530AP1SB-1-SO1	7471A	Mercury	0.46	mg/kg	5.6	7.71	0.03		0.13	RL	0.018		
2172B530AP1SB-1-SO1	8260B	Methylene chloride	0.009	mg/kg	11	199		B	5.8	RL	1.5	U	MB
2172B530AP1SB-1-SO1	6010B	Arsenic	1.7	mg/kg	0.39	3.9	3.69	J	2.5	RL	0.46	J	DL
2172B530AP1SB-1-SO1	6010B	Lead	15	mg/kg	400	400	12.4		1.3	RL	0.29		
2172B530AP1SB-1-SO1	6010B	Iron	10500	mg/kg	55000	54800	22600		62.8	RL	13.8		
2172B530AP1SB-1-SO1	6010B	Magnesium	6240	mg/kg			1058		628	RL	11.8		
2172B530AP1SB-1-SO1	6010B	Manganese	341	mg/kg	1800	10700			1.9	RL	0.35		
2172B530AP1SB-1-SO1	6010B	Barium	324	mg/kg	15000	15600	482		25.1	RL	0.48		
2172B530AP1SB-1-SO1	6010B	Nickel	8.7	mg/kg	1500	1560	19.5		5	RL	0.41		
2172B530AP1SB-1-SO1	6010B	Potassium	1610	mg/kg			3950		628	RL	33.9		
2172B530AP1SB-1-SO1	6010B	Beryllium	0.52	mg/kg	160	156	1.49	J	0.63	RL	0.064	J	DL
2172B530AP1SB-1-SO1	6010B	Sodium	4280	mg/kg			2526		628	RL	107		
2172B530AP1SB-1-SO1	6010B	Zinc	40.9	mg/kg	23000	23500	49.2		6.3	RL	1.9		
2172B530AP1SB-1-SO1	6010B	Chromium	8.7	mg/kg		113000	18.1		1.3	RL	0.28		
2172B530AP1SB-1-SO1	6010B	Cadmium	1.8	mg/kg	70	77.9	0.224		0.63	RL	0.036		
2172B530AP1SB-1-SO1	6010B	Calcium	26400	mg/kg			91760		628	RL	61.5		
2172B530AP1SB-1-SO1	6010B	Cobalt	4.2	mg/kg	23		6.82		1.3	RL	0.14		
2172B530AP1SB-1-SO1	6010B	Copper	13.6	mg/kg	3100	3130	18.4		3.1	RL	0.56		
2172B530AP1SB-1-SO1	6010B	Aluminum	9430	mg/kg	77000	78100	23340		37.7	RL	8.9		
2172B530AP1SB-1-SO1	6010B	Vanadium	16.1	mg/kg	5.5	391	27.2		1.3	RL	0.15		
2172B530AP1SB-1-SO1	160.3 MOD	Percent Solids	79.7	%					10	RL	10		
2172B530AP1SB-5-SO1	8260B	Methylene chloride	0.0052	mg/kg	11	199		J B	5.2	RL	1.4	U	MB
2172B530AP1SB-5-SO1	8270C	bis(2-Ethylhexyl) phthalate	0.022	mg/kg	35	347		J	55	RL	21	J	LS, DL
2172B530AP1SB-5-SO1	8270C	Di-n-butyl phthalate	0.031	mg/kg	6100	6110		J	55	RL	16	J	LS, DL
2172B530AP1SB-5-SO1	6010B	Arsenic	0.66	mg/kg	0.39	3.9	3.69	J	2.2	RL	0.4	J	DL
2172B530AP1SB-5-SO1	6010B	Lead	5.3	mg/kg	400	400	12.4		1.1	RL	0.25		
2172B530AP1SB-5-SO1	6010B	Iron	7300	mg/kg	55000	54800	22600		54.6	RL	12		
2172B530AP1SB-5-SO1	6010B	Magnesium	3410	mg/kg			1058		546	RL	10.3		
2172B530AP1SB-5-SO1	6010B	Manganese	201	mg/kg	1800	10700			1.6	RL	0.31		

Building 530 All Results Table
Fort Wingate Depot Activity

Client Sample Id	Analysis Method	Analyte	Result	Unit	EPA RSL (mg/kg)	NMED SSG (mg/kg)	FWDA BKG	Flag	RL High Limit	High Limit Type	MDL Low Limit	Data Validation Qualifiers	Reason Codes
2172B530AP1SB-5-SO1	6010B	Barium	51.6	mg/kg	15000	15600	482		21.8	RL	0.42		
2172B530AP1SB-5-SO1	6010B	Nickel	7.2	mg/kg	1500	1560	19.5		4.4	RL	0.36		
2172B530AP1SB-5-SO1	6010B	Potassium	816	mg/kg			3950		546	RL	29.5		
2172B530AP1SB-5-SO1	6010B	Beryllium	0.53	mg/kg	160	156	1.49	J	0.55	RL	0.056	J	DL
2172B530AP1SB-5-SO1	6010B	Sodium	3850	mg/kg			2526		546	RL	92.8		
2172B530AP1SB-5-SO1	6010B	Zinc	11.5	mg/kg	23000	23500	49.2		5.5	RL	1.6		
2172B530AP1SB-5-SO1	6010B	Chromium	5.3	mg/kg		113000	18.1		1.1	RL	0.24		
2172B530AP1SB-5-SO1	6010B	Calcium	9330	mg/kg			91760		546	RL	53.5		
2172B530AP1SB-5-SO1	6010B	Cobalt	3.2	mg/kg	23		6.82		1.1	RL	0.12		
2172B530AP1SB-5-SO1	6010B	Copper	1.4	mg/kg	3100	3130	18.4	J	2.7	RL	0.49	J	DL
2172B530AP1SB-5-SO1	6010B	Aluminum	9320	mg/kg	77000	78100	23340		32.8	RL	7.7		
2172B530AP1SB-5-SO1	6010B	Vanadium	7.3	mg/kg	5.5	391	27.2		1.1	RL	0.13		
2172B530AP1SB-5-SO1	160.3 MOD	Percent Solids	91.6	%					10	RL	10		
2172B530AP2SB-1-SO1	7471A	Mercury	0.018	mg/kg	5.6	7.71	0.03	J	0.12	RL	0.016	J	DL
2172B530AP2SB-1-SO1	8260B	Methylene chloride	0.0066	mg/kg	11	199		B	5.2	RL	1.4	U	MB
2172B530AP2SB-1-SO1	6010B	Arsenic	1.7	mg/kg	0.39	3.9	3.69	J	2.3	RL	0.43	J	DL
2172B530AP2SB-1-SO1	6010B	Lead	6.9	mg/kg	400	400	12.4		1.2	RL	0.27		
2172B530AP2SB-1-SO1	6010B	Iron	10600	mg/kg	55000	54800	22600		57.9	RL	12.7		
2172B530AP2SB-1-SO1	6010B	Magnesium	3750	mg/kg			1058		579	RL	10.9		
2172B530AP2SB-1-SO1	6010B	Manganese	298	mg/kg	1800	10700			1.7	RL	0.32		
2172B530AP2SB-1-SO1	6010B	Barium	222	mg/kg	15000	15600	482		23.2	RL	0.44		
2172B530AP2SB-1-SO1	6010B	Nickel	8.3	mg/kg	1500	1560	19.5		4.6	RL	0.38		
2172B530AP2SB-1-SO1	6010B	Potassium	1290	mg/kg			3950		579	RL	31.3		
2172B530AP2SB-1-SO1	6010B	Beryllium	0.47	mg/kg	160	156	1.49	J	0.58	RL	0.059	J	DL
2172B530AP2SB-1-SO1	6010B	Sodium	3370	mg/kg			2526		579	RL	98.5		
2172B530AP2SB-1-SO1	6010B	Zinc	22	mg/kg	23000	23500	49.2		5.8	RL	1.7		
2172B530AP2SB-1-SO1	6010B	Chromium	7.7	mg/kg		113000	18.1		1.2	RL	0.25		
2172B530AP2SB-1-SO1	6010B	Cadmium	0.074	mg/kg	70	77.9	0.224	J	0.58	RL	0.034	J	DL
2172B530AP2SB-1-SO1	6010B	Calcium	15200	mg/kg			91760		579	RL	56.8		
2172B530AP2SB-1-SO1	6010B	Cobalt	4.3	mg/kg	23		6.82		1.2	RL	0.13		
2172B530AP2SB-1-SO1	6010B	Copper	4.2	mg/kg	3100	3130	18.4		2.9	RL	0.52		
2172B530AP2SB-1-SO1	6010B	Aluminum	10200	mg/kg	77000	78100	23340		34.8	RL	8.2		
2172B530AP2SB-1-SO1	6010B	Vanadium	14.5	mg/kg	5.5	391	27.2		1.2	RL	0.14		
2172B530AP2SB-1-SO1	160.3 MOD	Percent Solids	86.3	%					10	RL	10		
2172B530AP2SB-5-SO1	8260B	Methylene chloride	0.0067	mg/kg	11	199		B	5.6	RL	1.5	U	MB
2172B530AP2SB-5-SO1	6010B	Arsenic	0.52	mg/kg	0.39	3.9	3.69	J	2.2	RL	0.41	J	DL

Building 530 All Results Table
Fort Wingate Depot Activity

Client Sample Id	Analysis Method	Analyte	Result	Unit	EPA RSL (mg/kg)	NMED SSG (mg/kg)	FWDA BKG	Flag	RL High Limit	High Limit Type	MDL Low Limit	Data Validation Qualifiers	Reason Codes
2172B530AP2SB-5-SO1	6010B	Lead	3.4	mg/kg	400	400	12.4		1.1	RL	0.25		
2172B530AP2SB-5-SO1	6010B	Iron	3540	mg/kg	55000	54800	22600		55.3	RL	12.2		
2172B530AP2SB-5-SO1	6010B	Magnesium	3230	mg/kg			1058		553	RL	10.4		
2172B530AP2SB-5-SO1	6010B	Manganese	375	mg/kg	1800	10700			1.7	RL	0.31		
2172B530AP2SB-5-SO1	6010B	Barium	62.3	mg/kg	15000	15600	482		22.1	RL	0.42		
2172B530AP2SB-5-SO1	6010B	Nickel	3.9	mg/kg	1500	1560	19.5	J	4.4	RL	0.37	J	DL
2172B530AP2SB-5-SO1	6010B	Potassium	560	mg/kg			3950		553	RL	29.9		
2172B530AP2SB-5-SO1	6010B	Beryllium	0.32	mg/kg	160	156	1.49	J	0.55	RL	0.056	J	DL
2172B530AP2SB-5-SO1	6010B	Sodium	2270	mg/kg			2526		553	RL	94		
2172B530AP2SB-5-SO1	6010B	Zinc	9.6	mg/kg	23000	23500	49.2		5.5	RL	1.6		
2172B530AP2SB-5-SO1	6010B	Chromium	6.3	mg/kg		113000	18.1		1.1	RL	0.24		
2172B530AP2SB-5-SO1	6010B	Cadmium	0.18	mg/kg	70	77.9	0.224	J	0.55	RL	0.032	J	DL
2172B530AP2SB-5-SO1	6010B	Cobalt	1.7	mg/kg	23		6.82		1.1	RL	0.12		
2172B530AP2SB-5-SO1	6010B	Copper	1.8	mg/kg	3100	3130	18.4	J	2.8	RL	0.5	J	DL
2172B530AP2SB-5-SO1	6010B	Aluminum	5340	mg/kg	77000	78100	23340		33.2	RL	7.8		
2172B530AP2SB-5-SO1	6010B	Vanadium	16.7	mg/kg	5.5	391	27.2		1.1	RL	0.13		
2172B530AP2SB-5-SO1	6010B	Calcium	174000	mg/kg			91760		2770	RL	271		

Legend

Laboratory Qualifier Codes

Validation Qualifiers:

J = The associated result is quantitatively uncertain.

U = The associated analyte is considered not detected.

Reason Codes

DL - result reported between method detection limit and reporting limit

FD - field duplicate imprecision

Sample Number Nomenclature:

2172B530T3SS-1-SO1

21 - Parcel

72 - SWMU

B530 - Building 530

T - Trench, AP - Acid Pit

SS - subsurface soil, SB - soil boring

1- depth of sample

Appendix E – Quality Control Reports

PIKA INTERNATIONAL, INC.

Quality Control Report

Date: June 24, 2010 **Contract Number:** W912G-10-C-0054
Report Number: 10-12-149 **Job Site** Parcel 21
Project Location: Ft. Wingate Depot Activity, NM **Job Location or Details** Building 530

Type of Inspection Performed: ☐ **Preparatory** ☐ **Initial** ☑ **Follow On**
Area or Task inspected: Removal of debris around building 530.

Operation Inspected:

☑	Mobilization/Setup	☑	Safety	☑	Quality
☐	Building Renovation	☐	Excavation	☐	Survey
☐	Construction	☐	Hammermill	☐	Demolition
☐	Explosives	☑	Scrap	☑	Demobilization/Closure
☐	List Other Operation:				

Quality Inspection Results: MOB/SETUP/DEMOB: The Contractor mobilized promptly, with equipment in good operating condition and returned the site to original look. SAFETY: The Contractor conducted this operation in a safe, orderly, and expeditious way. WORK: The work involved the clean-up of debris around building 530. The contractor used a backhoe/excavator and dump truck to haul the debris. The debris was segregated between concrete, asphalt, and other debris. The concrete and asphalt were taken to recyclers and the other debris to the landfill. QUALITY: The task involved removing debris from around building 530. The Contractor accomplished these tasks as designed and stated in the Scope of Work.

Follow Up Action(s) Required:

Follow Up Action(s) Varified:

Remarks:

I certify that this report is complete and correct and that I, or my authorized representative's, have inspected the work performed this day and have determined that all materials, equipment and workmanship are in strict compliance with plans and specification except as noted herein.

James L King, Jr. Digitally signed by James L King, Jr. DN: cn=James L King, Jr., o=PIKA International, ou, email=jking@pikainc.com, c=US Date: 2010.06.29 11:53:30 -06'00'

James L King, Site Manager **Date**

SCOVILLE.MICHAEL.G.1231021988 Digitally signed by SCOVILLE.MICHAEL.G.1231021988 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=SCOVILLE.MICHAEL.G.1231021988 Date: 2010.06.29 13:15:18 -05'00'

Michael G. Scoville, COE Site Representative **Date**

PIKA INTERNATIONAL, INC.

Quality Control Report

Date:	October 21, 2010	**Contract Number:**	W9126G-09-C-0053
Report Number:	09-12-149	**Job Site**	FWDA - Phase 7
Project Location:	Ft. Wingate Depot Activity, NM	**Building Numbers**	507,508,509,510,511,512 513,514,515,516,522,526 540

Type of Inspection Performed: ☐ **Preparatory** ☐ **Initial** ☑ **Follow On**

Area or Task inspected: Demolition operations.

Demolitions Operation Inspected:

- ☑ Bld Demo complete
- ☑ Foundations removed
- ☑ Appurtenances removed
- ☑ Graded
- ☐ List Other Operation: _____
- ☑ 100' area cleared
- ☑ Site Cleared
- ☐ Other
- ☐

Quality Inspection Results: Need to police the area for minor items. Found pieces of concrete/asphalt and metal around 507, 508, and 511. There is a pile of dirt/asphalt by 515 to be removed. Found pieces of concrete, wood, wire, and tires around 522. Found concrete, wood, and wiring around 516.

Follow Up Action(s) Required: Independence/Bohunk will police the area and dispose of these items.

Follow Up Action(s) Varified: Walked area with Martin Carpenter (USACE) on Saturday, October 23. Everything looks good and ready for seeding.

James King Jr. — **PIKA Representative (print and sign)** — **Date** 10/25/10

MARTIN S. CARPENTER — **COE Site Representative (print and sign)** — **Date** 10/25/10

Site Closure Inspected:

- ☑ Final Grade
- ☑ Seeding
- ☑ Cover applied
- ☑ Site Cleared
- ☑ Quality
- ☐ Survey

James King Jr. — **PIKA Representative (print and sign)** — **Date** 10/28/10

MARTIN S. CARPENTER — **COE Site Representative (print and sign)** — **Date** 10/28/10

Appendix F – Photographs

Sampling at Ft. Wingate

Sampling Workshop Area

Sampling around building 522

Taking GPS locations at 522

Sampling at building 522

Sampling at building 522

Removing concrete for sampling building 522

Sampling at Ft. Wingate

Decontamination after building sampling

Pit sampling at building 530

Appendix G – US Army Correspondences