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REVISED DRAFT SOIL DELINEATION SAMPLING SUMMARY REPORT SWMU 16 CAST HIGH EXPLOSIVE FILL/BUILDING 146 INCINERATOR NSA CRANE IN (REVISED DRAFT ACTING AS FINAL VERSION)
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Revised Draft
Soil Delineation Sampling Data Summary Report
SWMU 16 - Cast High Explosive Fill/ Building 146 Incinerator

Naval Support Activity Crane
Crane, Indiana

Naval Facilities Engineering Command Midwest

Contract Number N62470-08-D-1001

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December 2012

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DECEMBER 2012

REVISED DRAFT
SOIL DELINEATION SAMPLING DATA SUMMARY REPORT
FOR
SWMU 16 - CAST HIGH EXPLOSIVE FILL/ BUILDING 146 INCINERATOR

NAVAL SUPPORT ACTIVITY, CRANE
CRANE, INDIANA

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

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1.0 BACKGROUND

This report constitutes the Delineation Data Summary Report for Solid Waste Management Unit (SWMU) 16, Cast High Explosives Fill/B146 Incinerator, located at the Naval Surface Warfare Center (NSWC), Crane, Indiana. Tetra Tech, Inc. (Tetra Tech) prepared this report for the Department of the Navy (Navy), Naval Facilities Engineering Field Division Midwest (NAVFAC MW). This report was completed under Contract Task Order (CTO) F277, Comprehensive Long-Term Environmental Action Navy (CLEAN) III, Contract Number N62470-08-D-0001.

Building 146 was an explosives fill and pressure washout facility and included a trichloroethene (TCE) degreaser, which discharged to sumps located outside of Building 146. Prior to 1978, outfalls from the sumps, which are located north, east, and west of Building 146, discharged to swales that ultimately discharged to Boggs Creek via Turkey Creek. In 1998 it was found that discharges of floor drains located near the degreaser were routed through terra cotta pipe to the west sump. The degreaser has been removed and the drain lines from Building 146 have been plugged. Three oil-fired, rotary kiln incinerators, with fuel storage tanks were located on the south end of Building 146. These incinerators were used for the destruction of the explosive constituent of small munitions items and components. Ashes from the incinerator were stored in a pile, which was located near the incinerators. The incinerators were closed in the early 1990s, and the waste ash piles were removed along with some obviously contaminated soil.

The Navy has completed a Resource Conservation Act (RCRA) Facility Investigation (RFI) for SWMU 16. Based on the findings in the RFI, the Navy determined that an interim measures action would be conducted in the TCE Contamination Area to reduce contamination sources for groundwater, and the Metals Contamination Area to reduce ecological risk. Efficient implementation of the interim measure required a more precise delineation of the extent of soils contamination in each area. In addition, after the RFI field activities were completed, an underground storage tank (UST) was discovered in an area northeast of Building 146.

1.1 PRELIMINARY REMEDIATION GOALS

As presented in the Technical Memorandum, Ecological Media Cleanup Goals SWMU 16 Surface Soils (Tetra Tech, 2010), site-specific preliminary remediation goals (PRGs) were developed based on risks to plants and invertebrates for antimony and copper, and based on risks to plants, soil invertebrates, and invertivorous birds for lead and zinc. The PRGs were developed using the results of earthworm and plant toxicity tests, and earthworm bioaccumulation tests that were conducted using site soil. The following briefly presents the development of each PRG.

- Soil Invertebrates: The PRGs for soil invertebrates were based on the results of a 28-day earthworm toxicity test, where survival and growth of the earthworms were the endpoints. None of the site samples had lower survival or growth earthworms compared to the reference samples, so the maximum detected concentrations of the metals in the samples tested were considered the No Observed Effects Concentration (NOEC). The NOECs are used as the PRGs for soil invertebrates for copper (253 mg/kg) and zinc (1,950 mg/kg). Because the USEPA Ecological Soil Screening Levels (Eco SSLs) (USEPA, 2005a and 2005b) for soil invertebrates for antimony (78 mg/kg) and lead (1,700 mg/kg) were greater than the NOECs, the Eco SSLs are the PRGs for those metals (see Table 1-1).

- Plants: The PRGs for plants were based on the results of 28-day toxicity tests with Red clover and ryegrass. The endpoints of the tests were germination, survival, and growth. There were some impacts to plants in the site samples, but it appeared the soil pH was a confounding factor in the tests. Nevertheless, NOECs and Lowest Observed Effects Concentrations (LOECs) were developed for antimony, lead, and zinc. The geometric means between the NOECs and LOECs were used at the PRGs for antimony (6.3 mg/kg), lead (652 mg/kg), and zinc (1,950 mg/kg). A LOEC could not be developed for copper because the maximum concentration was in a non-toxic sample so the PRGs for copper was based on the NOEC.

- Invertivorous Birds: The PRGs for invertivorous birds was developed by first conducting an earthworm bioaccumulation test using site soils, and then using the site-specific bioaccumulation factors (BAFs) to calculate the PRG. Table 1-1 presents the calculated value of the PRGs for invertivorous birds for lead and zinc; PRGs were not calculated for antimony or copper because these metals did not pose potential risks to invertivorous birds in the ecological risk assessment for SWMU 16 (Tetra Tech, 2011a). The PRG for lead in Table 1-1 (163 mg/kg) is lower than the value presented in the Technical Memorandum (349 mg/kg) (Tetra Tech, 2010) because USEPA suggested that the Navy use a lowest observed adverse effects level (LOAEL) for lead on another site that was lower than the LOAEL presented in the Technical Memorandum. This LOAEL then resulted in the lower PRG presented in Table 1-1. Note that because birds roam across the site, USEPA agreed that the PRGs for insectivorous birds can be applied as an average concentration across the site.

The PRGs were then used as the media cleanup standards (MCSs) for SWMU 16 with one exception. For antimony, the plant PRG of 6.3 mg/kg was lower than the base-wide background concentration of 6.9 mg/kg. Therefore, 6.9 mg/kg was used as the MCS for antimony.

As presented in Table 1-1, the MCS for lead at any given sample point is 652 mg/kg to be protective of plants; whereas, 163 mg/kg is the average MCS concentration that has to be met to be protective of birds across the site. Therefore for initial screening purposes, 652 mg/kg was used as the MCS for lead for the individual sampling locations.

PRGs for chlorinated solvents in soil were based on the protection of groundwater. These PRGs are listed in Table 1-2.

TABLE 1-1

SOIL PRELIMINARY REMEDIATION GOALS - METALS
SWMU 16
NSA CRANE
CRANE, INDIANA

Assessment Endpoint	Concentrations of metals (mg/kg)			
	Antimony	Copper	Lead	Zinc
Soil Invertebrates				
Preliminary Remediation Goal	78[(1)]	253	1700[(1)]	1950
Invertivorous Birds				
Preliminary Remediation Goal	-	-	163	5363
Terrestrial Plants				
Preliminary Remediation Goal	6.3	253	652	1716

1 - Based on USEPA Ecological Soil Screening Levels (USEPA 2005a and b).
- - Not applicable

TABLE 1-2

SOIL PRELIMINARY REMEDIATION GOALS - VOLATILE ORGANICS
SWMU 16
NSA CRANE
CRANE, INDIANA

Compound	CAS No.	MCS (µg/kg)
Carbon tetrachloride	56-23-5	38
1,1,2-Trichloroethane	79-00-5	32
cis-1,2-Dichloroethene	156-59-2	420
trans-1,2-Dichloroethene	156-60-5	580
Tetrachloroethene	127-18-4	46
Trichloroethene	79-01-6	36
Vinyl chloride	75-01-4	13.8

Notes:

CAS - Chemical Abstracts Service
µg/kg - micrograms per kilogram

2.0 FIELD INVESTIGATION

Two rounds of soil delineation sampling were conducted for SWMU 16. Round 1 occurred in August 2011, and Round 2 occurred in October/November 2012. Table 2-1 presents the Rounds 1 and 2 soil delineation samples that were collected for each area, and the associated laboratory analyses. Figures 3-1 through 3-5 present the sample locations. Appendix A.1 provides the soil boring and sample logs for the Round 1 sampling event (August 2011), and Appendix A.2 provides the soil boring and sample logs for the Round 2 sampling event (October/November 2012). The soil boring and sample logs for the prior RFI sampling are presented in the SWMU 16 RFI report (Tetra Tech, 2011). Appendix A.3 presents the chain-of-custody forms for the August 2011 event, and Appendix A.4 presents the chain-of-custody forms for the October/November 2012 event.

2.1 ROUND 1 SOIL DELINEATION SAMPLING

The Round 1 soil delineation sampling field activities conducted in August 2011 were implemented in accordance with the EPA-approved SAP (Tetra Tech, 2011b). The field investigation activities were conducted in three discrete areas: TCE Contamination Area, Metals Contamination Area, and UST Area.

2.1.1 TCE Contamination Area

Soil samples were collected from select areas identified based on historic RFI data in the TCE Contamination Area. Forty-four (44) soil borings (16SB118 – 16SB153 and 16SB199 – 16SB206) were advanced with the use of a DPT rig within the area west and north of Building 146 during Round 1. Up to three soil samples were collected from each boring location; one surface soil (0.5 – 2 feet bgs), and up to two subsurface soil samples, depending on soil depth above bedrock. The subsurface soil samples were collected from 2 to 6 feet bgs and the 2-foot soil interval above the bedrock surface. Only one subsurface soil sample was collected if the bedrock was less than 6 feet bgs. The samples were analyzed for VOCs associated with solvent use.

2.1.2 Metals Contamination Area

Thirty-seven (37) surface soil samples (16SS154 – 16SS190) were collected in Round 1 within the Metals Contamination Area. Only surface soil samples were collected, since the only concerns are ecological receptors for metals. Surface soil samples were collected for analyses of select metals associated with the former ash piles (antimony, copper, lead, and zinc).

2.1.3 UST Area

Eight (8) soil borings (16SB191 – 16SB198) were advanced within the area surrounding the UST. Surface and subsurface soil samples were collected to determine the presence/absence of contamination in the area of the UST. All samples were analyzed for VOCs, Total Petroleum Hydrocarbons - Diesel Range Organic (TPH-DRO), TPH - Gasoline Range Organics (GRO) and lead.

2.1.4 Round 1 Sampling Summary

The extent of the TCE soil contamination was not fully delineated in the southern area of the TCE Contamination Area. In addition, the need existed for further horizontal contaminant delineation refinement in the northwestern and northern areas.

In addition, the extent of metals contamination was fully delineated for antimony and copper; however, additional soil sampling was required to fully delineate/bound the extent of zinc and lead concentrations in surface soils above the MCS in the southeastern area of the site.

Based on the results of the Round 1 soil delineation sampling, it was determined by the Navy that additional soil delineation sampling was warranted in both the TCE Contamination Area and the Metals Contamination Area in order to fully delineate the extent of the observed contamination (Tetra Tech, 2012).

2.2 ROUND 2 SOIL DELINEATION SAMPLING

The Round 2 soil delineation sampling field activities were conducted in October and November 2012. The field activities were implemented in accordance with the SWMU 16 Delineation Sampling Data Summary Report (Tetra Tech, 2012). The field investigation activities were conducted in two discrete areas: TCE Contamination Area and Metals Contamination Area.

2.2.1 TCE Contamination Area

Round 2 soil delineation sampling in the TCE Contamination Area consisted of collecting twenty (20) surface and nine (9) subsurface soil samples from select areas (16SB207 – 16SB220 and 16SB236 – 16SB241) based on the Round 1 soil delineation sampling results, in order to fully delineate the TCE contamination, both horizontally and vertically, in these areas. Surface and subsurface soil samples were collected from the ground surface to the top of bedrock, observed at approximately 2 to 6 feet bgs in the sampled areas. All soil samples were analyzed for select VOC analysis associated with solvent use (i.e., 1,1,2-trichloroethane, carbon tetrachloride, cis-1,2-dichloroethene, trans-1,2-dichloroethene, TCE, and vinyl chloride).

2.2.2 Metals Contamination Area

Round 2 soil delineation sampling in the Metals Contamination Area consisted of the collection of 15 surface soil samples (16SS221 – 16SB235). Only soil samples were collected, since the only concerns for metals are ecological receptors. All of the samples collected were analyzed for lead and zinc in order to fully delineate the horizontal extent of exceedances of these two metals identified in the Round 1 delineation sampling.

TABLE 2-1

ROUNDS 1 & 2 SAMPLE SUMMARY
SWMU 16
NSA CRANE
CRANE, INDIANA

Sample Location	Date Sampled Collected	Sample Collection Method	Total Depth (feet bgs)	Sample ID	Analyses		
					TCE Contamination Area VOCs	Metals Contamination Area	UST Area VOCs, TPH-GRO TPH-DRO, Lead
Soil Delineation Sampling – TCE Contamination Area (Round 1)							
16SB118	8/24/11	DPT	7.2	16SS1180002	Asphalt/Gravel		
				16SB1180206	X		
				16SB1180607	X		
16SB119	8/24/11	DPT	7.9	16SS1190002	Asphalt/Gravel		
				16SB1190406	X		
				16SB1190608	X		
16SB120	8/24/11	DPT	7.8	16SS1200002	Asphalt/Gravel		
				16SB1200406	X		
				16SB1200608	X		
16SB121	8/24/11	DPT	7.0	16SS1210002	Asphalt/Gravel		
				16SB1210306	X		
				16SB1210607	X		
16SB122	8/24/11	DPT	10.0	16SS1220002	Asphalt/Gravel		
				16SB1220406	X		
				16SB1220910	X		
16SB123	8/24/11	DPT	8.0	16SS1230002	Asphalt/Gravel		
				16SB1230306	X		
				16SB1230608	X		
16SB124	8/24/11	DPT	11.0	16SS1240002	Asphalt/Gravel		
				16SB1240306	X		
				16SB1240911	X		
16SB125	8/24/11	DPT	7.1	16SS1250002	Asphalt/Gravel		
				16SB1250306	X		
				16SB1250607	X		
16SB126	8/24/11	DPT	5.0	16SS1260002	X		
				16SB1260205	X		
				16SB126XXXX	Refusal		

TABLE 2-1

ROUNDS 1 & 2 SAMPLE SUMMARY
SWMU 16
NSA CRANE
CRANE, INDIANA

Sample Location	Date Sampled Collected	Sample Collection Method	Total Depth (feet bgs)	Sample ID	Analyses		
					TCE Contamination Area VOCs	Metals Contamination Area	UST Area VOCs, TPH-GRO TPH-DRO, Lead
16SB127	8/24/11	DPT	5.7	16SS1270002	X		
				16SB1270206	X		
				16SB127XXXX	Refusal		
16SB128	8/24/11	DPT	6.7	16SS1280002	X		
				16SB1280206	X		
				16SB1280607	X		
16SB129	8/24/11	DPT	6.0	16SS1290002	X		
				16SB1290206	X		
				16SB129XXXX	Refusal		
16SB130	8/24/11	DPT	7.3	16SS1300002	X		
				16SB1300206	X		
				16SB1300607	X		
16SB131	8/24/11	DPT	6.0	16SS1310002	X		
				16SB1310206	X		
				16SB131XXXX	Refusal		
16SB132	8/24/11	DPT	7.9	16SS1320002	X		
				16SB1320206	X		
				16SB1320608	X		
16SB133	8/24/11	DPT	6.0	16SS1330002	X		
				16SB1330206	X		
				16SB133XXXX	Refusal		
16SB134	8/24/11	DPT	6.7	16SS1340002	X		
				16SB1340206	X		
				16SB1340607	X		
16SB135	8/24/11	DPT	6.0	16SS1350002	X		
				16SB1350206	X		
				16SB135XXXX	Refusal		
16SB136	8/24/11	DPT	7.0	16SS1360002	X		
				16SB1360206	X		
				16SB1360607	X		

TABLE 2-1

ROUNDS 1 & 2 SAMPLE SUMMARY
SWMU 16
NSA CRANE
CRANE, INDIANA

Sample Location	Date Sampled Collected	Sample Collection Method	Total Depth (feet bgs)	Sample ID	Analyses		
					TCE Contamination Area VOCs	Metals Contamination Area	UST Area VOCs, TPH-GRO TPH-DRO, Lead
16SB137	8/24/11	DPT	5.0	16SS1370002	X		
				16SB1370205	X		
				16SB137XXXX	Refusal		
16SB138	8/24/11	DPT	7.8	16SS1380002	X		
				16SB1380206	X		
				16SB1380608	X		
16SB139	8/24/11	DPT	5.5	16SS1390002	X		
				16SB1390206	X		
				16SB139XXXX	Refusal		
16SB140	8/24/11	DPT	6.0	16SS1400002	X		
				16SB1400206	X		
				16SB140XXXX	Refusal		
16SB141	8/25/11	DPT	9.1	16SS1410002	X		
				16SB1410206	X		
				16SB1410709	X		
16SB142	8/25/11	DPT	3.7	16SS1420002	X		
				16SB1420204	X		
				16SB142XXXX	Refusal		
16SB143	8/25/11	DPT	4.9	16SS1430002	X		
				16SB1430205	X		
				16SB143XXXX	Refusal		
16SB144	8/25/11	DPT	3.5	16SS1440002	X		
				16SB144-0204	X		
				16SB144XXXX	Refusal		
16SB145	8/25/11	DPT	3.1	16SS1450002	X		
				16SB1450203	X		
				16SB145XXXX	Refusal		
16SB146	8/25/11	DPT	4.7	16SS1460002	X		
				16SB1460205	X		
				16SB146XXXX	Refusal		

TABLE 2-1

ROUNDS 1 & 2 SAMPLE SUMMARY
SWMU 16
NSA CRANE
CRANE, INDIANA

Sample Location	Date Sampled Collected	Sample Collection Method	Total Depth (feet bgs)	Sample ID	Analyses		
					TCE Contamination Area VOCs	Metals Contamination Area	UST Area VOCs, TPH-GRO TPH-DRO, Lead
16SB147	8/25/11	DPT	5.9	16SS1470002	X		
				16SB1470206	X		
				16SB147XXXX	Refusal		
16SB148	8/25/11	DPT	6.0	16SS1480002	X		
				16SB1480206	X		
				16SB148XXXX	Refusal		
16SB149	8/25/11	DPT	5.5	16SS1490002	X		
				16SB1490206	X		
				16SB149XXXX	Refusal		
16SB150	8/25/11	DPT	4.8	16SS1500002	X		
				16SB1500205	X		
				16SB150XXXX	Refusal		
16SB151	8/25/11	DPT	3.9	16SS1510002	X		
				16SB1510204	X		
				16SB151XXXX	Refusal		
16SB152	8/25/11	DPT	2.8	16SS1520002	X		
				16SB1520203	X		
				16SB152XXXX	Refusal		
16SB153	8/25/11	DPT	5.4	16SS1530002	X		
				16SB1530206	X		
				16SB153XXXX	Refusal		
16SB199	8/24/11	DPT	8.7	16SS1990002	Asphalt/Gravel		
				16SB1990406	X		
				16SB1990709	X		
16SB200	8/25/11	DPT	3.9	16SS2000002	Gravel		
				16SB2000204	X		
				16SB200XXXX	Refusal		
16SB201	8/25/11	DPT	3.2	16SS2010002	Gravel		
				16SB2010203	X		
				16SB201XXXX	Refusal		

TABLE 2-1

ROUNDS 1 & 2 SAMPLE SUMMARY
SWMU 16
NSA CRANE
CRANE, INDIANA

Sample Location	Date Sampled Collected	Sample Collection Method	Total Depth (feet bgs)	Sample ID	Analyses		
					TCE Contamination Area VOCs	Metals Contamination Area	UST Area VOCs, TPH-GRO TPH-DRO, Lead
16SB202	8/25/11	DPT	4.0	16SS2020002	Gravel		
				16SB2020204	X		
				16SB202XXXX	Refusal		
16SB203	8/25/11	DPT	3.0	16SS2030002	Gravel		
				16SB2030203	X		
				16SB203XXXX	Refusal		
16SB204	8/25/11	DPT	8.8	16SS2040002	X		
				16SB2040206	X		
				16SB2040709	X		
16SB205	8/25/11	DPT	6.5	16SS2050002	X		
				16SB2050206	X		
				16SB2050607	X		
16SB206	8/25/11	DPT	4.3	16SS2060002	X		
				16SB2060204	X		
				16SB206XXXX	Refusal		
Soil Delineation Sampling – TCE Contamination Area (Round 2)							
16SB207	10/6/12	DPT	2.5	16SS2070002	X		
				16SB2070206	Refusal		
				16SB207XXXX	Refusal		
16SB208	10/6/12	DPT	1.6	16SS2080002	X		
				16SB2080206	Refusal		
				16SB208XXXX	Refusal		
16SB209	10/6/12	DPT	2.7	16SS2090002	X		
				16SB2090203	X		
				16SB209XXXX	Refusal		
16SB210	10/6/12	DPT	1.7	16SS2100002	X		
				16SB2100206	Refusal		
				16SB210XXXX	Refusal		
16SB211	10/6/12	DPT	2.5	16SS2110002	X		
				16SB2110206	Refusal		
				16SB211XXXX	Refusal		

TABLE 2-1

ROUNDS 1 & 2 SAMPLE SUMMARY
SWMU 16
NSA CRANE
CRANE, INDIANA

Sample Location	Date Sampled Collected	Sample Collection Method	Total Depth (feet bgs)	Sample ID	Analyses		
					TCE Contamination Area VOCs	Metals Contamination Area	UST Area VOCs, TPH-GRO TPH-DRO, Lead
16SB212	10/6/12	DPT	1.7	16SS2120002	X		
				16SB2120206	Refusal		
				16SB212XXXX	Refusal		
16SB213	10/6/12	DPT	1.7	16SS2130002	X		
				16SB2130206	Refusal		
				16SB213XXXX	Refusal		
16SB214	10/6/12	DPT	2.5	16SS2140002	X		
				16SB2140206	Refusal		
				16SB214XXXX	Refusal		
16SB215	10/6/12	DPT	2.3	16SS2150002	X		
				16SB2150206	Refusal		
				16SB215XXXX	Refusal		
16SB216	10/6/12	DPT	2.3	16SS2160002	X		
				16SB2160204	Refusal		
				16SB216XXXX	Refusal		
16SB217	10/6/12	DPT	2.3	16SS2170002	X		
				16SB2170204	Refusal		
				16SB217XXXX	Refusal		
16SB218	10/6/12	DPT	2.5	16SS2180002	X		
				16SB2180204	Refusal		
				16SB218XXXX	Refusal		
16SB219	10/6/12	DPT	6.0	16SS2190002	X		
				16SB2190206	X		
				16SB219XXXX	Refusal		
16SB220	10/6/12	DPT	6.0	16SS2200002	X		
				16SB2200206	X		
				16SB220XXXX	Refusal		
16SB236	11/30/12	DPT	5.7	16SS2360002	X		
				16SB2360206	X		
				16SB236XXXX	Refusal		

TABLE 2-1

ROUNDS 1 & 2 SAMPLE SUMMARY
SWMU 16
NSA CRANE
CRANE, INDIANA

Sample Location	Date Sampled Collected	Sample Collection Method	Total Depth (feet bgs)	Sample ID	Analyses		
					TCE Contamination Area VOCs	Metals Contamination Area	UST Area VOCs, TPH-GRO TPH-DRO, Lead
16SB237	11/30/12	DPT	5.2	16SS2370002	X		
				16SB2370206	X		
				16SB237XXXX	Refusal		
16SB238	11/30/12	DPT	5.4	16SS2380002	X		
				16SB2380206	X		
				16SB238XXXX	Refusal		
16SB239	11/30/12	DPT	5.7	16SS2390002	X		
				16SB2390206	X		
16SB239	11/30/12	DPT	5.7	16SB239XXXX	Refusal		
16SB240	11/30/12	DPT	5.9	16SS2400002	X		
				16SB2400206	X		
				16SB240XXXX	Refusal		
16SB241	11/30/12	DPT	6.1	16SS2410002	X		
				16SB2410206	X		
				16SB241XXXX	Refusal		
SOIL – Metals Contamination Area							
16SB154	8/25/11	DPT	2	16SS1540002		X	
16SB155	8/25/11	DPT	2	16SS1550002		X	
16SB156	8/25/11	DPT	2	16SS1560002		X	
16SB157	8/25/11	DPT	2	16SS1570002		X	
16SB158	8/25/11	DPT	2	16SS1580002		X	
16SB159	8/25/11	DPT	2	16SS1590002		X	
16SB160	8/25/11	DPT	2	16SS1600002		X	
16SB161	8/25/11	DPT	2	16SS1610002		X	
16SB162	8/25/11	DPT	2	16SS1620002		X	
16SB163	8/25/11	DPT	2	16SS1630002		X	
16SB164	8/25/11	DPT	2	16SS1640002		X	
16SB165	8/25/11	DPT	2	16SS1650002		X	

TABLE 2-1

ROUNDS 1 & 2 SAMPLE SUMMARY
SWMU 16
NSA CRANE
CRANE, INDIANA

Sample Location	Date Sampled Collected	Sample Collection Method	Total Depth (feet bgs)	Sample ID	Analyses		
					TCE Contamination Area VOCs	Metals Contamination Area	UST Area VOCs, TPH-GRO TPH-DRO, Lead
16SB166	8/25/11	DPT	2	16SS1660002		X	
16SB167	8/25/11	DPT	2	16SS1670002		X	
16SB168	8/25/11	DPT	2	16SS1680002		X	
16SB169	8/25/11	DPT	2	16SS1690002		X	
16SB170	8/25/11	DPT	2	16SS1700002		X	
16SB171	8/25/11	DPT	2	16SS1710002		X	
16SB172	8/25/11	DPT	2	16SS1720002		X	
16SB173	8/25/11	DPT	2	16SS1730002		X	
16SB174	8/25/11	DPT	2	16SS1740002		X	
16SB175	8/25/11	DPT	2	16SS1750002		X	
16SB176	8/26/11	HA	2	16SS1760002		X	
16SB177	8/26/11	HA	2	16SS1770002		X	
16SB178	8/26/11	HA	2	16SS1780002		X	
16SB179	8/26/11	HA	2	16SS1790002		X	
16SB180	8/26/11	HA	2	16SS1800002		X	
16SB181	8/26/11	HA	2	16SS1810002		X	
16SB182	8/26/11	HA	2	16SS1820002		X	
16SB183	8/26/11	HA	2	16SS1830002		X	
16SB184	8/26/11	HA	2	16SS1840002		X	
16SB185	8/26/11	HA	2	16SS1850002		X	
16SB186	8/26/11	HA	2	16SS1860002		X	
16SB187	8/26/11	HA	2	16SS1870002		X	
16SB188	8/26/11	HA	2	16SS1880002		X	
16SB189	8/26/11	HA	2	16SS1890002		X	
16SB190	8/26/11	HA	2	16SS1900002		X	
16SB221	10/5/12	HA	2	16SS2210002		X	

TABLE 2-1

ROUNDS 1 & 2 SAMPLE SUMMARY
SWMU 16
NSA CRANE
CRANE, INDIANA

Sample Location	Date Sampled Collected	Sample Collection Method	Total Depth (feet bgs)	Sample ID	Analyses		
					TCE Contamination Area VOCs	Metals Contamination Area	UST Area VOCs, TPH-GRO TPH-DRO, Lead
16SB222	10/5/12	HA	2	16SS2220002		X	
16SB223	10/5/12	HA	2	16SS2230002		X	
16SB224	10/5/12	HA	2	16SS2240002		X	
16SB225	10/5/12	HA	2	16SS2250002		X	
16SB226	10/5/12	HA	2	16SS2260002		X	
16SB227	10/5/12	HA	2	16SS2270002		X	
16SB228	10/5/12	HA	2	16SS2280002		X	
16SB229	10/5/12	HA	2	16SS2290002		X	
16SB230	10/5/12	HA	2	16SS2300002		X	
16SB231	10/5/12	HA	2	16SS2310002		X	
16SB232	10/5/12	HA	2	16SS2320002		X	
16SB233	10/5/12	HA	2	16SS2330002		X	
16SB234	10/5/12	HA	2	16SS2340002		X	
16SB235	10/5/12	HA	2	16SS2350002		X	
SOIL – UST Area							
16SB191	8/23/11	DPT	7.8	16SS1910002			X
				16SB1910206			X
				16SB1910608			X
16SB192	8/23/11	DPT	8.8	16SS1920002			X
				16SB1920206			X
				16SB1920709			X
16SB193	8/23/11	DPT	8.1	16SS1930002			X
				16SB1930206			X
				16SB1930608			X
16SB194	8/23/11	DPT	9.6	16SS1940002			X
				16SB1940206			X
				16SB1940810			X

TABLE 2-1

ROUNDS 1 & 2 SAMPLE SUMMARY
SWMU 16
NSA CRANE
CRANE, INDIANA

Sample Location	Date Sampled Collected	Sample Collection Method	Total Depth (feet bgs)	Sample ID	Analyses		
					TCE Contamination Area VOCs	Metals Contamination Area	UST Area VOCs, TPH-GRO TPH-DRO, Lead
16SB195	8/23/11	DPT	8.6	16SS1950002			X
				16SB1950206			X
				16SB1950709			X
16SB196	8/23/11	DPT	11.5	16SS1960002			X
				16SB1960206			X
				16SB1961012			X
16SB197	8/23/11	DPT	7.2	16SS1970002			X
				16SB1970206			X
				16SB1970607			X
16SB198	8/23/11	DPT	7.0	16SS1980002			X
				16SB1980206			X
				16SB1980607			X

Notes:
bgs – below ground surface
DPT – Direct Push Technology
HA – Hand Auger
Borings drilled in the TCE Contamination Area and the UST Area were advanced until boring refusal (bedrock). Borings drilled/hand augered in the Metals Contamination Area were advanced to two feet below ground surface. (See text for analyses descriptions).

3.0 ANALYTICAL DATA SUMMARIES

The following presents the results of the SWMU 16 soil delineation sampling data analyses.

3.1 TCE CONTAMINATION AREA SOIL DELINEATION DATA

Table 3-1 presents the TCE Contamination Area surface and subsurface soil data screened against the applicable MCSs for VOCs. Figure 3-1 presents the TCE concentrations above the MCSs for the surface soil data. The table and figure utilizes the entire VOC dataset for all samples collected at SWMU 16 as part of the RFI, as well as the soil delineation sampling events.

TCE was the only constituent to exhibit concentrations above MCSs in both rounds of delineation sampling. Several surface soil samples showed exceedances, mainly in the southern extent of sampling.

Figures 3-2 and 3-3 present the TCE concentrations above MCSs for the subsurface soil data for the 2 – 6 feet bgs and 6 – 10 feet bgs samples, respectively. The figures utilize the entire VOC dataset for all samples collected at SWMU 16. The 2 – 6 foot bgs area encompasses the contamination observed in both the 0 - 2 foot bgs and 6 - 10 foot bgs depth horizons. Therefore, the “clean boundary” dashed line depicted in Figure 3-2 would serve as the extent of the TCE Contamination Area requiring remediation.

Similar to the surface soil data, TCE was the only constituent to exhibit concentrations above MCSs in the subsurface soil samples. Exceedances were observed in the northern, western and southern investigation areas.

Based on the results of the Round 2 soil delineation data, the extent of TCE soil contamination has been fully delineated, both horizontally and vertically (top of bedrock), in the TCE Contamination Area of SWMU 16.

3.2 METALS CONTAMINATION AREA SURFACE SOIL DELINEATION DATA

Table 3-2 presents the Metals Contamination Area soil data screened against the applicable MCSs. Figure 3-4 presents the surface soil data for antimony, copper, lead and zinc, and the proposed soil removal areas. Both the table and figure utilize the entire dataset for all samples collected at SWMU 16 as part of the RFI, as well as the most recent soil delineation sampling event.

Several exceedances of all four metals were observed, with the majority of the highest exceedances co-located in the eastern and southeastern portions of the area. Based on the results of the Round 2 data,

the extent of metals concentrations above MCSs has been fully delineated in the surface soil horizontally in the Metals Contamination Area of SWMU 16.

3.3 UST AREA SOIL DELINEATION DATA

Table 3-3 presents the UST Area surface soil data screened against the applicable Project Screening Levels (PSLs) established in the SAP (Tetra Tech, 2011b). Figure 3-5 presents the soil sampling locations for the UST Area.

The only exceedance of a PSL in the surface soil samples was for acrolein, which was detected in a duplicate sample (16SS1980002-D). There were no exceedances of PSLs for any of the subsurface soil samples.

3.4 DATA SUMMARY

3.4.1 TCE Contamination Area

Based on the evaluation of all data available for SWMU 16, the extent of the TCE soil contamination is fully delineated both horizontally and vertically (top of bedrock) for the TCE Contamination Area

3.4.2 Metals Contamination Area

Based on the evaluation of all data available for SWMU 16, the extent of surface soil metals contamination is fully delineated for the Metals Contamination Area.

3.4.3 UST Area

Based on the evaluation of the soil data for the UST Area, no further action is required.

TABLE 3-1

TCE CONTAMINATION AREA SOIL SAMPLE SCREENING
SWMU 16
NSA CRANE
CRANE, INDIANA

Location	Sample ID	Sample Date	1,1,2-TRICHLOROETHANE	CIS-1,2-DICHLOROETHENE	TRANS-1,2-DICHLOROETHENE	TRICHLOROETHENE	VINYL CHLORIDE	CARBON TETRACHLORIDE	TETRACHLOROETHENE
		SWMU 16 MCS	**32**	**420**	**580**	**36**	**14**	**38**	**46**
16SB001	16SS0010002	03/27/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U
16SB001	16SB0010406	03/27/2003	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
16SB002	16SS0020002	03/27/2003	1.1 U	1.1 U	1 J	1.1 U	1.1 U	1.1 U	1.1 U
16SB002	16SB0020406	03/27/2003	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
16SB003	16SS0030002	03/27/2003	1.1 U	1.1 U	2 J	1.1 U	1.1 U	1.1 U	1.1 U
16SB004	16SS0040002	03/27/2003	1.2 U	1.2 U	1 J	1.2 U	1.2 U	1.2 U	1.2 U
16SB005	16SS0050002	03/27/2003	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
16SB006	16SS0060002	03/27/2003	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
16SB034	16SS0340002	04/09/2003	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
16SB035	16SS0350002	03/28/2003	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
16SB036	16SS0360002	04/09/2003	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
16SB036	16SB0360203	04/09/2003	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
16SB037	16SS0370002	03/28/2003	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
16SB038	16SS0380002	03/28/2003	1.1 U	1.1 U	1.1 U	6	1.1 U	1.1 U	1.1 U
16SB038	16SB0380203	03/28/2003	1.1 U	1.1 U	1.1 U	4	1.1 U	1.1 U	1.1 U
16SB039	16SS0390002	03/28/2003	1.2 U	23	2 J	**86**	1.2 U	1.2 U	1.2 U
16SB039	16SB0390203	03/28/2003	1.2 U	200	12	**280**	1.2 U	1.2 U	1.2 U
16SB040	16SB0400506	03/28/2003	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
16SB040	16SB0400608	03/28/2003	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
16SB041	16SB0410305	03/27/2003	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
16SB041	16SB0410507	03/27/2003	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
16SB047	16SB0470405	12/05/2003	1.18 U	22	1.18 U	**61**	1.18 U	1.18 U	1.18 U
16SB048	16SB0480203	12/05/2003	1.12 U	1.12 U	1.12 U	**97 J**	1.12 U	1.12 U	1.12 U
16SB049	16SB0490405	12/05/2003	0.81 U	0.814 U	0.814 U	**37**	0.814 U	0.814 U	0.814 U
16SB050	16SB0500103	12/05/2003	0.98 U	0.978 U	1 J	**190 J**	0.978 U	0.978 U	0.978 U
16SB051	16SS0510102	08/13/2004	1.09 U	1.09 U	1.09 U	1.09 U	1.09 U	1.09 U	1.09 U
16SB051	16SB0510204	08/13/2004	1.17 U	1.17 U	1.17 U	1.17 U	1.17 U	1.17 U	1.17 U
16SB052	16SS0520102	08/12/2004	0.93 U	0.933 U	0.933 U	8	0.933 U	0.933 U	0.933 U
16SB052	16SB0520205	08/12/2004	1.05 U	1.05 U	1.05 U	14	1.05 U	1.05 U	1.05 U
16SB053	16SS0530102	08/12/2004	0.89 U	0.888 U	0.888 U	**61**	0.888 U	0.888 U	0.888 U
16SB053	16SB0530205	08/12/2004	1.01 U	1.01 U	1.01 U	**1300**	1.01 U	1.01 U	1.01 U
16SB054	16SS0540102	08/13/2004	1.05 U	1.05 U	1.05 U	**67**	1.05 U	1.05 U	1.05 U
16SB054	16SB0540205	08/13/2004	1.3 U	1.3 U	1.3 U	**210**	1.3 U	1.3 U	1.3 U
16SB055	16SS0550102	08/12/2004	0.93 U	0.93 U	0.93 U	**64**	0.93 U	0.93 U	0.93 U
16SB055	16SB0550206	08/12/2004	1.07 U	1.07 U	1.07 U	**79**	1.07 U	1.07 U	1.07 U
16SB055	16SB0550607	08/12/2004	0.95 U	0.946 U	0.946 U	2 J	0.946 U	0.946 U	0.946 U
16SB056	16SS0560102	08/12/2004	1.02 U	1.02 U	1.02 U	34	1.02 U	1.02 U	1.02 U
16SB056	16SB0560206	08/12/2004	8 J	1.05 UR	1.05 UR	**930 J**	1.05 U	1.05 UR	1.05 UR
16SB056	16SB0560608	08/12/2004	4	1.13 U	1.13 U	**200**	1.13 U	1.13 U	1.13 U
16SB057	16SS0570102	08/13/2004	0.99 U	0.993 U	0.993 U	0.993 U	0.993 U	0.993 U	0.993 U
16SB057	16SB0570206	08/13/2004	1.04 U	1.04 U	1.04 U	1.04 U	1.04 U	1.04 U	1.04 U
16SB058	16SS0580102	08/13/2004	0.95 U	0.945 U	0.945 U	0.945 U	0.945 U	0.945 U	0.945 U

TABLE 3-1

TCE CONTAMINATION AREA SOIL SAMPLE SCREENING
SWMU 16
NSA CRANE
CRANE, INDIANA

Location	Sample ID	Sample Date	1,1,2-TRICHLOROETHANE	CIS-1,2-DICHLOROETHENE	TRANS-1,2-DICHLOROETHENE	TRICHLOROETHENE	VINYL CHLORIDE	CARBON TETRACHLORIDE	TETRACHLOROETHENE
		SWMU 16 MCS	**32**	**420**	**580**	**36**	**14**	**38**	**46**
16SB058	16SB0580206	08/13/2004	1.06 U	1.06 U	1.06 U	18	1.06 U	1.06 U	1.06 U
16SB058	16SB0580607	08/13/2004	1.03 U	1.03 U	1.03 U	28	1.03 U	1.03 U	1.03 U
16SB059	16SS0590102	08/13/2004	1.01 U	1.01 U	1.01 U	13	1.01 U	1.01 U	1.01 U
16SB059	16SB0590206	08/13/2004	1.22 U	1.22 U	1.22 U	**190**	1.22 U	1.22 U	1.22 U
16SB059	16SB0590608	08/13/2004	0.99 U	0.988 U	0.988 U	9	0.988 U	0.988 U	0.988 U
16SB060	16SS0600102	08/11/2004	1.14 U	17	1.14 U	9	1.14 U	1.14 U	1.14 U
16SB060	16SB0600206	08/11/2004	1.04 UJ	8 J	1.04 UJ	28 J	1.04 UJ	1.04 UJ	1.04 UJ
16SB060	16SB0600609	08/11/2004	1.02 U	4	1.02 U	1.02 U	1.02 U	1.02 U	1.02 U
16SB061	16SS0610102	08/11/2004	1.19 U	1.1 J	1.19 U	3 J	1.19 U	1.19 U	1.19 U
16SB061	16SB0610206	08/11/2004	1.09 U	86	5	**160**	1.09 U	1.09 U	1.09 U
16SB061	16SB0610607	08/11/2004	1.2 U	11	1.2 U	14	1.2 U	1.2 U	1.2 U
16SB062	16SS0620102	08/13/2004	1 U	1 U	1 U	1 U	1 U	1 U	1 U
16SB062	16SB0620206	08/13/2004	1.01 U	1.01 U	1.01 U	5	1.01 U	1.01 U	1.01 U
16SB062	16SB0620607	08/13/2004	0.97 U	0.968 U	0.968 U	6	0.968 U	0.968 U	0.968 U
16SB063	16SS0630102	08/11/2004	1.01 U	1.01 U	1.01 U	1.01 U	1.01 U	1.01 U	1.01 U
16SB063	16SB0630206	08/11/2004	1.19 U	1.19 U	1.19 U	1.19 U	1.19 U	1.19 U	1.19 U
16SB063	16SB0630608	08/11/2004	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
16SB064	16SS0640102	08/11/2004	1.05 U	1.05 U	1.05 U	1.05 U	1.05 U	1.05 U	1.05 U
16SB064	16SB0640206	08/11/2004	1.09 U	1.09 U	1.09 U	1.09 U	1.09 U	1.09 U	1.09 U
16SB064	16SB0640608	08/11/2004	1.24 U	1.24 U	1.24 U	1.24 U	1.24 U	1.24 U	1.24 U
16SB065	16SS0650102	08/11/2004	1.17 U	1.17 U	1.17 U	1.17 U	1.17 U	1.17 U	1.17 U
16SB065	16SB0650206	08/11/2004	1.27 U	24	3 J	3 J	12	1.27 U	1.27 U
16SB065	16SB0650608	08/11/2004	1.45 U	27	4 J	17	6	1.45 U	1.45 U
16SB066	16SS0660102	08/12/2004	1.26 U	73	1.26 J	34	1.26 U	1.26 U	1.26 U
16SB066	16SB0660206	08/12/2004	1.23 U	23	1.23 U	9	1.23 U	1.23 U	1.23 U
16SB066	16SB0660608	08/12/2004	0.92 U	1 J	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U
16SB067	16SS0670102	08/12/2004	1.19 U	3 J	1.19 U	3 J	1.19 U	1.19 U	1.19 U
16SB067	16SB0670206	08/12/2004	1.09 U	1.09 U	1.09 U	2 J	1.09 U	1.09 U	1.09 U
16SB067	16SB0670609	08/12/2004	1.21 U	1.21 U	1.21 U	2 J	1.21 U	1.21 U	1.21 U
16SB068	16SS0680102	08/12/2004	0.96 U	5	0.963 U	0.963 U	0.963 U	0.963 U	0.963 U
16SB068	16SB0680206	08/12/2004	1.02 U	7 J	1.02 U	1.02 U	1.02 U	1.02 U	1.02 U
16SB068	16SB0680609	08/12/2004	1.12 U	5	1.12 U	1.12 U	1.12 U	1.12 U	1.12 U
16SB069	16SS0690102	08/12/2004	1 U	0.995 U	0.995 U	0.995 U	0.995 U	0.995 U	0.995 U
16SB069	16SB0690206	08/12/2004	1.05 U	1.05 U	1.05 U	1.05 U	1.05 U	1.05 U	1.05 U
16SB069	16SB0690607	08/12/2004	1.35 U	1.35 U	1.35 U	1.35 U	1.35 U	1.35 U	1.35 U
16SB070	16SS0700102	08/12/2004	0.92 U	0.923 U	0.923 U	0.923 U	0.923 U	0.923 U	0.923 U
16SB070	16SB0700206	08/12/2004	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
16SB070	16SB0700607	08/12/2004	0.98 U	2 J	0.978 U	10	0.978 U	0.978 U	0.978 U
16SB071	16SS0710102	08/12/2004	0.94 UJ	0.943 UJ	0.943 UJ	0.943 UJ	0.943 UJ	0.943 UJ	0.943 UJ
16SB071	16SB0710206	08/12/2004	1.16 U	1.16 U	1.16 U	1.16 U	1.16 U	1.16 U	1.16 U
16SB072	16SS0720102	08/12/2004	0.93 U	13	0.933 U	2 J	0.933 U	0.933 U	0.933 U
16SB072	16SB0720206	08/12/2004	0.99 U	32	0.986 U	5	0.986 U	0.986 U	0.986 U

TABLE 3-1

TCE CONTAMINATION AREA SOIL SAMPLE SCREENING
SWMU 16
NSA CRANE
CRANE, INDIANA

Location	Sample ID	Sample Date	1,1,2-TRICHLOROETHANE	CIS-1,2-DICHLOROETHENE	TRANS-1,2-DICHLOROETHENE	TRICHLOROETHENE	VINYL CHLORIDE	CARBON TETRACHLORIDE	TETRACHLOROETHENE
		SWMU 16 MCS	**32**	**420**	**580**	**36**	**14**	**38**	**46**
16SB072	16SB0720607	08/12/2004	1.22 U	53	1.22 U	11	1.22 U	1.22 U	1.22 U
16SB073	16SS0730102	08/12/2004	1 U	3 J	1 U	1 U	1 U	1 U	1 U
16SB073	16SB0730204	08/12/2004	1.03 U	5	1.03 U	1.03 U	1.03 U	1.03 U	1.03 U
16SB074	16SS0740102	08/17/2004	0.94 U	0.938 U	0.938 U	0.938 U	0.938 U	0.938 U	0.938 U
16SB074	16SB0740206	08/17/2004	1.04 U	1.04 U	1.04 U	1.04 U	1.04 U	1.04 U	1.04 U
16SB075	16SS0750102	08/12/2004	0.97 U	0.967 U	0.967 U	0.967 U	0.967 U	0.967 U	0.967 U
16SB075	16SB0750203	08/12/2004	0.98 U	0.975 U	0.975 U	0.975 U	0.975 U	0.975 U	0.975 U
16SB076	16SS0760102	08/12/2004	0.95 U	0.953 U	0.953 U	0.953 U	0.953 U	0.953 U	0.953 U
16SB076	16SB0760206	08/12/2004	0.93 U	0.929 U	0.929 U	0.929 U	0.929 U	0.929 U	0.929 U
16SB076	16SB0760607	08/12/2004	1.12 U	1.12 U	1.12 U	1.12 U	1.12 U	1.12 U	1.12 U
16SB077	16SS0770102	08/12/2004	0.89 U	0.893 U	0.893 U	0.893 U	0.893 U	0.893 U	0.893 U
16SB077	16SB0770206	08/12/2004	0.99 U	0.988 U	0.988 U	0.988 U	0.988 U	0.988 U	0.988 U
16SB077	16SB0770610	08/12/2004	0.92 U	0.92 U	0.92 U	1 J	0.92 U	0.92 U	0.92 U
16SB078	16SS0780102	08/12/2004	1.02 U	1.02 U	1.02 U	1.02 U	1.02 U	1.02 U	1.02 U
16SB078	16SB0780206	08/12/2004	1.01 U	1.01 U	1.01 U	1.01 U	1.01 U	1.01 U	1.01 U
16SB078	16SB0780609	08/12/2004	1.04 UJ	1.04 UJ	1.04 UJ	1.04 UJ	1.04 UJ	1.04 UJ	1.04 UJ
16SB090	16SB0900406	08/16/2004	0.96 U	0.955 U	0.955 U	**220 J**	0.955 U	0.955 U	0.955 U
16SB090	16SB0900608	08/16/2004	1.17 U	1.17 J	1.17 U	**220 J**	1.17 U	1.17 U	1.17 U
16SB091	16SB0910406	08/16/2004	0.94 U	1 J	0.944 U	**390 J**	0.944 U	0.944 U	0.944 U
16SB091	16SB0910609	08/16/2004	0.97 U	3 J	0.974 U	**980**	0.974 U	0.974 U	0.974 U
16SB092	16SB0920406	08/16/2004	0.93 U	0.932 U	0.932 U	32	0.932 U	0.932 U	0.932 U
16SB092	16SB0920608	08/16/2004	0.87 U	0.869 U	0.869 U	28	0.869 U	0.869 U	0.869 U
16SB093	16SB0930406	08/16/2004	0.95 U	0.95 U	0.95 U	**250 J**	0.95 U	0.95 U	0.95 U
16SB093	16SB0930608	08/16/2004	1.05 U	1.05 U	1.05 U	**360**	1.05 U	1.05 U	1.05 U
16SB094	16SB0940708	08/16/2004	1.48 U	1.48 U	1.48 U	20	1.48 U	1.48 U	1.48 U
16SB095	16SB0950406	08/16/2004	1.01 U	1.01 U	1.01 U	**9000**	1.01 U	1.01 U	1.01 U
16SB095	16SB0950607	08/16/2004	1.05 U	1.05 U	1.05 U	**2000**	1.05 U	1.05 U	1.05 U
16SB096	16SB0960406	08/16/2004	0.97 U	0.966 U	0.966 U	**120 J**	0.966 U	0.966 U	0.966 U
16SB096	16SB0960608	08/16/2004	1.06 U	1.06 U	1.06 U	11	1.06 U	1.06 U	1.06 U
16SB097	16SB0970406	08/16/2004	0.96 U	0.957 U	0.957 U	**1200**	0.957 U	0.957 U	0.957 U
16SB097	16SB0970607	08/16/2004	1.09 U	1.09 U	1.09 U	**88 J**	1.09 U	1.09 U	1.09 U
16SB098	16SS0980102	08/16/2004	1.24 U	1.24 U	1.24 U	**170**	1.24 U	1.24 U	1.24 U
16SB098	16SB0980206	08/16/2004	0.92 U	0.922 U	0.922 U	**140**	0.922 U	0.922 U	0.922 U
16SB098	16SB0980607	08/16/2004	0.93 U	0.929 U	0.929 U	**200 J**	0.929 U	0.929 U	0.929 U
16SB099	16SS0990102	08/16/2004	0.98 U	0.98 U	0.98 U	**103 J**	0.98 U	0.98 U	0.98 U
16SB099	16SB0990206	08/16/2004	1.11 U	1.11 U	1.11 U	**630**	1.11 U	1.11 U	1.11 U
16SB099	16SB0990608	08/16/2004	1.06 U	1.06 U	1.06 U	**160**	1.06 U	1.06 U	1.06 U
16SB118	16SB1180206	08/24/2011	0.54 U	16.4	0.308 J	4.03	0.544 U	--	--
16SB118	16SB1180607	08/24/2011	0.53 U	34.1	0.55 J	16.1	0.31 J	--	--
16SB119	16SB1190406	08/24/2011	0.53 U	35.9	1.1	4.02	0.823 J	--	--
16SB119	16SB1190608	08/24/2011	0.3 U	0.525	0.303 U	0.333 U	0.303 U	--	--
16SB120	16SB1200406	08/24/2011	0.33 U	7.31 J	0.344 J	5.6	0.333 U	--	--

TABLE 3-1

TCE CONTAMINATION AREA SOIL SAMPLE SCREENING
SWMU 16
NSA CRANE
CRANE, INDIANA

Location	Sample ID	Sample Date	1,1,2-TRICHLOROETHANE	CIS-1,2-DICHLOROETHENE	TRANS-1,2-DICHLOROETHENE	TRICHLOROETHENE	VINYL CHLORIDE	CARBON TETRACHLORIDE	TETRACHLOROETHENE
		SWMU 16 MCS	**32**	**420**	**580**	**36**	**14**	**38**	**46**
16SB120	16SB1200608	08/24/2011	0.31 U	17.6 J	0.368 J	2.13 J	0.311 U	--	--
16SB121	16SB1210306	08/24/2011	0.3 U	2.77	0.3 U	0.904	0.3 U	--	--
16SB121	16SB1210607	08/24/2011	0.53 U	1.91	0.532 U	1.06	0.532 U	--	--
16SB122	16SB1220406	08/24/2011	0.31 U	2.78	0.312 U	1.9	0.312 U	--	--
16SB122	16SB1220910	08/24/2011	0.55 U	11.2	0.548 U	4.39	0.548 U	--	--
16SB123	16SB1230306	08/24/2011	--	120	13	**190**	2	--	--
16SB123	16SB1230608	08/24/2011	--	63	7	**150**	1	--	--
16SB124	16SB1240306	08/24/2011	--	20	0.57 J	**110**	0.63 U	--	--
16SB124	16SB1240911	08/24/2011	--	12	0.56 U	**63**	0.56 U	--	--
16SB125	16SB1250306	08/24/2011	--	41	1	**95**	0.59 U	--	--
16SB125	16SB1250607	08/24/2011	--	23	0.67 J	**57**	0.56 U	--	--
16SB126	16SS1260002	08/24/2011	--	0.51 U	0.51 U	0.51 U	0.51 U	--	--
16SB126	16SB1260205	08/24/2011	--	0.6 U	0.6 U	0.6 U	0.6 U	--	--
16SB127	16SS1270002	08/24/2011	--	0.51 U	0.51 U	0.51 U	0.51 U	--	--
16SB127	16SB1270206	08/24/2011	--	0.54 U	0.54 U	**44**	0.54 U	--	--
16SB128	16SS1280002	08/24/2011	--	0.52 U	0.52 U	0.52 U	0.52 U	--	--
16SB128	16SB1280206	08/24/2011	--	0.52 U	0.52 U	18	0.52 U	--	--
16SB128	16SB1280607	08/24/2011	--	0.57 U	0.57 U	**41**	0.57 U	--	--
16SB129	16SS1290002	08/24/2011	--	0.52 U	0.52 U	0.52 U	0.52 U	--	--
16SB129	16SB1290206	08/24/2011	--	0.52 U	0.52 U	**65**	0.52 U	--	--
16SB130	16SS1300002	08/24/2011	--	0.67 U	0.67 U	0.67 U	0.67 U	--	--
16SB130	16SB1300206	08/24/2011	--	0.52 U	0.52 U	27	0.52 U	--	--
16SB130	16SB1300607	08/24/2011	--	0.48 J	0.73 U	**160**	0.73 U	--	--
16SB131	16SS1310002	08/24/2011	--	0.72 U	0.72 U	0.72 U	0.72 U	--	--
16SB131	16SB1310206	08/24/2011	--	0.69 U	0.69 U	**37**	0.69 U	--	--
16SB132	16SS1320002	08/24/2011	0.45 U	0.45 U	0.45 U	0.495 U	0.45 U	--	--
16SB132	16SB1320206	08/24/2011	0.49 U	0.487 U	0.487 U	1.2	0.487 U	--	--
16SB132	16SB1320608	08/24/2011	0.49 U	0.493 U	0.493 U	2.99	0.493 U	--	--
16SB133	16SS1330002	08/24/2011	0.51 U	0.507 U	0.507 U	0.557 U	0.507 U	--	--
16SB133	16SB1330206	08/24/2011	0.5 U	0.502 U	0.502 U	0.561 J	0.502 U	--	--
16SB134	16SS1340002	08/24/2011	0.45 U	0.449 U	0.449 U	0.494 U	0.449 U	--	--
16SB134	16SB1340206	08/24/2011	0.48 U	0.484 U	0.484 U	**62.7**	0.484 U	--	--
16SB134	16SB1340607	08/24/2011	0.54 U	0.647 J	0.539 U	**780**	0.539 U	--	--
16SB135	16SB1350002	08/24/2011	0.49 U	0.491 U	0.491 U	3.21	0.491 U	--	--
16SB135	16SB1350206	08/24/2011	0.48 U	4.86	4.28	**96.6 J**	0.48 U	--	--
16SB136	16SS1360002	08/24/2011	0.51 U	0.511 U	0.511 U	0.681 J	0.511 U	--	--
16SB136	16SB1360206	08/24/2011	0.57 U	0.573 U	0.573 U	3.28	0.573 U	--	--
16SB136	16SB1360607	08/24/2011	0.52 U	0.523 U	0.523 U	3.28	0.523 U	--	--
16SB137	16SS1370002	08/24/2011	0.52 U	0.516 U	0.499 J	14.6	0.516 U	--	--
16SB137	16SB1370205	08/24/2011	0.52 U	0.523 U	0.523 U	0.576 UJ	0.523 U	--	--
16SB138	16SS1380002	08/24/2011	0.52 U	0.519 U	0.519 U	2.76	0.519 U	--	--
16SB138	16SB1380206	08/24/2011	0.51 J	17.7	18.9	**1280**	0.497 U	--	--

TABLE 3-1

TCE CONTAMINATION AREA SOIL SAMPLE SCREENING
SWMU 16
NSA CRANE
CRANE, INDIANA

Location	Sample ID	Sample Date	1,1,2-TRICHLOROETHANE	CIS-1,2-DICHLOROETHENE	TRANS-1,2-DICHLOROETHENE	TRICHLOROETHENE	VINYL CHLORIDE	CARBON TETRACHLORIDE	TETRACHLOROETHENE
		SWMU 16 MCS	**32**	**420**	**580**	**36**	**14**	**38**	**46**
16SB138	16SB1380608	08/24/2011	0.37 J	2.44	1.52	**462**	0.478 U	--	--
16SB139	16SS1390002	08/24/2011	0.29 U	0.287 U	0.287 U	0.315 U	0.287 U	--	--
16SB139	16SB1390206	08/24/2011	0.31 U	0.21 J	0.308 U	1.37	0.308 U	--	--
16SB140	16SS1400002	08/24/2011	0.49 U	0.492 U	0.492 U	0.541 U	0.492 U	--	--
16SB140	16SB1400206	08/24/2011	0.52 U	9.46	0.517 U	14.4	1.76	--	--
16SB141	16SS1410002	08/25/2011	0.5 U	0.5 U	0.5 U	0.55 U	0.5 U	--	--
16SB141	16SB1410206	08/25/2011	0.54 U	0.536 U	0.536 U	4.69	0.536 U	--	--
16SB141	16SB1410709	08/25/2011	0.33 U	0.33 U	0.33 U	3.3	0.33 U	--	--
16SB142	16SS1420002	08/25/2011	0.52 U	0.519 U	0.519 U	0.571 U	0.519 U	--	--
16SB142	16SB1420204	08/25/2011	0.58 U	0.578 U	0.578 U	1.39	0.578 U	--	--
16SB143	16SS1430002	08/25/2011	0.5 U	0.501 U	0.501 U	0.551 U	0.501 U	--	--
16SB143	16SB1430205	08/25/2011	0.58 U	0.582 U	0.582 U	0.641 U	0.582 U	--	--
16SB144	16SS1440002	08/25/2011	0.53 U	0.533 U	0.533 U	0.586 U	0.533 U	--	--
16SB144	16SB1440204	08/25/2011	0.51 U	0.514 U	0.514 U	0.566 U	0.514 U	--	--
16SB145	16SS1450002	08/25/2011	0.53 U	0.529 U	0.529 U	0.582 U	0.529 U	--	--
16SB145	16SB1450203	08/25/2011	0.53 U	0.533 U	0.533 U	0.587 U	0.533 U	--	--
16SB146	16SB1460205	08/25/2011	0.49 U	0.488 U	0.488 U	**51.4**	0.488 U	--	--
16SB147	16SS1470002	08/25/2011	0.51 U	0.775 J	0.511 U	19.3	0.511 U	--	--
16SB147	16SB1470206	08/25/2011	0.58 U	0.494 J	0.581 U	12.3 J	0.581 U	--	--
16SB148	16SS1480002	08/25/2011	0.53 U	0.533 U	0.533 U	5.57	0.533 U	--	--
16SB148	16SB1480206	08/25/2011	0.59 U	0.592 U	0.592 U	2.66	0.592 U	--	--
16SB150	16SB1500205	08/25/2011	0.52 U	0.518 U	0.518 U	**329**	0.518 U	--	--
16SB151	16SS1510002	08/25/2011	0.5 U	1.34	0.501 U	**123**	0.501 U	--	--
16SB151	16SB1510204	08/25/2011	0.54 U	0.295 J	0.537 U	**220**	0.537 U	--	--
16SB152	16SS1520002	08/25/2011	0.54 U	0.539 U	0.539 U	**185**	0.539 U	--	--
16SB152	16SB1520203	08/25/2011	0.57 U	0.569 U	0.569 U	**173**	0.569 U	--	--
16SB153	16SS1530002	08/25/2011	0.52 U	0.519 U	0.519 U	**157**	0.519 U	--	--
16SB153	16SB1530206	08/25/2011	0.52 U	0.518 U	0.518 U	**236**	0.518 U	--	--
16SB207	16SS207-0002	10/06/2012	2.48 U	2.48 UJ	2.48 U	10.4 J	2.48 U	2.48 U	2.48 U
16SB208	16SS208-0002	10/06/2012	2.28 U	2.28 UJ	2.28 U	15.3	2.28 U	2.28 U	2.28 U
16SB209	16SS209-0002	10/06/2012	2.23 U	2.23 UJ	2.23 U	**44.2**	2.23 U	2.23 U	2.23 U
16SB209	16SB209-0203	10/06/2012	3 U	3 UJ	3 U	**45.5 J**	3 U	3 U	3 U
16SB210	16SS210-0002	10/06/2012	2.54 U	2.54 UJ	2.54 U	2.54 U	2.54 U	2.54 U	2.54 U
16SB211	16SS211-0002	10/06/2012	2.99 UJ	2.99 UJ	2.99 UJ	13.4 J	2.99 UJ	2.99 UJ	2.99 UJ
16SB212	16SS212-0002	10/06/2012	2.38 U	2.38 UJ	2.38 U	23.8	2.38 U	2.38 U	2.38 U
16SB213	16SS213-0002	10/06/2012	2.59 U	2.59 UJ	2.59 U	3.49 J	2.59 U	2.59 U	2.59 U
16SB214	16SS214-0002	10/06/2012	2.86 U	2.86 UJ	2.86 U	2.86 U	2.86 U	2.86 U	2.86 U
16SB215	16SS215-0002	10/06/2012	2.54 U	2.54 UJ	2.54 U	30.1	2.54 U	2.54 U	2.54 U
16SB216	16SS216-0002	10/06/2012	2.52 U	2.52 UJ	2.52 U	3.36 J	2.52 U	2.52 U	2.52 U
16SB217	16SS217-0002	10/06/2012	2.21 U	2.21 UJ	2.21 U	1.62 J	2.21 U	2.21 U	2.21 U
16SB218	16SS218-0002	10/06/2012	2.51 UJ	2.51 UJ	2.51 UJ	21.1 J	2.51 UJ	2.51 UJ	2.51 UJ
16SB219	16SS219-0002	10/06/2012	2.39 U	2.39 UJ	2.39 U	2.39 U	2.39 U	2.39 U	2.39 U

TABLE 3-1

TCE CONTAMINATION AREA SOIL SAMPLE SCREENING
SWMU 16
NSA CRANE
CRANE, INDIANA

Location	Sample ID	Sample Date	1,1,2-TRICHLOROETHANE	CIS-1,2-DICHLOROETHENE	TRANS-1,2-DICHLOROETHENE	TRICHLOROETHENE	VINYL CHLORIDE	CARBON TETRACHLORIDE	TETRACHLOROETHENE
		SWMU 16 MCS	**32**	**420**	**580**	**36**	**14**	**38**	**46**
16SB219	16SB219-0206	10/06/2012	2.55 U	2.55 UJ	2.55 U	**56**	2.55 U	2.55 U	2.55 U
16SB220	16SS220-0002	10/06/2012	2.51 U	2.51 UJ	2.51 U	2.51 U	3.17 J	2.51 U	2.51 U
16SB220	16SB220-0206	10/06/2012	2.42 U	2.42 U	2.42 U	2.42 U	2.42 UJ	2.42 U	2.42 U
16SB236	16SS236-0002	11/30/2012	2.31 U	2.31 U	2.31 U	2.31 U	2.31 U	2.31 U	2.31 U
16SB236	16SB236-0206	11/30/2012	2.34 U	2.34 U	2.34 U	2.34 U	2.34 U	2.34 U	2.34 U
16SB237	16SS237-0002	11/30/2012	2.64 U	2.64 U	2.64 U	2.64 U	2.64 U	2.64 U	2.64 U
16SB237	16SB237-0206	11/30/2012	2.31 U	2.31 U	2.31 U	2.31 U	2.31 U	2.31 U	2.31 U
16SB238	16SS238-0002	11/30/2012	2.35 U	2.35 U	2.35 U	2.35 U	2.35 U	2.35 U	2.35 U
16SB238	16SB238-0206	11/30/2012	2.23 U	2.23 U	2.23 U	2.23 U	2.23 U	2.23 U	2.23 U
16SB239	16SS239-0002	11/30/2012	2.29 U	2.29 U	2.29 U	2.29 U	2.29 U	2.29 U	2.29 U
16SB239	16SB239-0206	11/30/2012	1.79 U	1.79 U	1.79 U	1.79 U	1.79 U	1.79 U	1.79 U
16SB240	16SS240-0002	11/30/2012	2.23 U	2.23 U	2.23 U	2.23 U	2.23 U	2.23 U	2.23 U
16SB240	16SB240-0206	11/30/2012	2.31 U	2.31 U	2.31 U	2.31 U	2.31 U	2.31 U	2.31 U
16SB241	16SS241-0002	11/30/2012	2.04 U	2.04 U	2.04 U	2.04 U	2.04 U	2.04 U	2.04 U
16SB241	16SB241-0206	11/30/2012	2.57 U	2.57 U	2.57 U	2.57 U	2.57 U	2.57 U	2.57 U

Shaded cells indicate the chemical concentration exceeds the MCS.
J - chemical detected, but the conentration reported is an estimated value
U - concentration not detected at the laboratory detection limit
-- - not analyzed
All units are in µg/kg
MCS - Media Cleanup Standard

TABLE 3-2

METALS CONTAMINATION AREA SOIL SAMPLE SCREENING
SWMU 16
NSA CRANE
CRANE, INDIANA

LOCATION	SAMPLE ID	SAMPLE DATE	ANTIMONY	COPPER	LEAD	ZINC
		SWMU 16 MCS	6.9(1) / 6.3(2)	253	652(2) /163(3)	1716
16SB007	16SS0070002	3/27/2003	0.29 U	13.8 J	16.0 J	48.1 J
16SB008	16SS0080002	3/27/2003	2.9 U	T	195 J	271 J
16SB009	16SS0090002	3/27/2003	8.9 J	84.0 J	311 J	552 J
16SB009	16SS0090002-D	3/27/2003	13.6 J	190 J	480 J	1320 J
16SB010	16SS0100002	3/27/2003	7.3 J	127 J	345 J	972 J
16SB011	16SB0110204	3/27/2003	0.39 U	8.7 J	8.1 J	20.6 J
16SB011	16SS0110002	3/27/2003	3.4 U	16.9 J	15.2 J	55.9 J
16SB012	16SB0120204	3/28/2003	0.71 U	13.2 J	10.3 J	35.9 J
16SB012	16SS0120002	3/28/2003	3.6 J	62.6 J	258 J	603 J
16SB013	16SB0130204	3/28/2003	0.41 U	19.3 J	9.5 J	15.2 U
16SB013	16SS0130002	3/28/2003	13.0 J	122 J	405 J	1560 J
16SB014	16SS0140002	3/27/2003	27.2 J	231 J	1240 J	575 J
16SB015	16SS0150002	3/27/2003	4.4 J	413 J	211 J	1150 J
16SB016	16SS0160002	3/27/2003	6.6 J	66.9 J	154 J	563 J
16SB017	16SB0170204	3/27/2003	0.31 U	15.5 J	6.1 J	59.0 J
16SB017	16SS0170002	3/27/2003	1.4 U	39.5 J	140 J	438 J
16SB018	16SB0180203	3/28/2003	0.51 U	34.8 J	14.2 J	17.8 J
16SB018	16SS0180002	3/28/2003	0.59 U	12.8 J	9.8 J	47.8 J
16SB019	16SB0190203	3/28/2003	0.24 U	6.8 J	6.3 J	14.0 J
16SB019	16SS0190002	3/28/2003	0.29 U	6.9 J	8.1 J	17.6 U
16SB020	16SS0200002	3/28/2003	7.7 J	65.4 J	765 J	132 U
16SB021	16SS0210002	3/28/2003	14.8 J	391 J	211 J	2510 U
16SB022	16SB0220203	3/28/2003	0.14 U	3.6 J	3.4 J	15.6 J
16SB022	16SS0220002	3/28/2003	2.0 U	28.3 J	69.9 J	197 U
16SB023	16SB0230203	3/28/2003	0.24 U	8.6 J	7.3 J	20.2 J
16SB023	16SS0230002	3/28/2003	1.3 U	23.0 J	43.0 J	102 J
16SB024	16SB0240203	3/28/2003	0.28 U	7.8 J	5.8 J	17.5 J
16SB024	16SS0240002	3/28/2003	2.0 J	15.3 J	18.0 J	174 J
16SB025	16SB0250203	3/28/2003	0.57 U	10.0 J	7.4 J	11.5 J
16SB025	16SS0250002	3/28/2003	1.5 U	19.0 J	24.9 J	97.2 J
16SB026	16SB0260204	4/9/2003	0.14 U	10.8 J	7.9 U	48.9 J
16SB026	16SS0260002	4/9/2003	0.19 U	13.0 J	14.8 U	49.0 J
16SB027	16SB0270203	3/28/2003	0.97 U	3.9 J	4.4 J	4.5 U
16SB027	16SS0270002	3/28/2003	0.27 U	5.1 J	8.3 J	24.3 U
16SB028	16SB0280203	3/28/2003	0.19 U	6.8 J	6.4 J	59.6 J
16SB028	16SS0280002	3/28/2003	0.66 U	19.8 J	31.8 J	144 U
16SB029	16SB0290203	3/28/2003	0.41 U	11.5 J	6.5 J	29.1 J
16SB029	16SS0290002	3/28/2003	2.8 U	35.0 J	85.7 J	401 U
16SB030	16SB0300203	3/28/2003	0.48 U	11.2 J	8.3 J	27.9 J
16SB030	16SS0300002	3/28/2003	1.2 U	18.8 J	16.9 J	68.2 J
16SB031	16SS0310002	3/28/2003	1.6 U	42.5 J	150 J	633 J
16SB032	16SB0320204	4/9/2003	0.51 J	17.1 J	20.1 J	31.2 J
16SB032	16SS0320002	4/9/2003	0.79 J	15.9 J	17.2 J	40.6 J
16SB033	16SB0330204	4/9/2003	0.25 U	5.4 J	12.9 J	8.6 U
16SB033	16SS0330002	4/9/2003	1.1 J	33.5 J	123 J	193 U
16SB043	16SS0430002	12/5/2003	1.2 J	19.2 J	31.5 J	144 J
16SB044	16SS0440002	12/5/2003	3.3 J	72.9 J	240 J	967 J
16SB045	16SS0450002	12/5/2003	3.1 J	32.2 J	127 J	455 J
16SB085	16SB0850204	8/14/2004	0.65 U	12.5 J	15.6 J	40.6

TABLE 3-2

METALS CONTAMINATION AREA SOIL SAMPLE SCREENING
SWMU 16
NSA CRANE
CRANE, INDIANA

LOCATION	SAMPLE ID	SAMPLE DATE	ANTIMONY	COPPER	LEAD	ZINC
		SWMU 16 MCS	***6.9(1) / 6.3(2)***	**253**	***652(2) /163(3)***	**1716**
16SB085	16SS0850002	8/14/2004	0.96 U	19.2 J	26 J	135
16SB086	16SB0860204	8/14/2004	0.56 U	14.2 J	13.2 J	35.7
16SB086	16SS0860002	10/16/2004	3.0 J	38.5 J	110 J	368 J
16SB087	16SB0870204	8/14/2004	1.4 J	25.5 J	71.1 J	130
16SB087	16SS0870002	8/14/2004	0.94 U	14.6 J	21.4 J	88.6
16SB088	16SB0880204	8/14/2004	0.34 U	6.6 J	9.4 J	18.2
16SB088	16SS0880002	8/14/2004	1.9 J	36.8 J	82.6 J	280
16SB089	16SB0890204	8/14/2004	0.62 U	16.7 J	21.2 J	35.4
16SB089	16SS0890002	8/14/2004	5.2 J	43.5 J	112 J	683
16SB154	16SS1540002	8/25/2011	1.7	24	69	200
16SB155	16SS1550002	8/25/2011	1.2	36	120	470
16SB156	16SS1560002	8/25/2011	0.57	16	24	76
16SB157	16SS1570002	8/25/2011	4.5	110	390	850
16SB158	16SS1580002	8/25/2011	0.33	11	23	42
16SB159	16SS1590002	8/25/2011	1.8	52	120	380
16SB160	16SS1600002	8/25/2011	0.081 U	21	19	130
16SB161	16SS1610002	8/25/2011	0.7	100	38	1400
16SB162	16SS1620002	8/25/2011	1.7	38	120	170
16SB163	16SS1630002	8/25/2011	0.51	34	94	210
16SB164	16SS1640002	8/25/2011	0.63	24	39	160
16SB165	16SS1650002	8/25/2011	0.27	35	94	190
16SB166	16SS1660002	8/25/2011	0.49	33	42	280
16SB167	16SS1670002	8/25/2011	0.61	28	55 J	140
16SB168	16SS1680002	8/25/2011	0.53	17	36 J	97
16SB169	16SS1690002	8/25/2011	0.58	17	31 J	91
16SB170	16SS1700002	8/25/2011	0.69	17	29 J	130
16SB171	16SS1710002	8/25/2011	1.6	41	79 J	340
16SB172	16SS1720002	8/25/2011	2.9	38	110 J	330
16SB173	16SS1730002	8/25/2011	0.34	13	17 J	59
16SB174	16SS1740002	8/25/2011	1.1	25	28 J	85
16SB175	16SS1750002	8/25/2011	0.42	24	32 J	84
16SB176	16SS17600002	8/26/2011	5	52	170	550
16SB177	16SS17700002	8/26/2011	7.3	150 J	760 J	2000 J
16SB178	16SS17800002	8/26/2011	6	88	290	1500
16SB179	16SS17900002	8/26/2011	4.9	190	590	2200
16SB180	16SS18000002	8/26/2011	4.7	96	370	1100
16SB181	16SS18100002	8/26/2011	8.3	450	1800	4000
16SB182	16SS18200002	8/26/2011	3.2	63	210	630
16SB183	16SS18300002	8/26/2011	4.9	95	360	1200
16SB184	16SS18400002	8/26/2011	7.8	170	640	1400
16SB185	16SS18500002	8/26/2011	1.5	27	78	390
16SB186	16SS18600002	8/26/2011	18	250	830	2600
16SB187	16SS18700002	8/26/2011	2.6	41	120	390
16SB188	16SS18800002	8/26/2011	21	290	1100	3200
16SB189	16SS18900002	8/26/2011	1.6	27	85	320
16SB190	16SS19000002	8/26/2011	15	190	600	2000
16SB221	16SS2210002	10/5/2012	--	--	101 J	902
16SB222	16SS2220002	10/5/2012	--	--	76.9 J	991
16SB223	16SS2230002	10/5/2012	--	--	175 J	883
16SB224	16SS2240002	10/5/2012	--	--	50.9 J	504

TABLE 3-2

METALS CONTAMINATION AREA SOIL SAMPLE SCREENING
SWMU 16
NSA CRANE
CRANE, INDIANA

LOCATION	SAMPLE ID	SAMPLE DATE	ANTIMONY	COPPER	LEAD	ZINC
		SWMU 16 MCS	**6.9(1) / *6.3* (2)**	**253**	***652* (2) /*163* (3)**	**1716**
16SB225	16SS2250002	10/5/2012	--	--	125 J	525
16SB226	16SS2260002	10/5/2012	--	--	101 J	288
16SB227	16SS2270002	10/5/2012	--	--	92.4 J	750
16SB228	16SS2280002	10/5/2012	--	--	244 J	671
16SB229	16SS2290002	10/5/2012	--	--	155 J	527
16SB230	16SS2300002	10/5/2012	--	--	358 J	1060
16SB231	16SS2310002	10/5/2012	--	--	28 J	155
16SB232	16SS2320002	10/5/2012	--	--	168 J	735
16SB233	16SS2330002	10/5/2012	--	--	114 J	741
16SB234	16SS2340002	10/5/2012	--	--	59.8 J	214
16SB235	16SS2350002	10/5/2012	--	--	339 J	930

Shaded cells indicate the chemical concentration exceeds the Medium Cleanup Standard (MCS).

J - estimated value

U - concentration is below the laboratory detection limit

1 - Basewide background concentration for soil

2 - Plant preliminary remediation goal, not to be exceeded at any given sample point

3 - Preliminary remediation goal for invertivorous birds - applied as an average lead concentration across the site.

All units are mg/kg

MCS - Media Cleanup Standard

-- - Not analyzed

TABLE 3-3

UST SOIL SAMPLE SCREENING
SWMU 16
NSA CRANE
CRANE, INDIANA

LOCATION **SAMPLE ID** **SAMPLE DATE**	**SWMU 16 PSL**	**16SB191** **16SB1910206** **8/23/2011**	**16SB191** **16SB1910608** **8/23/2011**	**16SB191** **16SS1910002** **8/23/2011**	**16SB192** **16SB1920206** **8/23/2011**	**16SB192** **16SB1920709** **8/23/2011**	**16SB192** **16SS1920002** **8/23/2011**
METALS (MG/KG)							
LEAD	163	20	9.8	57	14	12	32
VOLATILES (UG/KG)							
2-BUTANONE	30000	2.12 J	1.38 U	3.55 J	5.52	1.75 J	1.53 J
2-HEXANONE	220	1.53 U	1.38 U	2.17 U	2.7 U	1.46 U	2.53 U
ACETONE	90000	9.63	2.27 J	19	41.5	12.3	14.2
ACROLEIN	0.2	1.58 U	1.42 U	2.24 U	2.79 U	1.51 U	2.61 U
BENZENE	52	0.285 J	0.276 U	0.246 J	0.539 U	0.292 U	0.506 U
BROMOMETHANE	44	0.306 U	0.276 U	0.434 U	0.539 U	0.292 U	0.506 U
CARBON DISULFIDE	6200	1.27 U	1.15 U	1.98 J	2.25 U	1.22 U	2.11 U
CHLOROMETHANE	980	0.306 U	0.276 U	0.434 U	0.539 U	0.292 U	0.506 U
CIS-1,2-DICHLOROETHENE	420	0.306 U	0.276 U	0.434 U	0.539 U	0.292 U	0.506 U
CYCLOHEXANE	330000	0.235 J	0.276 U	0.934	0.539 U	0.292 U	0.506 U
ETHYLBENZENE	15600	0.556	0.276 U	0.434 U	0.539 U	0.292 U	0.506 U
ISOPROPYLBENZENE	11000	0.382 J	0.276 U	0.434 U	0.539 U	0.292 U	0.506 U
METHYL ACETATE	150000	2 J	1.53 U	2.4 U	3.15 J	1.62 U	1.53 J
TOLUENE	13800	0.831	0.276 U	0.68 J	0.539 U	0.292 U	0.506 U
TOTAL XYLENES	196000	2.88	0.276 U	0.326 J	0.539 U	0.292 U	0.506 U
VINYL CHLORIDE	14	0.306 U	0.276 U	0.434 U	0.539 U	0.292 U	0.506 U
PETROLEUM HYDROCARBONS (MG/KG)							
DRO (C08-C28)	230	8.3	2.1 J	5.8	5.7	3 J	2.4 J
GRO (C06-C12)	120	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.1 UJ

TABLE 3-3

UST SOIL SAMPLE SCREENING
SWMU 16
NSA CRANE
CRANE, INDIANA

LOCATION **SAMPLE ID** **SAMPLE DATE**	**SWMU 16 PSL**	**16SB193** **16SB1930206** **8/23/2011**	**16SB193** **16SB1930608** **8/23/2011**	**16SB193** **16SS1930002** **8/23/2011**	**16SB194** **16SB1940206** **8/23/2011**	**16SB194** **16SB1940810** **8/23/2011**	**16SB194** **16SS1940002** **8/23/2011**
METALS (MG/KG)							
LEAD	163	13	10	17	15	13	27
VOLATILES (UG/KG)							
2-BUTANONE	30000	1.67 J	1.39 J	4.03 J	1.14 J	2.89	1.97 J
2-HEXANONE	220	1.66 U	2.47 U	2.61 U	1.6 U	1.49 U	1.37 U
ACETONE	90000	6.86	9.44	36.7	7.91	18.2	19.5
ACROLEIN	0.2	1.71 U	2.55 U	2.7 U	1.65 U	1.54 U	1.42 U
BENZENE	52	0.332 U	0.494 U	0.522 U	0.319 U	0.298 U	0.275 U
BROMOMETHANE	44	0.332 U	0.494 U	0.522 U	0.319 U	0.298 U	0.275 U
CARBON DISULFIDE	6200	1.38 U	2.06 U	2.18 U	1.04 J	1.24 U	1.15 U
CHLOROMETHANE	980	0.332 U	0.494 U	0.522 U	0.319 U	0.298 U	0.275 U
CIS-1,2-DICHLOROETHENE	420	0.68	0.536 J	0.522 U	0.319 U	0.432 J	0.275 U
CYCLOHEXANE	330000	0.332 U	0.494 U	0.522 U	0.319 U	0.298 U	0.275 U
ETHYLBENZENE	15600	0.332 U	0.494 U	0.522 U	0.319 U	0.298 U	0.275 U
ISOPROPYLBENZENE	11000	0.332 U	0.494 U	0.522 U	0.319 U	0.298 U	0.275 U
METHYL ACETATE	150000	1.84 U	2.74 U	1.85 J	1.77 U	1.65 U	1.39 J
TOLUENE	13800	1.65	0.494 U	0.522 U	0.208 J	0.288 J	0.275 U
TOTAL XYLENES	196000	0.332 U	0.494 U	0.522 U	0.319 U	0.298 U	0.275 U
VINYL CHLORIDE	14	1.56	1.29	0.522 U	0.319 U	0.298 U	0.275 U
PETROLEUM HYDROCARBONS (MG/KG)							
DRO (C08-C28)	230	3.2 J	3 J	2.3 J	4.5	2.5 J	12 J
GRO (C06-C12)	120	1.2 UJ	1.2 UJ	1.2 UJ	1.3 UJ	1.2 UJ	1.1 UJ

TABLE 3-3

UST SOIL SAMPLE SCREENING
SWMU 16
NSA CRANE
CRANE, INDIANA

LOCATION **SAMPLE ID** **SAMPLE DATE**	**SWMU 16 PSL**	**16SB195** **16SB1950206** **8/23/2011**	**16SB195** **16SB1950709** **8/23/2011**	**16SB195** **16SS1950002** **8/23/2011**	**16SB196** **16SB1960206** **8/23/2011**	**16SB196** **16SB1960206-D** **8/23/2011**	**16SB196** **16SB1961012** **8/23/2011**
METALS (MG/KG)							
LEAD	163	15	13	26	22	22	9.5
VOLATILES (UG/KG)							
2-BUTANONE	30000	6.55	1.44 J	2.43 J	1.63 U	2.77	0.758 J
2-HEXANONE	220	2.63 U	2.25 U	1.87 U	1.63 U	1.53 U	1.46 U
ACETONE	90000	27.3	10.3	20.5	2.57 J	18.8 J	6.4
ACROLEIN	0.2	2.72 U	2.32 U	1.94 U	1.68 U	1.58 U	1.51 U
BENZENE	52	1.8	0.449 U	0.375 U	0.325 U	0.306 U	0.291 U
BROMOMETHANE	44	0.526 U	0.449 U	0.375 U	0.325 U	0.306 U	0.291 U
CARBON DISULFIDE	6200	2.19 U	1.87 U	1.56 U	1.36 U	1.27 U	0.656 J
CHLOROMETHANE	980	0.526 U	0.449 U	0.375 U	0.325 U	0.306 U	0.291 U
CIS-1,2-DICHLOROETHENE	420	0.526 U	0.449 U	0.375 U	0.325 U	0.306 U	0.291 U
CYCLOHEXANE	330000	0.526 U	0.449 U	0.375 U	0.325 U	0.306 U	0.291 U
ETHYLBENZENE	15600	14.4	0.449 U	0.375 U	0.325 U	0.306 U	0.291 U
ISOPROPYLBENZENE	11000	15.4	0.449 U	0.375 U	0.325 U	0.306 U	0.291 U
METHYL ACETATE	150000	2.91 U	2.49 U	2.07 U	1.8 U	1.69 U	1.61 U
TOLUENE	13800	7.32	0.449 U	0.219 J	0.325 U	0.239 J	0.291 U
TOTAL XYLENES	196000	89.7	0.449 U	0.375 U	0.325 U	0.306 U	0.291 U
VINYL CHLORIDE	14	0.526 U	0.449 U	0.375 U	0.325 U	0.306 U	0.291 U
PETROLEUM HYDROCARBONS (MG/KG)							
DRO (C08-C28)	230	5.8	3.7	2.9 J	3.2 J	0.75 J	2.7 J
GRO (C06-C12)	120	19 J	1.2 UR	1.1 UJ	1.2 UJ	1.2 UR	1.2 UJ

TABLE 3-3

UST SOIL SAMPLE SCREENING
SWMU 16
NSA CRANE
CRANE, INDIANA

LOCATION **SAMPLE ID** **SAMPLE DATE**	**SWMU 16 PSL**	**16SB196** **16SS1960002** **8/23/2011**	**16SB197** **16SB1970206** **8/23/2011**	**16SB197** **16SB1970607** **8/23/2011**	**16SB197** **16SS1970002** **8/23/2011**	**16SB198** **16SB1980206** **8/23/2011**
METALS (MG/KG)						
LEAD	163	45	17	11	35	18
VOLATILES (UG/KG)						
2-BUTANONE	30000	4.73	4.95	2.73 U	7.38	6.45
2-HEXANONE	220	1.51 U	2.62 U	2.73 U	1.6 U	2.69 U
ACETONE	90000	32.4	26.1	7.76	56.8	72.8
ACROLEIN	0.2	1.56 U	2.71 UJ	2.82 U	1.65 U	2.78 U
BENZENE	52	0.443 J	0.524 UJ	0.546 U	0.32 U	0.538 U
BROMOMETHANE	44	0.302 U	0.524 U	0.546 U	0.32 U	0.538 U
CARBON DISULFIDE	6200	1.19 J	2.18 U	2.27 U	1.33 U	2.24 U
CHLOROMETHANE	980	0.72	0.524 U	0.546 U	0.32 U	0.538 U
CIS-1,2-DICHLOROETHENE	420	0.302 U	0.524 U	0.546 U	0.32 U	0.538 U
CYCLOHEXANE	330000	0.302 U	0.524 U	0.546 U	0.32 U	0.538 U
ETHYLBENZENE	15600	0.297 J	0.524 UJ	0.546 U	0.32 U	0.538 U
ISOPROPYLBENZENE	11000	0.302 U	0.524 U	0.546 U	0.32 U	0.538 U
METHYL ACETATE	150000	1.67 U	2.32 J	3.02 U	4.26	4.12 J
TOLUENE	13800	1.02	0.9 J	0.546 U	0.32 U	0.538 U
TOTAL XYLENES	196000	0.675	0.524 U	0.546 U	0.32 U	0.538 U
VINYL CHLORIDE	14	0.302 U	2.37 J	2.24	0.32 U	0.538 U
PETROLEUM HYDROCARBONS (MG/KG)						
DRO (C08-C28)	230	3.4 J	3 J	0.95 J	2 J	1.1 J
GRO (C06-C12)	120	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ

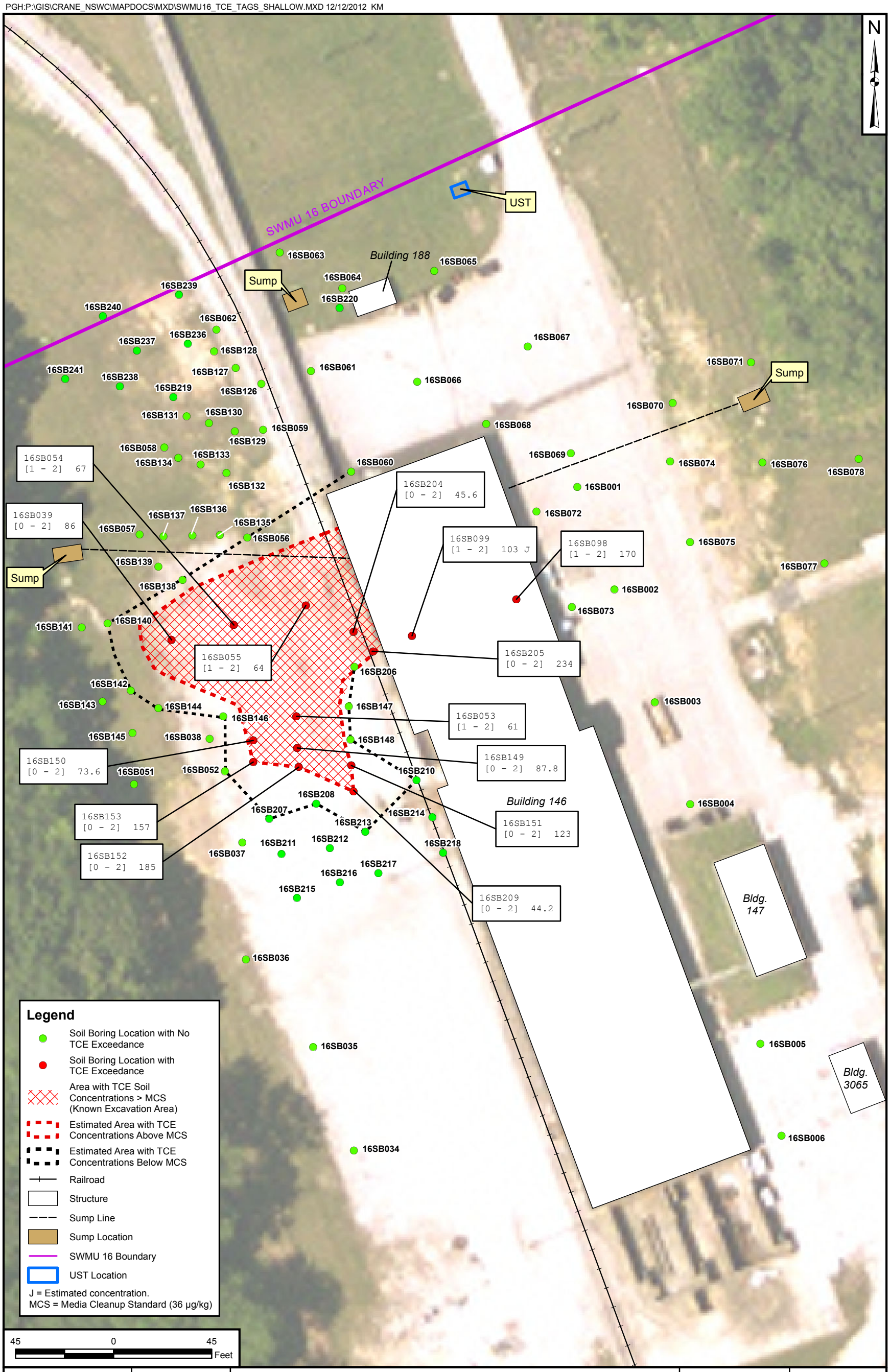
TABLE 3-3

UST SOIL SAMPLE SCREENING
SWMU 16
NSA CRANE
CRANE, INDIANA

LOCATION **SAMPLE ID** **SAMPLE DATE**	**SWMU 16 PSL**	**16SB198** **16SB1980607** **8/23/2011**	**16SB198** **16SS1980002** **8/23/2011**	**16SB198** **16SS1980002-D** **8/23/2011**
METALS (MG/KG)				
LEAD	163	12	67 J	130 J
VOLATILES (UG/KG)				
2-BUTANONE	30000	3.04 J	18.7 J	54.9 J
2-HEXANONE	220	2.54 U	2.47 U	1.97 J
ACETONE	90000	21.2	90.3 J	298 J
ACROLEIN	0.2	2.63 U	2.55 UJ	9.78 J
BENZENE	52	0.509 U	0.494 UJ	1.54 J
BROMOMETHANE	44	0.509 U	0.494 U	0.27 J
CARBON DISULFIDE	6200	2.12 U	2.06 U	2.18 U
CHLOROMETHANE	980	0.509 U	0.494 U	0.522 U
CIS-1,2-DICHLOROETHENE	420	0.509 U	0.494 U	0.522 U
CYCLOHEXANE	330000	0.509 U	0.494 U	0.522 U
ETHYLBENZENE	15600	0.509 U	0.494 U	0.522 U
ISOPROPYLBENZENE	11000	0.509 U	0.494 U	0.522 U
METHYL ACETATE	150000	2.81 U	17.2	17
TOLUENE	13800	0.509 U	0.478 J	0.383 J
TOTAL XYLENES	196000	0.509 U	0.494 U	0.522 U
VINYL CHLORIDE	14	0.509 U	0.494 U	0.522 U
PETROLEUM HYDROCARBONS (MG/KG)				
DRO (C08-C28)	230	1.4 J	1.7 J	1.4 J
GRO (C06-C12)	120	1.2 UJ	1.1 UJ	1.1 UR

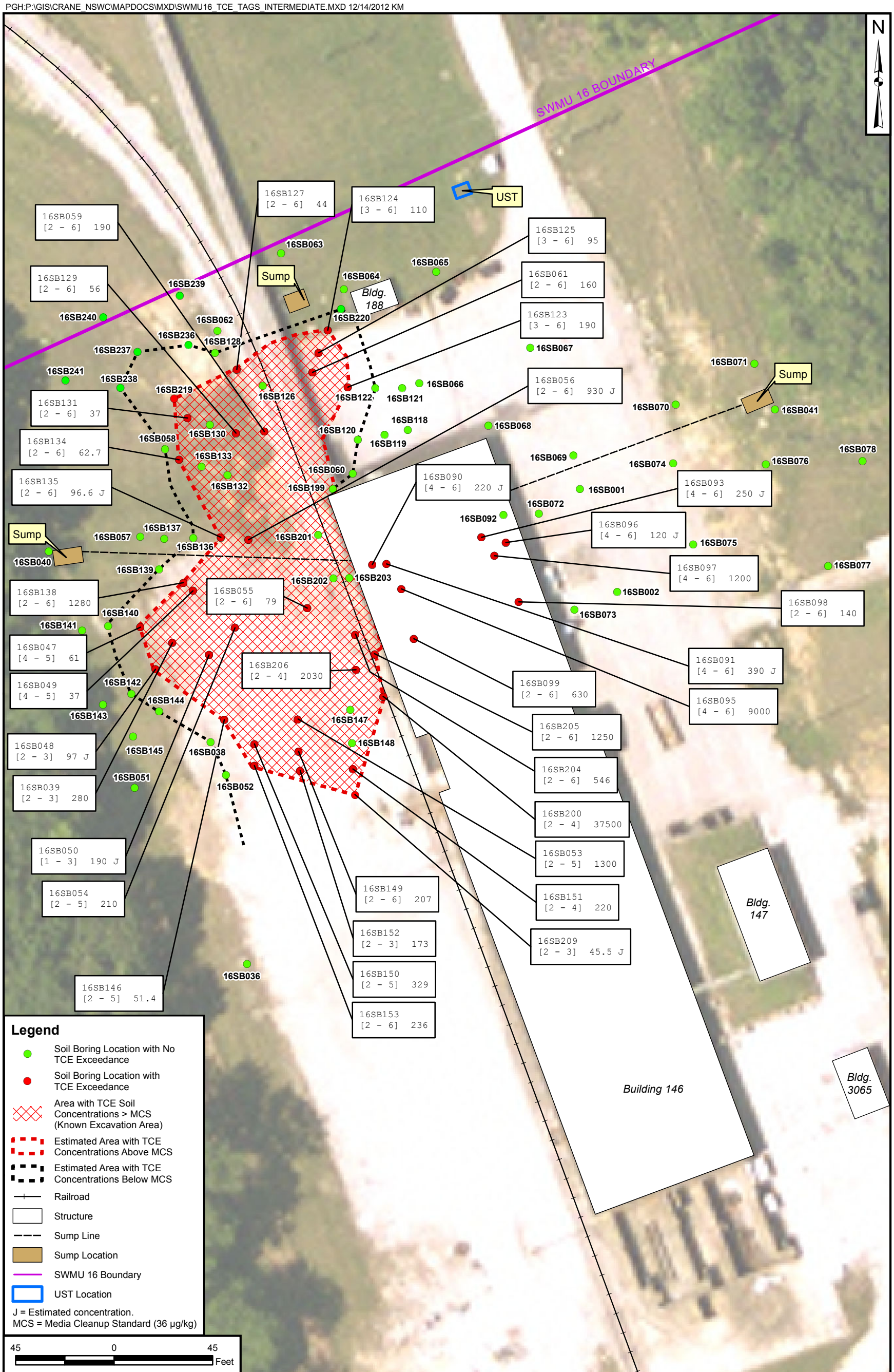
PSL - Project Screening Limit
Shaded cells indicate the chemical concentration exceeds the PSL, established in the SAP.
J - estimated value
U - concentration is below the laboratory detection limit

PGH:P:\GIS\CRANE_NSWC\MAPDOCS\MXD\SWMU16_TCE_TAGS_SHALLOW.MXD 12/12/2012 KM



DRAWN BY	DATE			CONTRACT NUMBER	CTO NUMBER
C. TULLEY	01/20/12		TCE CONTAMINATION AREA SOIL SAMPLING RESULTS AND CLEAN BOUNDARY SURFACE SOIL (0 - 2 FT) SWMU 16 - CAST HIGH EXPLOSIVES FILL/BLDG. 145 INCINERATOR NSA CRANE CRANE, INDIANA	02127	F277
CHECKED BY	DATE			APPROVED BY	DATE
J. DUCAR	12/12/12			—	—
REVISED BY	DATE			APPROVED BY	DATE
K. MOORE	12/7/12			—	—
SCALE				FIGURE NO.	REV
AS NOTED				FIGURE 3-1	0

PGH:P:\GIS\CRANE_NSWC\MAPDOCS\MXD\SWMU16_TCE_TAGS_INTERMEDIATE.MXD 12/14/2012 KM



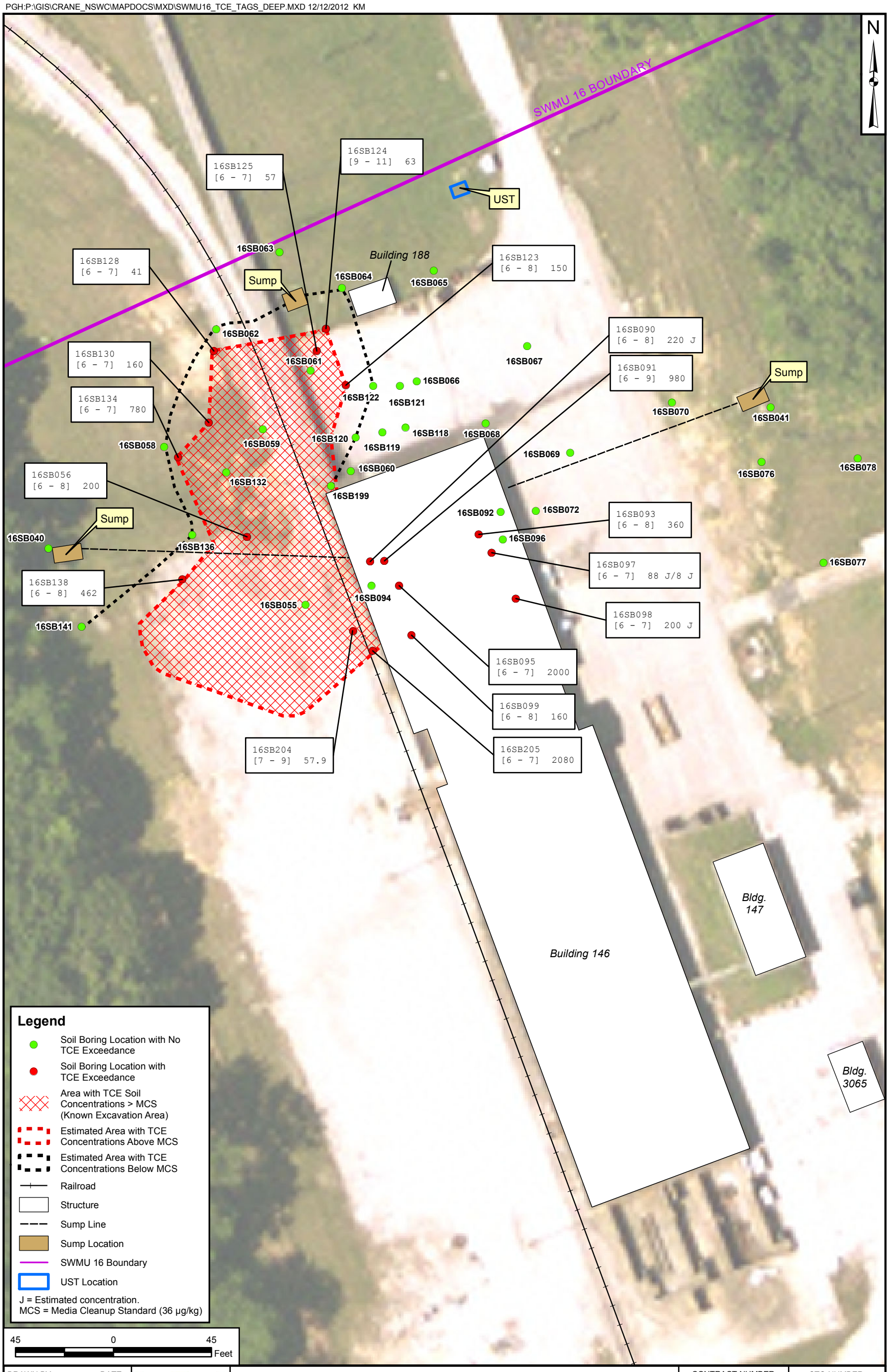
DRAWN BY	DATE
C. TULLEY	01/20/12
CHECKED BY	DATE
J. DUCAR	12/12/12
REVISED BY	DATE
K. MOORE	12/10/12
SCALE	
AS NOTED	

NAVFAC

TCE CONTAMINATION AREA SOIL SAMPLING RESULTS
AND CLEAN BOUNDARY
INTERMEDIATE SOIL (2 - 6 FT)
SWMU 16 - CAST HIGH EXPLOSIVES FILL/BLDG. 145 INCINERATOR
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER	CTO NUMBER
02127	F277
APPROVED BY	DATE
—	—
APPROVED BY	DATE
—	—
FIGURE NO. FIGURE 3-2	REV 0

PGH:P:\GIS\CRANE_NSWC\MAPDOCS\MXD\SWMU16_TCE_TAGS_DEEP.MXD 12/12/2012 KM



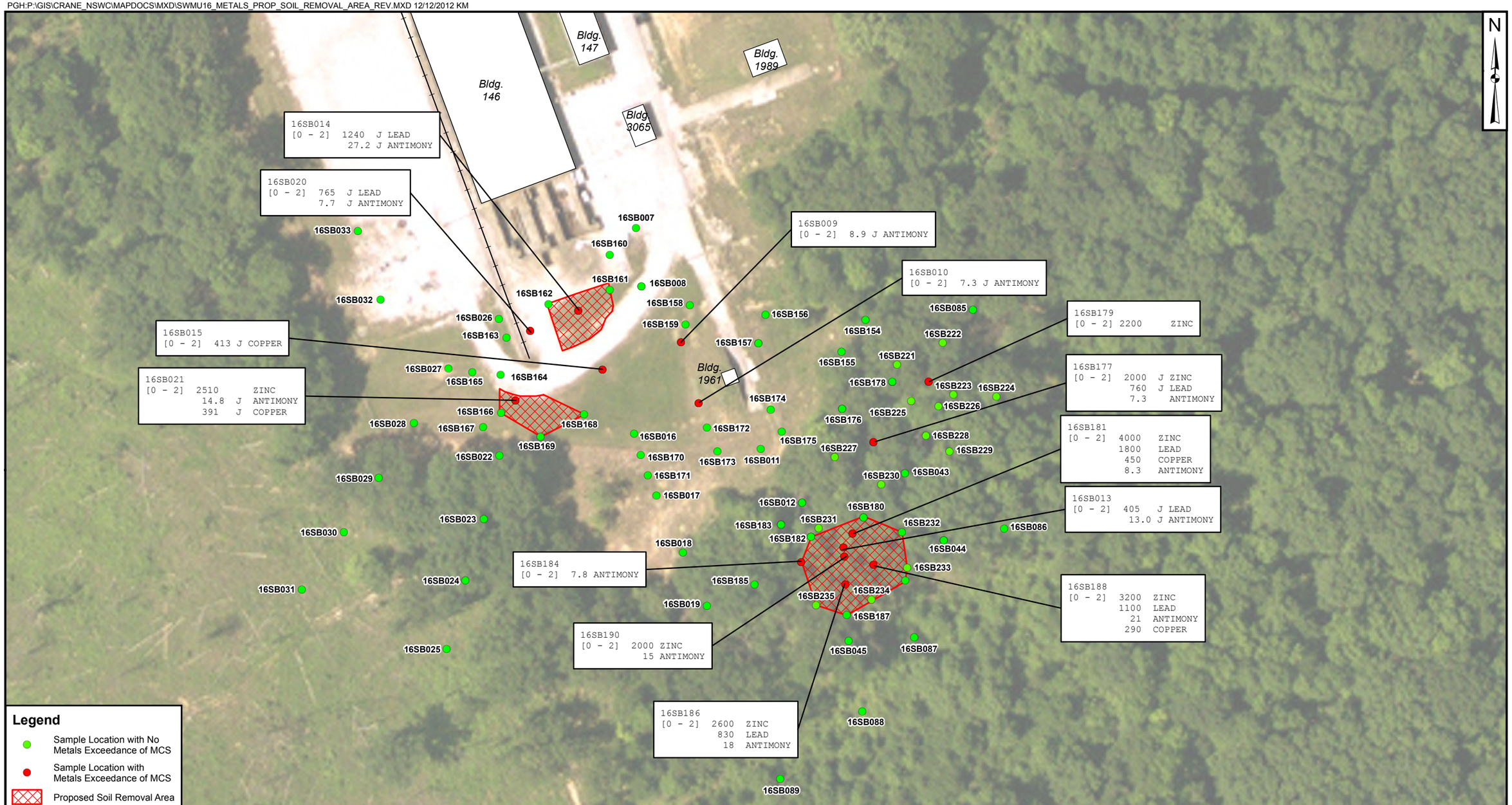
DRAWN BY	DATE
C. TULLEY	01/20/12
CHECKED BY	DATE
J. DUCAR	12/12/12
REVISED BY	DATE
—	—
SCALE	
AS NOTED	

NAVFAC

TCE CONTAMINATION AREA SOIL SAMPLING RESULTS
AND CLEAN BOUNDARY
DEEP SOIL (6 - 10 FT)
SWMU 16 - CAST HIGH EXPLOSIVES FILL/BLDG. 145 INCINERATOR
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER	CTO NUMBER
02127	F277
APPROVED BY	DATE
—	—
APPROVED BY	DATE
—	—
FIGURE NO.	REV
FIGURE 3-3	0

PGH:P:\GIS\CRANE_NSWC\MAPDOCS\MXD\SWMU16_METALS_PROP_SOIL_REMOVAL_AREA_REV.MXD 12/12/2012 KM



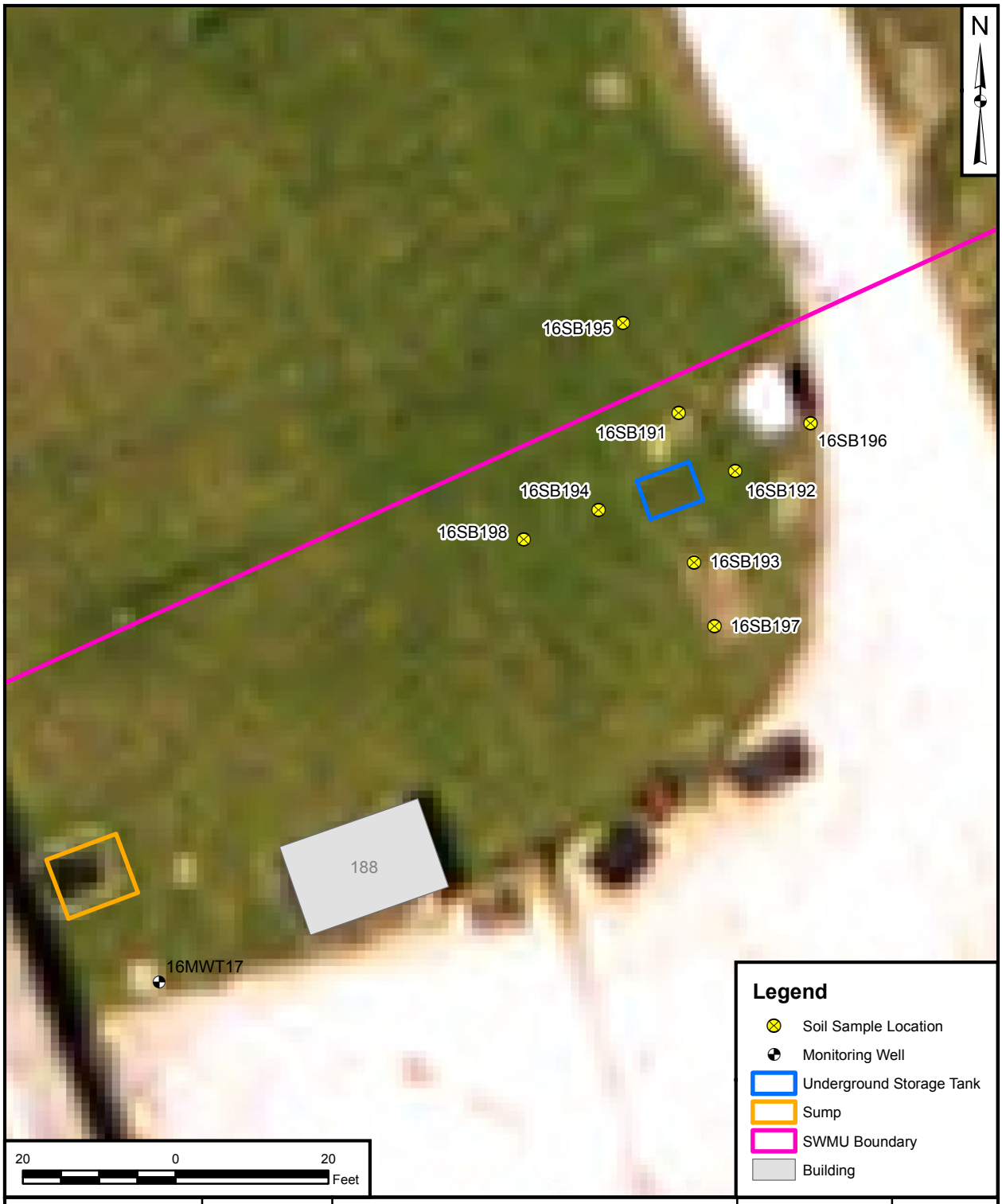
DRAWN BY	DATE
C. TULLEY	01/30/12
CHECKED BY	DATE
J. DUCAR	12/12/12
REVISED BY	DATE
K. MOORE	12/6/12
SCALE	
AS NOTED	

NAVFAC

METALS CONTAMINATION AREA SOIL SAMPLING RESULTS
AND PROPOSED SOILS REMOVAL AREAS
SWMU 16 - CAST HIGH EXPLOSIVES FILL/B146 INCINERATOR
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER	CTO NUMBER
112G02127	F277
APPROVED BY	DATE
—	—
APPROVED BY	DATE
—	—
FIGURE NO.	REV
FIGURE 3-4	0

PGH:P:\GIS\CRANE_NSWC\MAPDOCS\MXD\SWMU16_UST_SAMPLING_LOCS.MXD 12/12/2012 KM



DRAWN BY	DATE
S. PAXTON	01/19/12
CHECKED BY	DATE
J. DUCAR	12/12/12
REVISED BY	DATE
S. PAXTON	02/28/12
SCALE AS NOTED	

NAVFAC

UST AREA SAMPLING LOCATIONS
SWMU 16 - CAST HIGH EXPLOSIVES
FILL / BUILDING 146 INCINERATOR
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER	CTO NUMBER
___	F277
APPROVED BY	DATE
___	___
APPROVED BY	DATE
___	___
FIGURE NO.	REV
FIGURE 3-5	0

4.0 RECOMMENDATIONS

4.1 TCE CONTAMINATION AREA

The TCE Contamination Area extent of contamination is fully delineated. The recommendation is to proceed to an Intern Measures Work Plan (IMWP).

4.2 METALS CONTAMINATION

The Metals Contamination Area extent of contamination is fully delineated. The recommendation is to proceed to an IMWP.

4.2.1 Metals Contamination Area Soil Removal Determination

A systematic approach was used to determine which sample locations should be proposed for removal. The approach focused on first removing sample locations where concentrations of multiple metals were elevated, and in areas where ecological receptors were more likely to be exposed to the metals. Based on this, the soil near sample locations 16SB013, 16SB181, 16SB186, 16SB188, and 16SB190 are proposed for removal (see Table 4-1 and Figure 3-4). In addition, the soil around sample locations 16SB014 and 16SB021 is proposed for removal because of elevated concentrations of several metals, even though the habitat in these areas is limited. By removing the sample results from the areas proposed for excavation, and replacing the results with background concentrations [assuming the 95% UTL for Soil Category 3 from the Crane Basewide Soil Investigation Report (Tetra Tech, 2001)] for the four metals, the resulting average concentration for lead decreased from 212 mg/kg to 139 mg/kg, which is well below the invertivorous bird PRG of 163 mg/kg.

As noted on Table 4-1, there are seven additional locations that are not proposed for removal, even though the MCSs are exceeded for some of the metals. The last column in the table presents the rationale for why the locations are not proposed for removal. The rationales are presented in more detail below:

- 16SB020: The sample from this location was collected within the railroad bed so there is no ecological habitat in this area so it is not necessary to remove soil from this location.

- 16SB177 and 16SB179: These sample locations are within the wooded area in the south eastern portion of SWMU 16 (see Figure 3-4). The only MCSs that are being exceeded are based on plants; however, removing the soil would result in removing the trees and other vegetation. Also, because concentrations of metals just slightly exceed the plant MCSs and the area is wooded, it is not likely

that significant impacts to plants are occurring. Therefore, the damage that would be caused to the vegetation in the area during excavation activities does not warrant a removal of soil around these sample locations.

- 16SB009 and 16SB010: Soil from these sample locations only slightly exceeded the background concentration for antimony. No other metals exceeded a MCS at these locations. Also, as discussed in the Technical Memorandum (Tetra Tech, 2010), there is uncertainty in whether the impacts observed in the plant toxicity test was due to antimony. For these reasons, the soil around these sample locations is not proposed for removal.

- 16SB015: Soil from this sample location only slightly exceeded the plant MCS for copper. As stated above, the plant MCS for copper is based on a NOEC so impacts to plants at this level cannot be determined, but it would be greater than 253 mg/kg. For that reason, it is not likely the copper from this location is significantly impacting plants so the soil around this sample location is not proposed for removal.

Figure 3-4 presents the three discrete soil areas proposed to be remediated.

TABLE 4-1

SOIL SAMPLES PROPOSED FOR REMOVAL
SWMU 16
NSA CRANE
CRANE, INDIANA

SAMPLE LOCATION	SAMPLE DATE	PRE-REMEDIATION CONCENTRATIONS				POST-REMEDIATION CONCENTRATIONS				Sample Removed or Rationale for Not Removing a Sample
		ANTIMONY	COPPER	LEAD	ZINC	ANTIMONY	COPPER	LEAD	ZINC	
	SWMU 16 MCS	*6.9 (1) /6.3 (2)*	*253*	*652 (2) /163 (3)*	*1716*	*6.9 (1) /6.3 (2)*	*253*	*652 (2) /163 (3)*	*1716*	
16SB181	8/26/2011	6.9	450	1800	4000	6.9(4)	17.6(4)	27(4)	65.6(4)	To Be Removed
16SB014	3/27/2003	27.2	231	1240	575	6.9(4)	17.6(4)	27(4)	65.6(4)	To Be Removed
16SB188	8/26/2011	21	290	1100	3200	6.9(4)	17.6(4)	27(4)	65.6(4)	To Be Removed
16SB186	8/26/2011	18	250	830	2600	6.9(4)	17.6(4)	27(4)	65.6(4)	To Be Removed
16SB020	3/28/2003	7.7	65.4	765	132	7.7	65.4	765	132	Sample is located in railroad line. No ecological habitat.
16SB177	8/26/2011	7.3	150	760	2000	7.3	150	760	2000	Slightly greater than plant PRG in wooded area. Removal would impact plants by trying to protect plants.
16SB184	8/26/2011	7.8	170	640	1400	7.8	170	640	1400	Isolated detection above plant PRG and background.
16SB190	8/26/2011	15	190	600	2000	6.9(4)	17.6(4)	27(4)	65.6(4)	To Be Removed
16SB179	8/26/2011	4.9	190	590	2200	4.9	190	590	2200	Slightly greater than plant PRG in wooded area. Removal would impact plants by trying to protect plants.
16SB013	3/28/2003	13	122	405	1560	6.9(4)	17.6(4)	27(4)	65.6(4)	To Be Removed
16SB157	8/25/2011	4.5	110	390	850	4.5	110	390	850	No Issue
16SB180	8/26/2011	4.7	96	370	1100	4.7	96	370	1100	No Issue
16SB183	8/26/2011	4.9	95	360	1200	4.9	95	360	1200	No Issue
16SB010	3/27/2003	7.3	127	345	972	7.3	127	345	972	Isolated detection above plant PRG and background.
16SB009	3/27/2003	8.9	84	311	552	8.9	84	311	552	Isolated detection above plant PRG and background.
16SB178	8/26/2011	6	88	290	1500	6	88	290	1500	No Issue
16SB012	3/28/2003	3.6	62.6	258	603	3.6	62.6	258	603	No Issue
16SB044	12/5/2003	3.3	72.9	240	967	3.3	72.9	240	967	No Issue
16SB021	3/28/2003	14.8	391	211	2510	6.9(4)	17.6(4)	27(4)	65.6(4)	To Be Removed
16SB015	3/27/2003	4.4	413	211	1150	4.4	413	211	1150	PRG for copper very conservative because no impacts to plants or invertebrates were observed at 253 mg/kg.
16SB182	8/26/2011	3.2	63	210	630	3.2	63	210	630	No Issue
16SB008	3/27/2003	2.9	52.5	195	271	2.9	52.5	195	271	No Issue
16SB176	8/26/2011	5	52	170	550	5	52	170	550	No Issue
16SB016	3/27/2003	6.6	66.9	154	563	6.6	66.9	154	563	No Issue
16SB031	3/28/2003	1.6	42.5	150	633	1.6	42.5	150	633	No Issue
16SB017	3/27/2003	1.4	39.5	140	438	1.4	39.5	140	438	No Issue
16SB045	12/5/2003	3.1	32.2	127	455	3.1	32.2	127	455	No Issue

TABLE 4-1

SOIL SAMPLES PROPOSED FOR REMOVAL
SWMU 16
NSA CRANE
CRANE, INDIANA

SAMPLE LOCATION	SAMPLE DATE	PRE-REMEDIATION CONCENTRATIONS				POST-REMEDIATION CONCENTRATIONS				Sample Removed or Rationale for Not Removing a Sample
		ANTIMONY	COPPER	LEAD	ZINC	ANTIMONY	COPPER	LEAD	ZINC	
	SWMU 16 MCS	***6.9 (1) /6.3 (2)***	***253***	***652 (2) /163 (3)***	***1716***	***6.9 (1) /6.3 (2)***	***253***	***652 (2) /163 (3)***	***1716***	
16SB033	4/9/2003	1.1	33.5	123	193	1.1	33.5	123	193	No Issue
16SB187	8/26/2011	2.6	41	120	390	2.6	41	120	390	No Issue
16SB159	8/25/2011	1.8	52	120	380	1.8	52	120	380	No Issue
16SB162	8/25/2011	1.7	38	120	170	1.7	38	120	170	No Issue
16SB155	8/25/2011	1.2	36	120	470	1.2	36	120	470	No Issue
16SB089	8/14/2004	5.2	43.5	112	683	5.2	43.5	112	683	No Issue
16SB086	10/16/2004	3	38.5	110	368	3	38.5	110	368	No Issue
16SB172	8/25/2011	2.9	38	110	330	2.9	38	110	330	No Issue
16SB163	8/25/2011	0.51	34	94	210	0.51	34	94	210	No Issue
16SB165	8/25/2011	0.27	35	94	190	0.27	35	94	190	No Issue
16SB029	3/28/2003	2.8	35	85.7	401	2.8	35	85.7	401	No Issue
16SB189	8/26/2011	1.6	27	85	320	1.6	27	85	320	No Issue
16SB088	8/14/2004	1.9	36.8	82.6	280	1.9	36.8	82.6	280	No Issue
16SB171	8/25/2011	1.6	41	79	340	1.6	41	79	340	No Issue
16SB185	8/26/2011	1.5	27	78	390	1.5	27	78	390	No Issue
16SB022	3/28/2003	2	28.3	69.9	197	2	28.3	69.9	197	No Issue
16SB154	8/25/2011	1.7	24	69	200	1.7	24	69	200	No Issue
16SB167	8/25/2011	0.61	28	55	140	0.61	28	55	140	No Issue
16SB023	3/28/2003	1.3	23	43	102	1.3	23	43	102	No Issue
16SB166	8/25/2011	0.49	33	42	280	0.49	33	42	280	No Issue
16SB164	8/25/2011	0.63	24	39	160	0.63	24	39	160	No Issue
16SB161	8/25/2011	0.7	100	38	1400	0.7	100	38	1400	No Issue
16SB168	8/25/2011	0.53	17	36	97	0.53	17	36	97	No Issue
16SB175	8/25/2011	0.42	24	32	84	0.42	24	32	84	No Issue
16SB028	3/28/2003	0.66	19.8	31.8	144	0.66	19.8	31.8	144	No Issue
16SB043	12/5/2003	1.2	19.2	31.5	144	1.2	19.2	31.5	144	No Issue
16SB169	8/25/2011	0.58	17	31	91	0.58	17	31	91	No Issue
16SB170	8/25/2011	0.69	17	29	130	0.69	17	29	130	No Issue
16SB174	8/25/2011	1.1	25	28	85	1.1	25	28	85	No Issue
16SB085	8/14/2004	0.96	19.2	26	135	0.96	19.2	26	135	No Issue
16SB025	3/28/2003	1.5	19	24.9	97.2	1.5	19	24.9	97.2	No Issue
16SB156	8/25/2011	0.57	16	24	76	0.57	16	24	76	No Issue
16SB158	8/25/2011	0.33	11	23	42	0.33	11	23	42	No Issue
16SB087	8/14/2004	0.94	14.6	21.4	88.6	0.94	14.6	21.4	88.6	No Issue
16SB160	8/25/2011	0.081	21	19	130	0.081	21	19	130	No Issue
16SB024	3/28/2003	2	15.3	18	174	2	15.3	18	174	No Issue
16SB032	4/9/2003	0.79	15.9	17.2	40.6	0.79	15.9	17.2	40.6	No Issue

TABLE 4-1

SOIL SAMPLES PROPOSED FOR REMOVAL
SWMU 16
NSA CRANE
CRANE, INDIANA

SAMPLE LOCATION	SAMPLE DATE	PRE-REMEDIATION CONCENTRATIONS				POST-REMEDIATION CONCENTRATIONS				Sample Removed or Rationale for Not Removing a Sample
		ANTIMONY	COPPER	LEAD	ZINC	ANTIMONY	COPPER	LEAD	ZINC	
SWMU 16 MCS		***6.9 (1) /6.3 (2)***	***253***	***652 (2) /163 (3)***	***1716***	***6.9 (1) /6.3 (2)***	***253***	***652 (2) /163 (3)***	***1716***	
16SB173	8/25/2011	0.34	13	17	59	0.34	13	17	59	No Issue
16SB030	3/28/2003	1.2	18.8	16.9	68.2	1.2	18.8	16.9	68.2	No Issue
16SB007	3/27/2003	0.29	13.8	16	48.1	0.29	13.8	16	48.1	No Issue
16SB011	3/27/2003	3.4	16.9	15.2	55.9	3.4	16.9	15.2	55.9	No Issue
16SB026	4/9/2003	0.19	13	14.8	49	0.19	13	14.8	49	No Issue
16SB018	3/28/2003	0.59	12.8	9.8	47.8	0.59	12.8	9.8	47.8	No Issue
16SB027	3/28/2003	0.27	5.1	8.3	24.3	0.27	5.1	8.3	24.3	No Issue
16SB019	3/28/2003	0.29	6.9	8.1	17.6	0.29	6.9	8.1	17.6	No Issue
16SB221	10/5/2012	--	--	--	--	--	--	101	902	No Issue
16SB222	10/5/2012	--	--	--	--	--	--	76.9	991	No Issue
16SB223	10/5/2012	--	--	--	--	--	--	175	883	No Issue
16SB224	10/5/2012	--	--	--	--	--	--	50.9	504	No Issue
16SB225	10/5/2012	--	--	--	--	--	--	125	525	No Issue
16SB226	10/5/2012	--	--	--	--	--	--	101	288	No Issue
16SB227	10/5/2012	--	--	--	--	--	--	92.4	750	No Issue
16SB228	10/5/2012	--	--	--	--	--	--	244	671	No Issue
16SB229	10/5/2012	--	--	--	--	--	--	155	527	No Issue
16SB230	10/5/2012	--	--	--	--	--	--	358	1060	No Issue
16SB231	10/5/2012	--	--	--	--	--	--	28	155	No Issue
16SB232	10/5/2012	--	--	--	--	--	--	168	735	No Issue
16SB233	10/5/2012	--	--	--	--	--	--	114	741	No Issue
16SB234	10/5/2012	--	--	--	--	--	--	59.8	214	No Issue
16SB235	10/5/2012	--	--	--	--	--	--	339	930	No Issue
Average Concentration		**4**	**74**	**212**	**632**	**2**	**53**	**141**	**495**	No Issue

Notes:
Cells are shaded if the chemical concentration exceeds the greater of the basewide background concentration or the preliminary remediation goal. Because the lead PRG for invertovorous birds is an average across the site, the lead concentrations are shaded if they exceed the PRG for plants.

1 - Basewide background concentration for soil
2 - Plant preliminary remediation goal, not to be exceeded at any given sample point
3 - Preliminary remediation goal for invertivorous birds - applied as an average lead concentration across the site.
4 - Concentration is based on backfill material assuming the 95% UTL for Soil Category 3 from the Crane Basewide Soil Investigation Report (Tetra Tech, 2001).

PRG - Preliminary Remediation Goal
MCS - Media Cleanup Standard
Highlighted samples are proposed for removal
-- - Not analyzed

REFERENCES

Tetra Tech, 2001; Basewide Soil Investigation Report, Naval Surface Warfare Center Crane, Crane, Indiana, Tetra Tech NUS, Inc., January 2001.

Tetra Tech, 2010; Technical Memorandum, Ecological Media Cleanup Goals SWMU 16 Surface Soils, December 2010.

Tetra Tech, 2011a; Resource Conservation and Recovery Act Facility Investigation for Solid Waste Management Unit (SWMU) 16, Cast High Explosives Fill/B146 Incinerator, Naval Support Activity Crane, Crane, Indiana, Tetra Tech NUS, Inc., March 2011.

Tetra Tech, 2011b; Sampling and Analysis Plan, Soil Delineation and Characterization Investigation for SWMU 16 – Cast High Explosive Fill/Building 146 Incinerator, Naval Support Activity Crane, Crane, Indiana, Tetra Tech NUS, Inc., August 2011.

Tetra Tech, 2012; NSA Crane – SWMU 16 Delineation Sampling Data Summary Report, Naval Support Activity Crane, Crane, Indiana, Tetra Tech, Inc., March 2012.

USEPA, 2005a; U.S. Environmental Protection Agency, Ecological Soil Screening Level for Antimony, Interim Final. Office of Emergency and Remedial Response. OSWER Directive 9285.7-61, February.

USEPA, 2005b; U.S. Environmental Protection Agency, Ecological Soil Screening Level for Lead, Interim Final. Office of Emergency and Remedial Response. OSWER Directive 9285.7-70, March.

APPENDIX A

SOIL BORING, SAMPLE LOGS, AND CHAIN OF CUSTODY FORMS

APPENDIX A.1

SOIL BORING AND SAMPLE LOGS
ROUND 1 SAMPLING EVENT (AUGUST 2011)

SWMU 16 – SOIL LOGS

METALS CONTAMINATION AREA

SOIL SAMPLE LOG SHEETS

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: 16SWMU Crane
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS1540002
Sample Location: 16SB154
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 8-25-11
Time: 1509
Method: DPT
Monitor Reading (ppm): NA

Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
0-2'	Brown	Dry, Clayey Sand (SC)

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Ellen Barkley

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: 16SWMU Crane
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS15S0002
Sample Location: 16SB15S
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1507 Method: DPT Monitor Reading (ppm): NA	0-2'	Brown	Dry, clayey Sand (SC)

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkhite

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: 16 SWMU Crane
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS156002
Sample Location: 16SB156
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1517 Method: DPT Monitor Reading (ppm): NA	0-2'	Brown	Dry, Sandy Clay (SC)

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkte

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: SWMU 16 Crane
Project No.: 112G02127

Sample ID No.: 16SS157 0002
Sample Location: 16SB157
Sampled By: J. Grady
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1405 Method: DPT Monitor Reading (ppm): NA	0-2'	Brown	Dry, Clayey Sand (SC)

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkhite

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: SWMU 16 Crane
Project No.: 112G02129

Sample ID No.: 16SS1580002
Sample Location: 16SB158
Sampled By: J. Goerdt
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1355 Method: DPT Monitor Reading (ppm): NA	0-2'	Orange	Dry Clayey Sand (SC)

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkhte

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS159002
Sample Location: 16SB159
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1400 Method: DPT Monitor Reading (ppm): NA	0-2'	Orange/white	Dry, V. Fine Sand (SP)

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkhte

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SMU16 Crane
Project No.: 112G02121

Sample ID No.: 1655160002
Sample Location: 165B160
Sampled By: J. Gverek
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1350 Method: DPT Monitor Reading (ppm): NA	0-2'	Orange/brown	Dry, Clayey Sand (SC)

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkite

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU16 Crane
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS16/0002
Sample Location: 16SB16
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1345 Method: DPT Monitor Reading (ppm): N/A	0-2'	Brown	Dry Sand Clay (CL)

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkette

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02129

Sample ID No.: 16SS162D002
Sample Location: 16SB162
Sampled By: J. Goerdt
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1335 Method: DPT Monitor Reading (ppm): N/A	0-2'	Orange/white	Dry V. Fine Sand (SP)

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkhite

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: IG SWMU Crane
Project No.: 112G02127

Sample ID No.: 1655 163 0002
Sample Location: 165SB163
Sampled By: J. Grendy
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1434 Method: DPT Monitor Reading (ppm): NA	0-2'	Tan/Brown	V. Fine Sand (SP) Dry

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkette

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU Crane
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS164000Z
Sample Location: 16SB164
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1431 Method: DPT Monitor Reading (ppm): NA	0-2'	Rust/tan	Dry, V. Fine Sand (SP)

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkitts

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU Crane
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS165002
Sample Location: 16SB165
Sampled By: J. Gerst
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1428 Method: DPT Monitor Reading (ppm): N/A	0-2'	Rust/tan	Dry, Clayey Sand (SC)

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkbite

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU Crane
Project No.: 112G02127

Sample ID No.: 1655 1660002
Sample Location: 16SB 166
Sampled By: J. Goerdt
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1423 Method: DPT Monitor Reading (ppm): NA	0-2'	Rust Brown	Dry, Clayey Sand (SC)

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkhte

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16SWMU Crane
Project No.: 112G02127

Sample ID No.: 16SS167D002
Sample Location: 16SB167
Sampled By: J. Gerdt
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1425 Method: DPT Monitor Reading (ppm):	0-2'	white/tan	Dry, V. Fine Sand (SP)

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Kirkto

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16SWMU Crane
Project No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS168002
Sample Location: 16SB168
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1446 Method: DPT Monitor Reading (ppm): NA	0-2'	Tan	Dry, V. Fine Sand (SP)

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkitz

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU Crane
Project No.: 112 G 02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16 SS 169 0002
Sample Location: 16 SB 169
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1420 Method: DPT Monitor Reading (ppm): NA	0-2'	tan	Dry, Clayey Sand (SC)

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkbiles

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU Crane
Project No.: 112G02129

Sample ID No.: 16SS170 0002
Sample Location: 16SB170
Sampled By: J. Goerdt
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1410 Method: DPT Monitor Reading (ppm): N/A	0-2'	Rust Brown	Dry, Clayey Sand (SC)

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkte

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU Crane
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS171000 2
Sample Location: 16SB171
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1525 Method: DPT Monitor Reading (ppm): NA	0-2'	Brown	Dry, Clayey Sand (SC)

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
YES	

Signature(s): Ellen Berkette

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G0127

Sample ID No.: 16SS1720002
Sample Location: 16SB172
Sampled By: J. Gerdt
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1410 Method: DPT Monitor Reading (ppm): NA	0-2'	Brown	Dry, Clayey Sand (SC)

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Kerkstra

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 1RG02127
Project No.: 16SWMU Crane

Sample ID No.: 16SS1730002
Sample Location: 16SB173
Sampled By: J. Gould
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1515 Method: DPT Monitor Reading (ppm):	0-2'	Brown	Dry, sandy clay (CL)

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
	FD082511-04

Signature(s): Ellen Berkstate

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU Crane
Project No.: 112602127

Sample ID No.: 16SS 174 0002
Sample Location: 16SB174
Sampled By: J. Goerdt
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1412 Method: DPT Monitor Reading (ppm): NA	0-2'	Brown	Dry, Sandy Clay (CL)

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkette

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16SWMU Orame
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS175002
Sample Location: 16SB175
Sampled By: J. Goerde
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1500 Method: DPT Monitor Reading (ppm): NA	0-2'	Brown	Dry, Clayey Sand (SC)

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkbite

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU CRANE
Project No.: 112G02127

Sample ID No.: 16SS1760002
Sample Location: 176
Sampled By: J. FLOYD
C.O.C. No.: 1615

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 08/26/2011 Time: 1750 Method: HAND AUGER Monitor Reading (ppm): NA	0 - 2'	BROWN	DRY SAND CLAY (CL)

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle If Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU CRANE
Project No.: 112G02127

Sample ID No.: 16SS1770002
Sample Location: 177
Sampled By: J. FLOYD
C.O.C. No.: 1615

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 08/26/2011 Time: 1740 Method: HAND AUGER Monitor Reading (ppm): NA	0 - 2'	BROWN	DRY SAND CLAY (CL)

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

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Project Site Name: 16 SWMU CRANE
Project No.: 112G02127

Sample ID No.: 16SS1780002
Sample Location: 178
Sampled By: J. FLOYD
C.O.C. No.: 1615

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 08/26/2011 Time: 1730 Method: HAND AUGER Monitor Reading (ppm): NA	0 - 2'	REDDISH BROWN	DRY SAND CLAY CCL

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

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Project Site Name: 16 SWMU CRANE
Project No.: 112G02127

Sample ID No.: 16SS1790002
Sample Location: 179
Sampled By: J. FLOYD
C.O.C. No.: 1615

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 08/26/2011 Time: 1720 Method: HAND AUGER Monitor Reading (ppm): NA	0-2'	BROWN	DRY SAND CLAY (CL)

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU CRANE
Project No.: 112G02127

Sample ID No.: 16SS1800002
Sample Location: 180
Sampled By: J. FLOYD
C.O.C. No.: 1615

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 08/26/2011 Time: 1630 Method: HAND AUGER Monitor Reading (ppm): NA	0 - 2'	BROWN	DRY SAND CLAY (CL)

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU CRANE
Project No.: 112G02127

Sample ID No.: 16SS1810002
Sample Location: 181
Sampled By: J. FLOYD
C.O.C. No.: 1615

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 08/26/2011 Time: 1645 Method: HAND AUGER Monitor Reading (ppm): NA	0 - 2'	BROWN	DRY SAND CLAY (CL)

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

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Project Site Name: 16 SWMU CRANE
Project No.: 112G02127

Sample ID No.: 16SS1820002
Sample Location: 182
Sampled By: J. FLOYD
C.O.C. No.: 1615

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 08/26/2011 Time: 1525 Method: HAND AUGER Monitor Reading (ppm): NA	0 - 2'	ORANGE/BROWN	DRY CLAYEY SAND (SC)

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle If Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU CRANE
Project No.: 112G02127

Sample ID No.: 16SS1830002
Sample Location: 183
Sampled By: J. FLOYD
C.O.C. No.: 1615

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 08/26/2011 Time: 1545 Method: HAND AUGER Monitor Reading (ppm): NA	0 - 2'	ORANGE/BROWN	DRY SAND CLAY (CL)

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm).				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:
MS/MSD

Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU CRANE
Project No.: 112G02127

Sample ID No.: 16SS1840002
Sample Location: 184
Sampled By: J. FLOYD
C.O.C. No.: 1615

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 08/26/2011 Time: 1500 Method: HAND AUGER Monitor Reading (ppm): NA	0 - 2'	BROWN	DRY SAND CLAY (CL)

COMPOSITE SAMPLE DATA

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU CRANE
Project No.: 112G02127

Sample ID No.: 16SS1850002
Sample Location: 185
Sampled By: J. FLOYD
C.O.C. No.: 1615

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 08/26/2011 Time: 1510 Method: HAND AUGER Monitor Reading (ppm): NA	0 - 2'	ORANGE/ BROWN	DRY SAND CLAY (CL)

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:	Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU CRANE
Project No.: 112G02127

Sample ID No.: 16SS1060002
Sample Location: 106
Sampled By: J. FLOYD
C.O.C. No.: 1615

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 08/26/2011 Time: 1445 Method: HAND AUGER Monitor Reading (ppm): NA	0 - 2'	ORANGE/BROWN	DRY CLAYEY SAND (SC)

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm).				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle If Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU CRANE
Project No.: 112G02127

Sample ID No.: 16SS1870002
Sample Location: 187
Sampled By: J. FLOYD
C.O.C. No.: 1615

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 08/26/2011 Time: 1430 Method: HAND AUGER Monitor Reading (ppm): NA	0 - 2'	ORANGE	DRY SAND CLAY (CL)

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle If Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU CRANE
Project No.: 112G02127

Sample ID No.: 16SS1880002
Sample Location: 188
Sampled By: J. FLOYD
C.O.C. No.: 1615

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 08/26/2011 Time: 1615 Method: HAND AUGER Monitor Reading (ppm): NA	0 - 2'	DARK BROWN	DRY SAND CLAY (CL)

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU CRANE
Project No.: 112G02127

Sample ID No.: 16SS1890002
Sample Location: 189
Sampled By: J. FLOYD
C.O.C. No.: 1615

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 08/26/2011 Time: 1600 Method: HAND AUGER Monitor Reading (ppm): NA	0 - 2'	ORANGE/ BROWN	DRY CLAYEY SAND (SC

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Check if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU CRANE
Project No.: 112G02127

Sample ID No.: 16SS1900002
Sample Location: 190
Sampled By: J. FLOYD
C.O.C. No.: 1615

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 08/26/2011 Time: 1710 Method: HAND AUGER Monitor Reading (ppm): NA	0 - 2'	BROWN	DRY SAND CLAY (CL)

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

SWMU 16 – SOIL LOGS

TCE CONTAMINATION AREA

BORING LOGS

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: Crane-SWMU6
PROJECT NUMBER: 112G02127
DRILLING COMPANY: MiCah
DRILLING RIG: DPT

BORING No.: 16SB118
DATE: 8-24-11
GEOLOGIST: E. Bartlette
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0				Loose	Gray	Fill Material 2" Asphalt	Fill					
	1												
	2												
	3		100%		Stiff Dense	Gray/ Brown	Moist, Fat Clay	CH					
	4												
	5												
	6		100%		Stiff	Orange	Clayey Sand	SC					
	7						Bedrock Refusal at 7.2'						
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: Crane SWMU 16
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB19
DATE: 8-24-11
GEOLOGIST: E. Berkhte
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0				Loose	Gray	Fill Material 2" Asphalt	Fill					
	1												
	2												
	3	80%											
	4				Dense	Gray/Brown	Moist, Fat Clay	CH					
	5												
	6												
	7	100%			Loose	Orange	Dry Clayey Sand 7.9' Bedrock Refusal	SC					
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: Crane SWMU6
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB120
DATE: 8-24-11
GEOLOGIST: E. Berktitte
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0				Loose	Gray	Fill Material, Dry (3" Asphalt)	Fill					
	1												
	2												
	3	100%											
	4		X		soft Dense	Brown	Moist, Fat clay	CH					
	5					Gray							
	6												
	7					Orange							
	8						Bedrock Refusal at 7.8'						
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

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PROJECT NAME: Crane SWMU 16
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB121
DATE: 8-24-11
GEOLOGIST: E. Bartlette
DRILLER: R. Brush

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0				Loose	Gray	2" Asphalt Fill Material	Fill					
	1												
	2												
	3	4/4			Stiff	Brown	Dry, Sandy Clay	CL					
	4				Soft	Gray	Clay, some Sand	CH					
	5				Stiff	Brown	Sandy Clay, Dry	CL					
	6	100%				Brown tan							
	7						Bedrock Refusal at 7'						
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: Crane SWMU 16
PROJECT NUMBER: 112G02127
DRILLING COMPANY: MTCAL
DRILLING RIG: DPT

BORING No.: 16SB122
DATE: 8-24-11
GEOLOGIST: E. Berkhte
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0					Gray	2" Asphalt Fill Material	Fill					
	1												
	2												
	3	60%											
	4		X		Stiff	Brown	Sandy clay, Dry	CL					
	5				Soft	Gray	Moist clay	CH					
	6					Brown							
	7				Stiff		Sandy clay	CL					
	8												
	9		X		Loose	Orange	Clayey Sand	SC					
	10						Boring Refusal 10' (Bedrock)						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

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PROJECT NAME: Crane SWMU6
PROJECT NUMBER: 126 02127
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB123
DATE: 6-24-94
GEOLOGIST: E. Berkthe
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0				Loose	Gray	Fill Material 2" Asphalt	Fill					
	1												
	2	Soft											
	3				Stiff	Brown	Dry, Clay, Some Sand	CL					
	4					Gray							
	5				Soft	Brown	Moist Clay	CH					
	6	50#			Loose	Red	Clayey Sand Dry	SC					
					Stiff	Orange	Sandy Clay	CL					
	7				Loose	Brown	Clayey Sand	SC					
	8						Refusal at 8' (Bedrock)						
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: _____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

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PROJECT NAME: Crane SWMU 16
PROJECT NUMBER: 112G02197
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB124
DATE: 8-24-11
GEOLOGIST: E. Bartlett
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0				Loose	Gray	3" Asphalt Fill Material (Gravel/Fine Sand)	Fill					
	1												
	2	90%											
	3		X		Stiff	Brown	Moist Sandy Clay	CL					
	4												
	5		X		Soft	Gray	Moist Clay, Some sand	CH					
	6												
	7				Stiff	Orange brown	Dry, Sandy Clay	CL					
	8	40%											
	9		X										
	10				Loose	Orange	Clayey Sand, Dry	SC					
	11						Boring Refusal @ 11' (Bedrock)						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

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PROJECT NAME: Crane SWMU16
PROJECT NUMBER: 112G02129
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB125
DATE: 8-24-11
GEOLOGIST: E. Berkite
DRILLER: Ryan Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0				Loose	Gray	2" Asphalt Fill Material	Fill					
	1	80%					Gravel + Fine Sand						
	2												
	3		X		Soft	Brown	Moist Clay, Some Sand	CH					
	4	80%											
	5												
	6	100%	X		Stiff		Clayey Sand, Dry	SC					
	7						Refusal at 7.1' (Bedrock)						
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

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PROJECT NAME: SMU 16-Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB126
DATE: 8-24-11
GEOLOGIST: E. Barkhite
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		50%		Loose	Tan	Moist, Clayey Sand	SC					
	1												
	2				Stiff	Brown	Sandy Clay, Dry	CL					
	3		80%										
	4												
	5						Refusal at 5'						
	6												
	7												
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16-Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB127
DATE: 8-24-11
GEOLOGIST: E. Berkhiere
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		100%		Stiff	Brown	Moist, Clay, + trace Sand	CH					
	1												
	2						Moist Sandy Clay	CL					
	3		88%										
	4												
	5				Bedrock Refusal 5.7'								
	6												
	7												
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

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PROJECT NAME: SWMU 16 - Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB128
DATE: 8-24-11
GEOLOGIST: E. Berkelhe
DRILLER: R. Brosh

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		100%		Dense	Brown Gray	Moist Fat Clay, trace Sand	CH					
	1												
	2				Stiff	Brown	Dry Sandy Clay	CL					
	3												
	4												
	5				Stiff	Orange	Clayey Sandy Dry	SC					
	6												
	7				Bedrock Refusal at 6.7'								
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16-Crane
PROJECT NUMBER: 112G02107
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB129
DATE: 5-24-11
GEOLOGIST: E. Berkitte
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		80%		Loose	Tan	Dry Clayey Sand	SC					
	1				Stiff	Brown	Sandy Clay, Dry	CL					
	2				Loose	Tan	Clayey Sand, Moist	SC					
	3		80%		Stiff		Sandy Clay, Moist	CL					
	4												
	5												
	6						Refusal at 6'						
	7												
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): _____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU16 Crane
PROJECT NUMBER: 112G0227
DRILLING COMPANY: MTGah
DRILLING RIG: DPT

BORING No.: 16SB130
DATE: 8-24-11
GEOLOGIST: E. Bertlitte
DRILLER: R. Brash

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		100%		Stiff	tan	Dry, Clayey Sand	SC					
	1				↓	↓	↓	↓					
	2				Stiff	~~tan~~ yellow	Dry, Sandy Clay	CL					
	3		100%										
	4												
	5												
	6				Loose	Orange	Dry, ~~Oxe~~ Clayey Sand	SC					
	7						Bedrock Refusal at 7.3'						
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

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PROJECT NAME: 16-SWMU Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB131
DATE: 5-24-11
GEOLOGIST: E. Bertelle
DRILLER: R. Brosh

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		100%		Stiff	Brown	Dry Hard Clay	CH					
	1												
	2		70%			Orange	Sandy Clay	CL					
	3												
	4				Loose	Red	Clayey Sand	SC					
	5				Stiff		Sandy Clay	CL					
	6						Refusal at 6' (Bedrock						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB132
DATE: 8-24-11
GEOLOGIST: E. Bertrette
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		40%		Stiff	Brown	Dry Hard Clay	CH					
	1												
	2					Brown	Dry, Sandy Clay	CL					
	3		70%										
	4												
	5				Stiff								
	6				Loose	Gray	Clayey Sand, Dry	SC					
	7		100%										
	8						Boring Refusal 7.9'						
	9						Bedrock						
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: 16SWMU Crane
PROJECT NUMBER: N60267
DRILLING COMPANY: MiGah
DRILLING RIG: DPT

BORING No.: 16SB133
DATE: 8-24-11
GEOLOGIST: E. Berkstrite
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		100%		Stiff	Brown	Dry Hard Clay	CH					
	1												
	2		90%		Hard/ Loose	Orange/ tan	Dry, Clayey Sand	SC					
	3												
	4												
	5												
	6						Bedrock Refusal at 6'						
	7												
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: MTCah
DRILLING RIG: DPT

BORING No.: 16SB134
DATE: 8-24-11
GEOLOGIST: E. Berkitte
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0				Stiff	Brown	Dry Clay	CH					
	1												
	2												
	3					Orange tan	Clayey Sand, Dry	SC					
	4												
	5												
	6												
	7						Bedrock Refusal at 6.7'						
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02107
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: ~~16SS134-0002~~ 16SB135
DATE: 8-24-11
GEOLOGIST: E. Berthiite
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		100%		Loose	Brown	Dry, clayey Sand	SC					
	1												
	2												
	3		40%			Yellow							
	4					tan							
	5												
	6						Refusal at 6'		*Groundwater encountered at 6'				
	7												
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): [ ]

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB136
DATE: 8-24-11
GEOLOGIST: E. Berkhte
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		4pt		Loose	Gray	Dry ~~Soft~~ Clayed Sand	SC					
	1					Orange/Brown							
	2												
	3		Loose										
	4				Stiff		Dry Sandy Clay	CL					
	5				Loose		Dry Clayey Sand	SC					
	6		Loose										
	7						Bedrock refusal at 7'						
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): [ ]

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02b7
DRILLING COMPANY: MICAL
DRILLING RIG: DP4

BORING No.: 16SB137
DATE: 8-24-11
GEOLOGIST: E. Barkhke
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		70%		Loose	Gray/tan	Dry, Clayey Sand	SC					
	1												
	2				Soft		Sandy Clay	CL					
	3												
	4												
	5						Bedrock Refusal at 5'						
	6												
	7												
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): [ ]

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU16 Crane
PROJECT NUMBER: 112G03127
DRILLING COMPANY: Micah
DRILLING RIG: DP7

BORING No.: 16SB138
DATE: 8-24-11
GEOLOGIST: E. Berthiume
DRILLER: R. Brach

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		100%		Loose	Gray	Dry Sand Clay	CL					
	1												
	2				Stiff	tan	Dry hard Clay	CH					
	3		88%										
	4												
	5												
	6		100%		Red Yellow	Loose	Dry Clayey Sand	SC					
	7												
	8						Refusal at 7.8 (Bedrock)						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: MJCAH
DRILLING RIG: DPT

BORING No.: 16SB139
DATE: 8-24-11
GEOLOGIST: E. Berthitte
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		40%		Stiff	Brown	Dry, Sandy Clay	CL					
	1												
	2												
	3		80%										
	4				Soft	Gray	Moist Fat Clay	CH					
	5						Bedrock Refusal at 5.5'						
	6												
	7												
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02107
DRILLING COMPANY: MTCAL
DRILLING RIG: DPT

BORING No.: 16SB140
DATE: 8-24-11
GEOLOGIST: E. Berkhite
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		60%		Loose	Orange Brown	Clayey Sandy Dry	SC					
	1												
	2				Stiff	Brown	Dry Sandy Clay	CL					
	3		70%		Soft	Gray	Moist Fat Clay	CH					
	4												
	5				Loose	Red Orange	Moist Clayey Sand	SC					
	6						Bedrock Refusal at 6'						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: Crane SWMU16
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB141
DATE: 8-25-11
GEOLOGIST: E. Bartkiewicz
DRILLER: R. Brauch

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		75%		Loose	brown	Dry Clayey Sand	SC					
	1						Dry sandy Clay	CL					
	2												
	3		50%										
	4												
	5				Loose	White	Moist Clayey Sand	SC					
	6		80%		Stiff	Orange brown	Moist Sandy Clay	CL					
	7				Loose		Moist Clayey Sand	SC					
	8												
	9						Bedrock Refusal @ 9'						
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: Crane SWMU 16
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: SB 16142
DATE: 8-25-11
GEOLOGIST: E. Berthlette
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		100%		Loose	Brown	Moist Sandy clay	CL					
	1				↓	↓	↓	↓					
	2		100%		Loose	Brown	Moist, sandy clay	CL					
	3				↓								
							Bedrock refusal 3.7'						
	4												
	5												
	6												
	7												
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: Crane SWMU 16
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB143
DATE: 8-25-11
GEOLOGIST: E. Berklite
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		60%		Loose	Brown	Moist Sandy Clay	CL					
	1												
	2		100%										
	3												
	4												
	5					Bedrock Refusal 4ft							
	6												
	7												
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: Crane SWMU 16
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB14
DATE: 8-25-11
GEOLOGIST: E. Bentlite
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		100%		Stiff Dense	Brown	Moist clay, trace sand	CH					
	1												
	2		100%		Loose	Brown	Moist sandy clay	CL					
	3					Orange	clayey sand, Moist	SC					
	4						Bedrock Refusal 3.5'						
	5												
	6												
	7												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02187
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB145
DATE: 8-23-11
GEOLOGIST: E. Berthiite
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		100%		Dense	Brown	Moist Sandy Clay	CL					
	1												
	2		100%		Loose	White	Moist Clayed Sand - Bedrock Pieces						
	3						Bedrock Refusal 3.1'						
	4												
	5												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: 16 SWMU Crane
PROJECT NUMBER: 112G0127
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB146
DATE: 8-25-11
GEOLOGIST: E. Berkitte
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		4ft		Loose	Brown	Moist Clayey Sand	SC					
	1												
	2												
	3						Moist Sandy Clay	CL					
	4												
							Bedrock Refusal 4.7'						
	5												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): _____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: 16 SWMU Crane
PROJECT NUMBER: 112G02197
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB147
DATE: 8-25-11
GEOLOGIST: E. Berkheiser
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		8 of 60		Stiff	Brown	Moist Sandy Clay	CL					
	1												
	2				Loose		Moist Clayey Sand	SC					
	3												
	4					White							
	5												
						Bedrock Refusal 5.9'							

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: 16SWMU Crane
PROJECT NUMBER: 112G02121
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB148
DATE: 8-25-4
GEOLOGIST: E. Barkhite
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		60%		Loose	White	Gravel/Fill	Fill					
	1				Loose	Gray	Clayey Sand, Moist	SC					
	2					Orange Tan White							
	3												
	4												
	5												
	6						Bedrock Refusal at 6'						
	7												
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: 16SWMU Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB149
DATE: 8-25-4
GEOLOGIST: E. Berthette
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		80%		Loose	White	Gravel Fill	Fill					
	1				Stiff	Brown	Moist sandy clay	CL					
	2												
	3		90%		Loose		Moist Clayey Sand	SC					
	4					White							
	5					Orange							
							Bedrock Refusal 5.5'						
	6												
	7												
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: 16 Sluma Crane
PROJECT NUMBER: 112602121
DRILLING COMPANY: MTCAL
DRILLING RIG: DPT

BORING No.: 16SB150
DATE: 8-25-4
GEOLOGIST: E. Berkhiser
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		80%		Loose	White	Gravel Fill	Fill					
	1				Stiff	Brown	Moist Sandy Clay	CL					
	2				↓	↓	↓	↓					
	3				Loose	Orange	Moist Clayey Sand	SC					
	4				↓		↓	↓					
	5						Bedrock Refusal 4.8'						
	6												
	7												
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: 16SWMU16 Crane
PROJECT NUMBER: 112602129
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB151
DATE: 8-25-11
GEOLOGIST: E. Bertkite
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		100%		Loose	White	Gravel Fill	Fill					
	1				Stiff	Brown	Hard Clay, Moist	CH					
	2				Loose	White	Moist Clayey Sand	SC					
	3												
	4						Bedrock Refusal 3.9'						
	5												
	6												
	7												
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: 16SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: MTCAH
DRILLING RIG: DPT

BORING No.: 16 SB 152
DATE: ~~#~~ 08-28-11
GEOLOGIST: Z. Bartlite
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		100%		Loose	White	Gravel Fill	Fill					
	1				Stiff	Brown	Sand Clay, Dry	CL					
	2		100%		Loose	White	Clayey Sand	SC					
	3						Bedrock Refusal at 2.8'						
	4												
	5												
	6												
	7												
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: 16 SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: MiCah
DRILLING RIG: DPT

BORING No.: 16SB153
DATE: 08-25-11
GEOLOGIST: E. Berthfite
DRILLER: R. Brash

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		100%		Loose	White	Gravel Fill	Fill					
	1				Stiff	Brown	Dry Sandy Clay	CL					
	2				↓	↓	↓	↓					
	3		100%		Loose	Orange Brown	Dry Clayey Sand	SC					
	4				↓		↓	↓					
	5				↓		↓	↓					
							Bedrock Refusal at 5.4'						
	6												
	7												
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 6 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB199
DATE: 8-24-11
GEOLOGIST: E. Bertrite
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0					Loose	Fill Material 2" Asphalt	Fill					
	1												
	2												
	3												
	4		100%		Stiff	Gray/ Brown	Moist, Sandy Clay	CL					
	5												
	6												
	7		100%		Stiff Loose	Orange	~~Sam~~ Clayey Sand Dry	SC					
	8												
	9				Bedrock refusal 8.7'								
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: 16 SWMU Crane
PROJECT NUMBER: 112C02127
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: K2SB200
DATE: 8-25-11
GEOLOGIST: E. Borklite
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		50%		Loose	White	Gravel Fill	Fill					
	1				↓	↓	↓	↓					
	2	100%	X		Stiff	Brown	Hard Clay	CH					
	3				↓	↓	↓	↓					
	4						Bedrock Refusal 3.9'						
	5												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: 16 SWMU Crane
PROJECT NUMBER: 112G02129
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB201
DATE: 8-25-11
GEOLOGIST: E. Bortlette
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0				Loose	White	Gravel Fill	Fill					
	1												
	2		100+		Stiff	Brown	Dry, Sandy clay	CL					
	3						Bedrock Refusal at 3.2'						
	4												
	5												
	6												
	7												
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: 16SWMU Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB202
DATE: 8-25-11
GEOLOGIST: E. Berkeltite
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0				Loose	White	Gravel Fill	Fill					
	1				↓	↓	↓	↓					
	2		80%		Loose	Tan	Moist Clayey Sand	SC					
	3				↓	↓	↓	↓					
	4						Bedrock Refusal at 4						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: 14 SWMU Crane
PROJECT NUMBER: 112G02027
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 14SB203
DATE: 8-25-11
GEOLOGIST: E. Bertette
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0				Loose	White	Gravel Fill	Fill					
	1												
	2		80%		Loose	Gray	Moist Sandy clay	CL					
	3						Bedrock Refusal at 3'						
	4												
	5												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: 16 SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB204
DATE: 8-25-11
GEOLOGIST: E. Berkhite
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		80%		Loose	white	Gravel Fill	Fill					
	1				Stiff	Brown	Dry Sandy clay	CL					
	2				Loose								
	3												
	4		80%										
	5												
	6												
	7				Stiff								
	8		100%										
	9												
							Bedrock Refusal at 8.8'						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: 16 SWMU Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: MiCah
DRILLING RIG: DPT

BORING No.: 16SB205
DATE: 8-25-11
GEOLOGIST: E. Bertelite
DRILLER: R. Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0		70%		Loose	White	Gravel Fill	Fill					
	1				Stiff	Brown	Dry Sandy Clay	CL					
	2				Soft								
	3		80%										
	4												
	5				Stiff		Hard Clay, Dry	CH					
	6		100%										
							Bedrock Refusal 6.5'						
	7												
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): [ ]

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: 16 SWMU Crane
PROJECT NUMBER: 112G02129
DRILLING COMPANY: MTGA
DRILLING RIG: DPT

BORING No.: 16SB206
DATE: 5-25-11
GEOLOGIST: E. Bertlite
DRILLER: R. Brooh

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0				White	Loose	Gravel Fill	Fill					
	1				Brown	Brown	Dry Sandy Clay	CL					
	2												
	3												
	4						Bedrock Refusal at 4.3'						
	5												
	6												
	7												
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

SWMU 16 – SOIL LOGS

TCE CONTAMINATION AREA

SOIL SAMPLE LOG SHEETS

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: SWMU 16-Crane
Project No.:

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB1180306
Sample Location: 16SB118
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11	3-6	Brown/gray	Stiff, Fat, Moist clay
Time: 1045			
Method: DPT			
Monitor Reading (ppm): below			

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

3-4: 118
4-5: 40
5-6: 206* sample from this depth

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): [illegible]

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: SWMU 16-Crane
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB118 0607
Sample Location: 16SB118
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1050 Method: DPT Monitor Reading (ppm): 85	6-7'	Brown/orange	Stiff, Dry Clayey Sand

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkhiz

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: SWMU-16-Crane
Project No.: 112602127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB119046
Sample Location: 16SB119
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24 Time: 1030 Method: Monitor Reading (ppm):	4-6'	Brown/ Gray	Moist Fat Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

PID: 4-5': 120
5-6': 110

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkitto

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: SWMU 16-Crane
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB120046
Sample Location: 16SB120
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11	4-6'	Brown/Gray	Moist, Fat clay
Time: 1010			
Method: DPT			
Monitor Reading (ppm): below			

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

PID: 80 ppm

MAP:

Circle if Applicable:

MS/MSD: YES

Duplicate ID No.:

Signature(s): Ellen Berkette

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: SWMU-16-Crane
Project No.: N2G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB1200608
Sample Location: 16SB1200608
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 6-24-11 Time: 1015 Method: DPT Monitor Reading (ppm): below	6-8'	Gray to orange	Moist, Fat clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

PID: 6-7 85
7-8 100 > sample 6-8'

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkeley

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: SWMU16-Crane
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB12103O6
Sample Location: 16SB12
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 0950 Method: DPT Monitor Reading (ppm): below	3-6	Brown	Dry, sandy Clay Dry Clay some Sand

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

PID: 3-5* - 300ppm - sample collected from this zone

5-6 - 95 ppm

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkette

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: SWMU 16- Crane
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB1210607
Sample Location: 16SB21
Sampled By: J. Goerdy
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1000 Method: DPT Monitor Reading (ppm): below	6-7'	Brown/tan	Dry sandy Clay

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

PID: 6-7' = 60ppm

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berlette

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: SWMU 16 - Crane
Project No.: 112602127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB122040b
Sample Location: 16SB122
Sampled By: J. Gaeckt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 0935 Method: DPT Monitor Reading (ppm): below	4-6'	~~Sa~~ Brown/ Gray	Sandy Clay → Clay Dry → Moist

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

PID
4' : 15
5' : 40
6' : 150

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkstite

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB122091D
Sample Location: 16SB122
Sampled By: J. Gordy
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 0935 Method: DPT Monitor Reading (ppm): below	9-10'	Orange	Clayey Sand, Dry

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

PID 9': 45
10': 65

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkhite

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Crane SW/MU 16
Project No.: 112G02129

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB1230306
Sample Location: 16SB123
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 0925 Method: DPT Monitor Reading (ppm): 60-75	3-6	Brown/Gray	Clay, Some Sand, Dry

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

PID: 3-4.5 - 60ppm
4.5-6 - 75 ppm

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkeley

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Crane SWMU 16
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB1230608
Sample Location: 16SB123
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 0930 Method: DPT Monitor Reading (ppm): 30-45	6-8'	Red/Orange/Brown	Sandy Clay, Clayey Sand (Dry)

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

PID 6-7: 30
7-8: 45

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkelitz

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Crane SWMU 16
Project No.: 112602127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB124036
Sample Location:
Sampled By:
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11	3-6	Brown	Moist Sandy Clay
Time: 0905		Gray	Moist Clay
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkhite

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Crane SWMU 16
Project No.: 112G02107

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB124091 1
Sample Location: 16SB124
Sampled By: J. Goelet
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 8-24-11
Time: 0915
Method: DPT
Monitor Reading (ppm): 0

Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
9-11	orange/brown orange	Sandy clay (9-10') dry Clayey sand (10-11')

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkbite

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Crane SWMU 16
Project No.: 112602121

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS125SS02
Sample Location: 16SB125
Sampled By: J. Coendt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 0845 Method: DPT Monitor Reading (ppm):	0-2'		Fill Material - Not sampled

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Kerkhoff

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Crane SWMU 16
Project No.: 112602124

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB125036
Sample Location: 16SB125
Sampled By: J. Grant
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 0845 Method: DPT Monitor Reading (ppm): 0	3-6'	Brown	Moist, Clay, some Sand

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkhite

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Crane SWMU 16
Project No.: N2G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB1250607
Sample Location: 16SB125
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 0900 Method: DPT Monitor Reading (ppm): 0	6-7'	Brown	Clayey Sand, Dry

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkeley

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112602127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS1260002
Sample Location: 16SB126
Sampled By: E. Berkelite
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1325 Method: DPT Monitor Reading (ppm): 0	0-2	tan	clayey sand, Moist

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkelite

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16-Crane
Project No.: 112602R7

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB260205
Sample Location: 16SB260205
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1330 Method: DPT Monitor Reading (ppm): 0	2-5'	Brown	Moist, Sandy Clay

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD YES

Duplicate ID No.:

Signature(s): Ellen Berkeley

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16-Crane
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS1270002
Sample Location: 16SB127
Sampled By: J. Gorak
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-27-01 Time: 1310 Method: DPT Monitor Reading (ppm): 0	0-2'	Brown	Moist Stiff Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkeley

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16- Crane
Project No.: V12 G 02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB1270206
Sample Location: 16SB127
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1320 Method: DPT Monitor Reading (ppm): 0	2-6'	Brown	Sandy Clay, Moist

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkeley

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 6 Crane
Project No.: 112G02127

Sample ID No.: 16S8128 0002
Sample Location:
Sampled By:
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1250 Method: DPT Monitor Reading (ppm): 0	0-2'	Brown/Gray	Moist Fat Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.: 16FD082411-02

Signature(s): Ellen Berkstie

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16-Crane
Project No.: 112G02187

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB128G0206
Sample Location: 16SB128G0206
Sampled By: J. Gaudet
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1300 Method: DPT Monitor Reading (ppm): 0	2-6'	Tan	Dry Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkeley

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16-Crane
Project No.: 112G02107

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB128060607
Sample Location: 16SB28
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1315 Method: DPT Monitor Reading (ppm): 0	6-7'	orange tan	Dry Clayey Sand

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkhte

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS129S002
Sample Location: 16SB129
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 6-24-11
Time: 1335
Method: DPT
Monitor Reading (ppm): 0

Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
0-2'	0-1	Dry, Clayey Sand
	1-2	Dry, Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkbite

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16-Crane
Project No.: 112G02121

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB129G2016
Sample Location: 16SB129
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11	2-3	tan	Clayey Sand
Time: 1345	3-6		Sandy Clay (Moist)
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkette

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU6 Crane
Project No.: 112G02127

Sample ID No.: 16SS130002
Sample Location: 16SB130
Sampled By: J. Goerdt
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1350 Method: DPT Monitor Reading (ppm): 0	0-2	tan	Dry, Clayey Sand

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkhiser

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: N2602207

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB130206
Sample Location: 16SB130
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1355 Method: DPT Monitor Reading (ppm): 0	2-6	tan yellow	Sandy Clay, Dry

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkette

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 - Crane
Project No.: 112602127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB130607
Sample Location: 16SB130
Sampled By: J. Goebel
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 6-27-11	6-7'	orange	Dry, Clayey Sand
Time:			
Method: DPT			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkstresser

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16-Crane
Project No.: 112502127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS131002
Sample Location: 16SB131
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 6-24-11 Time: 1410 Method: DPT Monitor Reading (ppm): 0	0-2'	Brown	Hard Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen [illegible]

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 1260212

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB13102D6
Sample Location: 16SB13
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1420 Method: DPT Monitor Reading (ppm): 0	2-6	Orange/red	Sandy Clay, Clayey Sand

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkett

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02129

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS132000 02
Sample Location: 16SB132
Sampled By: J. Everett
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1425 Method: DPT Monitor Reading (ppm): 0	0-2'	Brown	Hard, Dry Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Burkitt

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 6 Crane
Project No.:

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB132020-06
Sample Location: 16SB132
Sampled By: J. Grent
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1430 Method: HPT Monitor Reading (ppm): 0	2-6'	Brown	Dry Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkitis

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB132Q608
Sample Location: 16SB132
Sampled By: J. Gerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1440 Method: DPT Monitor Reading (ppm): 0	6-8'	Gray	Dry Clayey Sand

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkhiser

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 6 Crane
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS133D002
Sample Location: 6SB133
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: ~~1450~~ 1445 Method: DPT Monitor Reading (ppm): 0	0-2	Brown	Dry hard Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkette

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02137

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB133020b
Sample Location: 16SB133
Sampled By: J. Gaddy
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1455 Method: DPT Monitor Reading (ppm): 0	2-6'	Orange/tan	Clayey sand, Dry

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkeley

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112602127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS134 0002
Sample Location: 16SB134
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1500 Method: DPT Monitor Reading (ppm): 0	0-2'	Brown	Dry clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkhiser

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SMWU 16 Crane
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB134 0206
Sample Location: 16SB134
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-26-11 Time: 1525 Method: DPT Monitor Reading (ppm): 0	2-6'	Brown orange/tan	Dry Clay (2-3') Dry Clayey Sand (3-6')

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkte

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB134060607
Sample Location: 16SB134
Sampled By: J. Goerde
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1510 Method: DPT Monitor Reading (ppm): 0	6-7'	tan	Clayey Sand, Dry

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkstresser

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 6 Crane
Project No.: 112G02127

Sample ID No.: 16SS1350002
Sample Location: 16SB135
Sampled By: J. Gorski
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 9-24-11 Time: 1545 Method: DPT Monitor Reading (ppm): 0	0-2'	Brown	Dry, Clayey Sand

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkhe

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB135020b
Sample Location: 16SB135
Sampled By: J. Gordy
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 9-24-11 Time: 1525 Method: DPT Monitor Reading (ppm): 0	2-6'	Tan/yellow	Dry, clayey sand

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkhiser

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU16 Crane
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB136D002
Sample Location: 16SB136
Sampled By: J. Gaard
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1545 Method: DPT Monitor Reading (ppm): 0	0-2'	Gray	Dry Clayey Sand

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berlette

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112602127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB13602QS
Sample Location: 16SB136
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1550 Method: DPT Monitor Reading (ppm): 0	2-6'	Orange/brown	Clayey Sand Sandy Clay

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berlette

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU Crane-16
Project No.: 112G02127

[] Surface Soil
[✓] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB136060607
Sample Location: 16SB136
Sampled By: J. Goerde
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1555 Method: DPT Monitor Reading (ppm): 0	6-7	orange/brown	Clayey Sand, Dry

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkstite

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 - Crane
Project No.: 112G02127

Sample ID No.: 16SS137002
Sample Location: 16SB139
Sampled By: J. Goerdt
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1600 Method: DPT Monitor Reading (ppm): 0	0-2'	gray/tan	Clayey Sand, dry

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkeley

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112600127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB137-0305
Sample Location: 16SB137
Sampled By:
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1610 Method: DPT Monitor Reading (ppm): 0	2-5'	gray/tan	Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkins

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G0210M

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS138002
Sample Location: 16SB138
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1615 Method: DPT Monitor Reading (ppm): 0	0-2	gray/tan	Sandy clay, dry

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkeley

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU16 Crane
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB138020b
Sample Location: 16SB138
Sampled By:
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1620 Method: DPT Monitor Reading (ppm): 0	2-6'	Brown	Moist, hard Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkstite

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB138 0608
Sample Location: 16SB138
Sampled By: E. Berthitte
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: ~~1625~~ 1630 Method: DPT Monitor Reading (ppm): 0	6-8'	Red/Yellow	Dry Clayey Sand

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berthitte

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU16 Crane
Project No.: 112G02129

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS139D002
Sample Location: 16SB139
Sampled By: E. Berkette
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1648 Method: DPT Monitor Reading (ppm): 0	0-2'	Brown	Dry, Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkette

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 165WMU crane
Project No.: 112G0127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 165B139D286
Sample Location: 165B139
Sampled By: E. Berkette
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1645 Method: DPT Monitor Reading (ppm): 0	2-6	Brown Gray	Sandy clay, Dry 2-4 Moist Fat clay 4-5.5'

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkette

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Crane SWMU 16
Project No.: 112602127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB140002
Sample Location: 16SB140
Sampled By: E. Berkite
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1050 Method: DPT Monitor Reading (ppm): 0	0-2'	orange brown	Dry, Clayey Sand

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkite

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Crane SWMU16
Project No.: 112G02137

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB100206
Sample Location: 16SB100
Sampled By: E. Berkite
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 8-24-11
Time: 1700
Method: DPT
Monitor Reading (ppm): 0

Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
2-3'	Brown	Sandy Clay - Dry
3-5'	Gray	Clay - Moist
5-6'	Red/Orange	Clayey Sand - Moist

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkite

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Crane SWMU 16
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS141 0002
Sample Location: 16SB141
Sampled By: J. Floyd
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 0755 Method: DPT Monitor Reading (ppm): 7.0	0-2'	Brown	Sandy Clay / Clayey Sand (Dry)

COMPOSITE SAMPLE DATA: Background

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkstresser

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Crane SWMU 6
Project No.: 112602127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB141 0206
Sample Location: 16SB141
Sampled By: J. Floyd
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 0805 Method: DPT Monitor Reading (ppm): 12.0	2-6'	2.5' 5-6'	Brown Sandy Clay (Moist) Clayey Sand Moist (White)

COMPOSITE SAMPLE DATA: Background

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkstresser

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Sw Mu 16 Cuche
Project No.: 112.602127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB141007-09
Sample Location: 16SB141
Sampled By: ~~E. Beckett~~ J. Floyd
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 0815 Method: DPT Monitor Reading (ppm): 9.0	7-9'	Orange/brown	Clayey Sand/Sandy Clay (Moist)

COMPOSITE SAMPLE DATA: Backgr.

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Beckett

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB42 0002
Sample Location: 16SB42
Sampled By: J. Flagg
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 0820 Method: DPT Monitor Reading (ppm): 9.5	0-2	Brown	Moist Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkette

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112 G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB420204
Sample Location: 16SB42
Sampled By:
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 0825 Method: DPT Monitor Reading (ppm): 8.0	2-4'	Gray/Brown	Moist, Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
Yes	

Signature(s): Ellen Berkette

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU Crane
Project No.: 112G021R7

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS1430002
Sample Location: 16SB143
Sampled By: J. Gordy
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 0835 Method: DPT Monitor Reading (ppm): 8	0-2	Brown	Moist Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkeley

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16SWMU Crane
Project No.: 112G02124

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB430205
Sample Location: 16SB143
Sampled By: J. Guerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 0840 Method: DPT Monitor Reading (ppm): 0	2-5'	Brown	Moist, Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.: 16FD082511-01

Signature(s): Ellen Berkstie

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16SWMU Crane
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS144G002
Sample Location: 16SB144
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 0845 Method: DPT Monitor Reading (ppm): 0	0-2'	Brown	Moist Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Beveles

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU Crane
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB144020
Sample Location: 16SB144
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11	2-4'	Brown	2-3' Sandy Clay Moist
Time: 0850		Orange	3-3.5 Clayey Sand Moist
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkstresser

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU Crane
Project No.: 112602127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS1450002
Sample Location: 16SB145
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 0855 Method: DPT Monitor Reading (ppm): 0	0-2'	Brown	Moist Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkite

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU Crane
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB145 0203
Sample Location: 16SB145
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 0900 Method: DPT Monitor Reading (ppm): 0	White/ Brown	2-3	Sandy Clay/Clayey Sand (Moist)

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Burkhart

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16SW MU Crane
Project No.: 112G02127

Sample ID No.: 16SSH6C002
Sample Location: 16SB#6
Sampled By: J. Goerdt
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 0905 Method: DPT Monitor Reading (ppm): 0	0-2'	Brown	Moist Clayey Sand

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkeley

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16SWMU Crane
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SBK460205
Sample Location: 16SB446
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 0910 Method: DPT Monitor Reading (ppm): 0	2-5	Brown	Moist Sandy Clay / Clayey Sand

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.: 16FD082511-02

Signature(s): Ellen Berkeley

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU Crane
Project No.: 112G02127

Sample ID No.: 16SSKF0002
Sample Location: 16SBKF1
Sampled By: J. Goerdt
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 0915 Method: DPT Monitor Reading (ppm): 0	0-2'	Brown	Moist Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkstresser

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16SW/MG Crane
Project No.: 112021127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB147020606
Sample Location: 16SB147
Sampled By: J. Golde
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 0920 Method: DPT Monitor Reading (ppm): 0	2-6'	Brown/White	Clayey Sand, Moist

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
Yes	

Signature(s): Ellen Berkeley

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 165WMA Crane
Project No.: 112G02127

Sample ID No.: 165S1480002
Sample Location: 165B148
Sampled By: J. Goerdt
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 0930 Method: DPT Monitor Reading (ppm):	0-2'	Gray	Clayey Sand, Moist

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkitis

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16SWMU Crane
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB148020G
Sample Location: 16SB148
Sampled By: J. Gordt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 0940 Method: DPT Monitor Reading (ppm): 0	2-6'	Orange/tan/white	Moist Clayey Sand

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkette

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU Crane
Project No.: 112G02K7

Sample ID No.: 16SB14908Q
Sample Location: 16SB149
Sampled By: J. Goard
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 0945 Method: DPT Monitor Reading (ppm): 0	0-2'	Brown	Moist Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkeley

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU Crane
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB490206
Sample Location: 16SB49
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 0950 Method: DPT Monitor Reading (ppm): 0	2-6'	Brown White/Orange	2-3' Sandy Clay 3-6' Clayey Sand (Moist)

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
YES	

Signature(s): Ellen Berkite

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 Swing Crane
Project No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS150002
Sample Location: 16SB150
Sampled By: J. Gorski
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1000 Method: DPT Monitor Reading (ppm):	0-2	Brown	Moist, Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkhito

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 165th MA Crane
Project No.:

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 165B150205
Sample Location: 165B150
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1005 Method: DPT Monitor Reading (ppm):	2-5	Brown orange	Sandy Clay / Clayey Sand (Moist)

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16SWMU Crane
Project No.: 112.602127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS151000Z
Sample Location: 16SB151
Sampled By: J. Coerde
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1010 Method: DPT Monitor Reading (ppm): 0	0-2'	Brown	Moist, Hard Clay

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkotes

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16SWMU Crane
Project No.: 112GC2127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB151020F
Sample Location: 16SB151
Sampled By: J. Goendt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-4	2-4	White	Moist Clayey Sand
Time: 1015			
Method: DPT			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkeley

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU Crane
Project No.: 112G02107

Sample ID No.: 16SS152002
Sample Location: 16SB152
Sampled By: J. Cuerda
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-28-11 Time: 1017 Method: DPT Monitor Reading (ppm): 0	0-2'	Brown	Dry Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkeley

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16SWMU Crane
Project No.: 1R602127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB152020B
Sample Location: 16SB152
Sampled By: J. Gordy
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1020 Method: DPT Monitor Reading (ppm): 0	2-3'	White	Moist clayey Sand

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkhiser

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU Crane
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 1655153000 2
Sample Location: 1658153
Sampled By: J. Goerke
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1025 Method: DPT Monitor Reading (ppm): 0	0-2'	Brown	Dry Sandy Clay

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkeley

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU Crane
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB153 0205
Sample Location: 16SB153
Sampled By: J. Coardy
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1030 Method: DPT Monitor Reading (ppm): 0	2-6'	Orange/brown	2-3' Sandy clay 3-6' clayey Sand (Dry)

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkette

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16-Crane
Project No.: 112G0127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB990406
Sample Location: 16SB99
Sampled By: J. Goerke
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1100 Method: DPT Monitor Reading (ppm):	4-6	Brown/Gray	Moist Sandy Clay

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkstie

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 6-Crane
Project No.: 112602127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB990709
Sample Location: 16SB990709
Sampled By: J. Grandy
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-24-11 Time: 1105 Method: DPT Monitor Reading (ppm): below	7-9	Brown/orange	6-7.5 Sandy Clay (Dry) 7.5-8.5 Clayey Sand

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

6-7 : 25
PID 7-8 : 25
8-8.5 : 25

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Burkhe

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16SWMU Crane
Project No.: 112G02127

Sample ID No.: 16SB200 ~~204~~
Sample Location: 16SB200
Sampled By: J. Goerke
C.O.C. No.:

~~[X]~~ Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: ~~1040~~ 1045 Method: DPT Monitor Reading (ppm): 0	~~0-2~~ 2-4	~~Brown~~ Gray	Dry, ~~Sand~~ Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

* surface sample not collected (all gravel/fill)

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Rendtorff

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16SWMG Crane
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB201 0203
Sample Location: 16SB201
Sampled By: J. Geeter
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1050 Method: DPT Monitor Reading (ppm):	2-3'	Brown	Dry, Sandy clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkhite

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU group
Project No.: 112G02RT

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB202024
Sample Location: 16SB202
Sampled By:
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-4 Time: 1055 Method: PPT Monitor Reading (ppm): 0	2-4	Tan	Moist Clayey Sand

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkhöte

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16SWH4 Crane
Project No.: 112 002127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB2030203
Sample Location: 16SB203
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-4 Time: 1100 Method: DPT Monitor Reading (ppm): 0	2-3'	Gray	Moist Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkstitz

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16SWMU Crane
Project No.: 112G02127

Sample ID No.: 16SS204002
Sample Location: 16SB204
Sampled By: J. Goerdt
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1110 Method: DPT Monitor Reading (ppm): 0	0-2'	Brown	Dry, Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkstite

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU Crane
Project No.: 112G0127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB204-0206
Sample Location: 16SB204
Sampled By: J. Gandy
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1115 Method: PPT Monitor Reading (ppm): 0	2-6'	Brown	Dry, Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkelite

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU Crane
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB204 0709
Sample Location: 16SB204
Sampled By: J. Gerdy
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1120 Method: DPT Monitor Reading (ppm): 0	7-9'	Brown	Dry Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Burkitt

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU Crane
Project No.: 112G02127

Sample ID No.: 16SS205 0002
Sample Location: 16SB205
Sampled By: J. Goerdt
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1125 Method: DPT Monitor Reading (ppm): 0	0-2'	Brown	Dry, Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkelite

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16SW MU Crane
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB205020G
Sample Location: 16SB205
Sampled By: J. Greenap
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1130 Method: DPT Monitor Reading (ppm): 0	2-6'	Brown	Sandy Clay/Clay (Dry)

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkite

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 SWMU Crane
Project No.: 112G02187

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB205060 7
Sample Location: 16SB205
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1135 Method: DPT Monitor Reading (ppm): 0	6-7'	Brown	Hard Clay, Dry

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkelite

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16SWMU16 Crane
Project No.: 112602127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS206D002
Sample Location: 16SB206
Sampled By: J. Goedd
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1140 Method: DPT Monitor Reading (ppm): 0	0-2'	Brown	~~Silty~~ Clay, Dry sandy

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkeley

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: 16 Crane
Project No.: 112 602127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB206020ft
Sample Location: 16SB206
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-25-11 Time: 1145 Method: DPT Monitor Reading (ppm): 0	2-4ft	Brown	Dry Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkhoe

SWMU 16 – SOIL LOGS

UST AREA

BORING LOGS

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16
PROJECT NUMBER: 112602127
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB191
DATE: 8-23-11
GEOLOGIST: E. Berkfile
DRILLER: Ryan Birch

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0				Soft	Dk Brown	Topsoil 1-2" Sandy clay	CL					
	1	100%		100%	Stiff	tan							
	2												
	3												
	4	50%		50%	Soft	gray	Clay, slight sand Moist	CH					
	5												
	6			100%									
	7				Stiff	Red Yellow	7' ~~Bedrock Refusal~~ Sandy Clay	CL	7-7.8 Bedrock Pieces				
	8						Bedrock Refusal at 7.8'						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No X Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16
PROJECT NUMBER: 1R60227
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB192
DATE: 8-23-11
GEOLOGIST: E. Berthiere
DRILLER: Ryan Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0	60%	X		Stiff	Brown	0-2" topsoil Sandy Clay, Dry	CL					
	1												
	2		X		Loose	Brown	Clayey gravel, Dry	GC	Fill Material?				
	3	70%			Stiff	tan	Dry, Sandy clay	CL					
	4												
	5		X		Soft	gray	Clay, slight sand	CH	Moist				
	6												
	7	40%	X										
	8												
	9						Bedrock refusal at 8.8'						
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: Crane SWMU 16
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB173
DATE: 8-23-11
GEOLOGIST: E. Bertrite
DRILLER: Ryan Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0	80%				Brown	Topsoil 2" Sandy, Clay, Dry	CL					
	1												
	2					Gray	Moist, Clay, slight sand	CH					
	3	40%											
	4												
	5												
	6	75%											
	7												
	8						Bedrock Refusal 8.1'						
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: _____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: Crane SWMU 16
PROJECT NUMBER: 112G02127
DRILLING COMPANY: MTEAH
DRILLING RIG: DPT

BORING No.: 16SB194
DATE: 8-23-11
GEOLOGIST: E. Bertette
DRILLER: Ryan Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0	60%			Loose	Tan	Dry, Clayey Sand (2" topsoil)	SC					
	1												
	2				Soft	Gray	Moist, Clay, slight sand	CH					
	3	40%											
	4												
	5												
	6												
	7												
	8				Stiff	Yellow	Moist Sandy Clay	CL					
	9												
	10						Bedrock Refusal 9.6'						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: Crane SWMU 16
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Misch
DRILLING RIG: DPT

BORING No.: 16SB195
DATE: 5-23-11
GEOLOGIST: E. Berkthe
DRILLER: Ryan Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0	topsoil	X		Loose	Tan	Dry, 2" Topsoil Clayey Sand	SC					
	1		X		↓	↓	↓	↓					
	2		X		Stiff	Brown	Dry, Sandy Clay	CL					
	3		X		↓	↓	↓	↓					
	4		X		↓	↓	↓	↓					
	5		X		Soft	Gray	Moist, Clay	CH					
	6				↓	↓		↓					
	7		X		↓	↓	Dry, Clay, bedrock press	↓					
	8		X		Hard	Tan	↓ Some sand	CL					
	9						Boring Refusal 8.6						
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

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PROJECT NAME: Crane SWMU 16
PROJECT NUMBER: 112G02187
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB196
DATE: 8-23-11
GEOLOGIST: E. Bentkitte
DRILLER: Ryan Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0	7 8 9	X		Stiff	Brown	Dry, 2" Asphalt Sandy Clay	CL					
	1		X										
	2		X		Soft	Tan	Moist, Clay, slight sand	CH					
	3		X			Gray							
	4	5 6 7	X										
	5		X		Stiff	Tan							
	6				Soft	Gray							
	7												
	8												
	9												
	10		X		Hard	Tan Red	Dry, Sandy Clay	CL					
	11		X				Bedrock pieces						
	12						Boring Refusal at 11.5' Bedrock						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: Crane SWMU 16
PROJECT NUMBER: 112G02187
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB197
DATE: 8-23-11
GEOLOGIST: E. Berthette
DRILLER: Ryan Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0				Stiff	Tan	Topsoil 0-2" Dry, Sandy Clay	CL					
	1												
	2				Hard	Tan	Moist Clay, Slight Sand	CH					
	3												
	4												
	5				Soft	Gray							
	6					Brown							
	7						Bedrock Refusal at 7.2'						
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

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PROJECT NAME: Crane SW MU 16
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Micah
DRILLING RIG: DPT

BORING No.: 16SB198
DATE: 8-23-11
GEOLOGIST: E. Berkhite
DRILLER: Ryan Brown

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0	100%			Loose	Tan	Dry, Clayey Sand	SC					
	1												
	2				Soft	Tan	Moist Clay, trace sand	CH					
	3												
	4	80%											
	5					Gray							
	6	100%			soft	tan	Sandy Clay, moist	CL					
	7				Bedrock Refusal at 7'								
	8												
	9												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

SWMU 16 – SOIL LOGS

UST AREA

SOIL SAMPLE LOG SHEETS

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Crane SWMU 16
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB191 0002
Sample Location: 16SB191
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-23-11 Time: 1045 Method: DPT Monitor Reading (ppm): 0	0-2'	DBrown Tan	(Topsoil - 2") Sandy Clay, Dry

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkeley

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Orate SWMU
Project No.: 1126 02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB190206
Sample Location: 16SB190
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 8-23-11
Time: 1110
Method: DPT
Monitor Reading (ppm): See below

Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
3.5-4	tan	Sandy Clay, Dry
4-6'	Gray	Clay, Moist

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

PID: (3.5-4) 27.0
PID: (4-5) 47.0 * location of TCE+GRO samples
PID: (5-6) 37.0
3.5-6' sampled for metals, DRO, & moisture

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkbe

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Crane SWMU 16
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 1619/0608
Sample Location: 1619
Sampled By:
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 8-23-11
Time: 1120
Method: DPT
Monitor Reading (ppm): 0

Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
6-7'	Gray	Clay, slight sand, Dry
7-7.8'	Red/Yellow	

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

* Sample collected at 6-8'

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkitis

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Crane SWMU 16
Project No.: ~~1658~~ 112602127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 1658192 0002
Sample Location: 1658192
Sampled By:
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-23-11 Time: 1225 Method: DPT Monitor Reading (ppm): 0	0-2'	Brown	Sandy Clay, Dry (0-2" Topsoil)

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkitis

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Crane SWMU 16
Project No.: 112602129

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB192020206
Sample Location: 16SB192
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 8-23-11
Time: 1240
Method: DPT
Monitor Reading (ppm): 0

Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
2-3.5'	Brown	Clayey Gravel, Dry
3.5-5	tan	Dry, Sandy Clay
5-6	gray	Clay, Some sand, Moist

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

* Sample collected at (2-6')

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkstite

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Crane SWMU 16
Project No.: 112G08127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB192G609
Sample Location: 16SB192
Sampled By:
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-23-11 Time: 1300 Method: DPT Monitor Reading (ppm): 0	7-9'	gray	Moist Clay, slight sand

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

* Sample 7-9'

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Kerkes

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Crane SW MU16
Project No.: 112602627

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS1930002
Sample Location: 16SB193
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-23-11 Time: 1310 Method: DPT Monitor Reading (ppm): 0	0-2'	Brown	2" Topsoil Sandy Clay, Dry

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkitto

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Crane SWMU 16
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB193020b
Sample Location: 16SB193
Sampled By: J. Guerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-23-11 Time: 1325 Method: DPT Monitor Reading (ppm): 0	2-6'	Gray	Moist, Clay, Slight Sand

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

Sample 2-6'

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkelite

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Crane SWMU16
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB1930608
Sample Location: 16SB193
Sampled By: J. Goerst
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-23-11 Time: 1335 Method: DPT Monitor Reading (ppm): 0	6-8'	Gray	Moist Clay, Slight sand

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle If Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkins

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Crane SWMU 16
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB194-0002
Sample Location: 6SB194
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-23-11	2" topsoil		
Time: 1340	0-2	tan	Clayey Sand, Dry
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkette

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Crane SWMU 16
Project No.: 112G0212

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB194020b
Sample Location: 16SB194
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-23-11 Time: ~~1340~~ 1350 Method: DPT Monitor Reading (ppm): 0	2-6'	Gray	Moist Clay, Slight Sand

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkbile

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Crane SWMU 16
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB194081O
Sample Location: 16SB194
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-23-11 Time: 1355 Method: DPT Monitor Reading (ppm): 0	8-10'	Red/yellow	Dry, sandy clay

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkelite

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Crane SWMU16
Project No.: 112G0227

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB195-0002
Sample Location: 16SB195
Sampled By: J. Gardt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 4-23-11 Time: 1410 Method: DPT Monitor Reading (ppm): 0	0-2'	tan	Loose, Clayey Sand, Dry

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Allen Berkhite

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Crane SWMU 6
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB195062b
Sample Location: 16SB195
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 8-23-11
Time: 1415
Method: DPT
Monitor Reading (ppm): See below

Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
2-5	Brown	Sandy Clay, Dry
5-6	Gray	Clay, Moist

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

*~~#~~ 3'-0
4'-0
PID 5'-3.5 ppm ~ sample for TCE & GRO
6'-0

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Ellen Berkbite

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Crane SWMU 16
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB195D09
Sample Location: 16SB195
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-23-11 Time: 1425 Method: DPT Monitor Reading (ppm): 0	7-9'	Gray/Tan	Hard/soft Clay, Dry

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkeley

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Crane SW MU16
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS196002
Sample Location: 16SB196
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-23-11 Time: 1435 Method: DPT Monitor Reading (ppm): 0	0-2'	Brown	Dry, Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkeley

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Crane SWMU6
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB196D206
Sample Location: 16SB196
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 6-23-11 Time: 1500 Method: DPT Monitor Reading (ppm): 0	2-6'	Tan/Gray	Moist, Clay, slight sand

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.: 16FD062311-01

Signature(s): Ellen Berkeley

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Crane SW MU16
Project No.: 112G08127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB196 10 12
Sample Location: 16SB196
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-23-11 Time: 1520 Method: DPT Monitor Reading (ppm): 0	10-12	Tan/Red	Sandy Clay, Dry

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkstis

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Crane SWMU16
Project No.: 112602127

Sample ID No.: 16SS1970002
Sample Location: 16SB197
Sampled By: J. Goerdt
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-23-11 Time: 1530 Method: DPT Monitor Reading (ppm): 0	0-2'	Tan	Dry, Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkstra

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Crane SWMU 16
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB97GQ06
Sample Location: 16SB97
Sampled By: S. Goodt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 6-23-11 Time: 1540 Method: DPT Monitor Reading (ppm): 0	2-6'	Brown/Gray	Moist Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD: yes

Duplicate ID No.:

Signature(s): Ella Rukitis

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Crane SWMU16
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 165B970607
Sample Location: 165B970607
Sampled By: J. Gaendt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 4-23-11 Time: 1605 Method: DPT Monitor Reading (ppm): 0	6-7'	Tan	Moist Clay

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Kerkstra

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Crane SWMU 16
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16S51980002
Sample Location: 16SB198
Sampled By: J. Goerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-23-11 Time: 1610 Method: DPT Monitor Reading (ppm): 0	0-2'	Tan	Dry, Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
	16FD082311-02

Signature(s): Ellen Berkhite

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Crane SWMU 16
Project No.: N2602127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB1980206
Sample Location: 16SB198
Sampled By: J. Gorecki
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-23-11	2-6'	Tan/gray	Moist Clay
Time: 1625			
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD: Yes

Duplicate ID No.:

Signature(s): Ellen Berkta

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Crane SWMU 16
Project No.: 112602127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB1980607
Sample Location: 16SB1980607
Sampled By: J. Gerdt
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 8-23-11 Time: 1645 Method: DPT Monitor Reading (ppm): 0	6-7'	tan	Moist, Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Ellen Berkhiser

APPENDIX A.2

SOIL BORING AND SAMPLE LOGS
ROUND 2 SAMPLING EVENT (OCTOBER/NOVEMBER 2012)

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Geo Logic
DRILLING RIG: 66DT track

BORING No.: 16SB207
DATE: 10/6/12
GEOLOGIST: K. Losekamp
DRILLER: Braidy Cockran

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Loose	white	gravel	gw					
				.5									
					Stiff	Brn	Silty Sand Clay	CL					
	1												
	2			2'1"									
					Hard	gray	weathered Sandstone						
				2'6"									
				EOB									
	3												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Refusal at 2'6"

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Geo Logic
DRILLING RIG: 66DT track

BORING No.: 16SB208
DATE: 10/6/12
GEOLOGIST: K. Losekamp
DRILLER: Braidy Cockran

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Coose	gray	gravel	gw					
				.5'									
					Stiff	Brn	Silty Sand Clay	CL					
	1												
				1.5									
				1'7"	Hard	gray	weathered Sandstone						
	2			EOB									
	3												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Refusal at 1'7"

Drilling Area Background (ppm): ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Geo Logic
DRILLING RIG: 66DT track

BORING No.: 16SB209
DATE: 10/6/12
GEOLOGIST: K. Losekamp
DRILLER: Braidy Cockran

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Loose	gray	gravel	gw					
			1.5	.5'									
							Sandy Silty Clay	CL					
	1												
			2.0										
	2												
				2'8"	Hard	gray	weathered Sandstone						
	3												
				EOB									

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Refusal at 3'.

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech

BORING LOG

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Geo Logic
DRILLING RIG: 66DT track

BORING No.: 16SB210
DATE: 10/6/12
GEOLOGIST: K. Losekamp
DRILLER: Braidy Cockran

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Loose	gray	gravel	gw					
				.5									
					Stiff	Brn	Sandy Clay	CL					
	1												
				1.5									
				1'8"	Hard	gray	Weathered Sandstone						
	2			EOB									
	3												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Refusal at 1'8"

Drilling Area Background (ppm):

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Geo Logic
DRILLING RIG: 66DT track

BORING No.: 16SB[redacted]211
DATE: 10/6/12
GEOLOGIST: K. Losekamp
DRILLER: Braidy Cockran

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					loose	gray	Gravel	gw					
				.5									
					Stiff	Brn	Sandy clay	CL					
	1												
	2												
							Weathered Sandstone						
				2.5									
	3												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Refusal at 2.5'.

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Geo Logic
DRILLING RIG: 66DT track

BORING No.: 16SB212
DATE: 10/6/12
GEOLOGIST: K. Losekamp
DRILLER: Braidy Cockran

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Loose	gray	Gravel	GW					
				.5									
					Stiff	Brn	Sandy Silty Clay	CL					
	1												
				1.8'									
	2				Hard	gray	Weathered Sandstone						
				EOB									
	3												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Refusal at 2.0'

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Geo Logic
DRILLING RIG: 66DT track

BORING No.: 16SB213
DATE: 10/6/12
GEOLOGIST: K. Losekamp
DRILLER: Braidy Cockran

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Loose	Gray	Gravel	GW					
				.5'									
					Stiff	Brn	Sandy silty Clay	CL					
	1												
				1.8''									
	2				Hard	Gray	Sandstone						
				EOB									
	3												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Refusal at 2.0'

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Geo Logic
DRILLING RIG: 66DT track

BORING No.: 16SB214
DATE: 10/6/12
GEOLOGIST: K. Losekamp
DRILLER: Braidy Cockran

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Loose	gray	gravel	gw					
				.5'									
					Stiff	BRN	Sandy silty clay	CL					
	1												
	2												
				2.0'	Soft	gray	weathered Sandstone						
				2.5'									
	3												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Refusal at 2.5'

Drilling Area Background (ppm): ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Geo Logic
DRILLING RIG: 66DT track

BORING No.: 16SB215
DATE: 10/6/12
GEOLOGIST: K. Losekamp
DRILLER: Braidy Cockran

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Loose	gray	gravel	gw					
			2	.5									
					Stiff	BRN	Silty clay	BRN					
			2										
					BRKN	gray	Sandstone weathered						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Refusal at 2' 4".

Drilling Area Background (ppm): ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Geo Logic
DRILLING RIG: 66DT track

BORING No.: 16SB216
DATE: 10/6/12
GEOLOGIST: K. Losekamp
DRILLER: Braidy Cockran

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							gravel						
				.5	stiff	BRN	Sandy Clay	CL					
							Some gravel						
	1												
	2												
					Hard	gray	weathered Sandstone						
				2' 4"									

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Refusal at 2' 4".

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Geo Logic
DRILLING RIG: 66DT track

BORING No.: 16 SB 217
DATE: 10/6/12
GEOLOGIST: K. Losekamp
DRILLER: Braidy Cockran

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Loose	Gray	Gravel	gw					
				.5									
					Stiff	BRN	Silty Clay	CL					
	1						Some Sand						
				1'8"									
	2					Gray BRN	Weathered Sandstone						
				2'3"									
				EOB									
	3												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Refusal at 2' 3"

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Geo Logic
DRILLING RIG: 66DT track

BORING No.: 16SB218
DATE: 10/6/12
GEOLOGIST: K. Losekamp
DRILLER: Braidy Cockran

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Loose	Gray	Gravel	GW					
				.5									
					Stiff	BRN	Sandy silty clay	CL	Very Strong				
	1								Odor-Fuel				
									.5-1.5				
	2			2.0									
					Soft	Gray	weathered Sandstone						
				2.5'									
	3												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: Refusal at 2.5'. Poor recovery 2nd push

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech

BORING LOG

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Geo Logic
DRILLING RIG: 66DT track

BORING No.: 16SB219
DATE: 10/6/12
GEOLOGIST: K. Losekamp
DRILLER: Braidy Cockran

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Stiff	BRN	Silty Clay	CL	Some gravel				
			3.5										
	2												
			4.0										
	4												
							Some BRN	Sandstone frags					
				5.8'									
	6				Hard	gray	Weathered Sandstone						
				EOB									
	8												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Refusal at 6.0' Location in field West to railroad tracks.

Drilling Area Background (ppm):

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech

BORING LOG

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Geo Logic
DRILLING RIG: 66DT track

BORING No.: 16SB220
DATE: 10/6/12
GEOLOGIST: K. Losekamp
DRILLER: Braidy Cockran

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Stiff	BRN	Silty Clay	CL					
			3.5										
	2												
			4.0										
	4												
			1.8										
			2.0	5.8'									
	6				Hard	gray	weathered Sandstone						
				EOB									

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Refusal at 6.0'

Drilling Area Background (ppm):

Converted to Well: Yes ____ No X Well I.D. #: ____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: NA
DRILLING RIG: NA

BORING No.: 16SB22
DATE: 10/5/2012
GEOLOGIST: K Losekamp
DRILLER: NA

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Soft	BR	Top Soil	OH					
				6"									
					M Stiff	BR	Silty Clay	CL					
	1												
	2												
				EOB									
	3												
	4												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): NA

Remarks: Hand Auger to 2 feet

Converted to Well: Yes _____ No x _____ Well I.D. #: _____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: NA
DRILLING RIG: NA

BORING No.: 16SB222
DATE: 10/5/2012
GEOLOGIST: K Losekamp
DRILLER: NA

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Soft	BR	Top Soil	OH					
				6"									
					M Stiff	BR	Silty Clay	CL					
	1												
	2												
				EOB									
	3												
	4												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): NA

Remarks: Hand Auger to 2 feet

Converted to Well: Yes _____ No x _____ Well I.D. #: _____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: NA
DRILLING RIG: NA

BORING No.: 16SB223
DATE: 10/5/2012
GEOLOGIST: K Losekamp
DRILLER: NA

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Soft	BR	Top Soil	OH					
				6"									
					M Stiff	BR	Silty Clay	CL					
	1												
	2												
				EOB									
	3												
	4												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): NA

Remarks: Hand Auger to 2 feet

Converted to Well: Yes _____ No x _____ Well I.D. #: _____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: NA
DRILLING RIG: NA

BORING No.: 16SB224
DATE: 10/5/2012
GEOLOGIST: K Losekamp
DRILLER: NA

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Soft	BR	Top Soil	OH					
				6"									
					M Stiff	BR	Silty Clay	CL					
	1												
	2												
				EOB									
	3												
	4												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): NA

Remarks: Hand Auger to 2 feet

Converted to Well: Yes _____ No x _____ Well I.D. #: _____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: NA
DRILLING RIG: NA

BORING No.: 16SB2 a5
DATE: 10/5/2012
GEOLOGIST: K Losekamp
DRILLER: NA

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Soft	BR	Top Soil	OH					
				6"									
					M Stiff	BR	Silty Clay	CL					
	1												
	2												
				EOB									
	3												
	4												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): NA

Remarks: Hand Auger to 2 feet

Converted to Well: Yes _____ No x _____ Well I.D. #: _____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: NA
DRILLING RIG: NA

BORING No.: 16SB2~~3~~6
DATE: 10/5/2012
GEOLOGIST: K Losekamp
DRILLER: NA

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Soft	BR	Top Soil	OH					
				6"									
					M Stiff	BR	Silty Clay	CL					
	1												
	2												
				EOB									
	3												
	4												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): NA

Remarks: Hand Auger to 2 feet

Converted to Well: Yes _____ No x _____ Well I.D. #: _____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: NA
DRILLING RIG: NA

BORING No.: 16SB221
DATE: 10/5/2012
GEOLOGIST: K Losekamp
DRILLER: NA

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Soft	BR	Top Soil	OH					
				6"									
					M Stiff	BR	Silty Clay	CL					
	1												
	2												
				EOB									
	3												
	4												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): NA

Remarks: Hand Auger to 2 feet

Converted to Well: Yes _____ No x _____ Well I.D. #: _____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: NA
DRILLING RIG: NA

BORING No.: 16SB228
DATE: 10/5/2012
GEOLOGIST: K Losekamp
DRILLER: NA

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Soft	BR	Top Soil	OH					
				6"									
					M Stiff	BR	Silty Clay	CL					
	1												
	2												
				EOB									
	3												
	4												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): NA

Remarks: Hand Auger to 2 feet

Converted to Well: Yes _____ No x _____ Well I.D. #: _____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: NA
DRILLING RIG: NA

BORING No.: 16SB229
DATE: 10/5/2012
GEOLOGIST: K Losekamp
DRILLER: NA

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Soft	BR	Top Soil	OH					
				6"									
					M Stiff	BR	Silty Clay	CL					
	1												
	2												
				EOB									
	3												
	4												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): NA

Remarks: Hand Auger to 2 feet

Converted to Well: Yes _____ No x _____ Well I.D. #: _____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: NA
DRILLING RIG: NA

BORING No.: 16SB2 30
DATE: 10/5/2012
GEOLOGIST: K Losekamp
DRILLER: NA

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Soft	BR	Top Soil	OH					
				6"									
					M Stiff	BR	Silty Clay	CL					
	1												
	2												
				EOB									
	3												
	4												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): NA

Remarks: Hand Auger to 2 feet

Converted to Well: Yes _____ No x _____ Well I.D. #: _____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: NA
DRILLING RIG: NA

BORING No.: 16SB231
DATE: 10/5/2012
GEOLOGIST: K Losekamp
DRILLER: NA

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Soft	BR	Top Soil	OH					
				6"									
					M Stiff	BR	Silty Clay	CL					
	1												
	2												
				EOB									
	3												
	4												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): NA

Remarks: Hand Auger to 2 feet

Converted to Well: Yes _____ No x _____ Well I.D. #: _____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: NA
DRILLING RIG: NA

BORING No.: 16SB232
DATE: 10/5/2012
GEOLOGIST: K Losekamp
DRILLER: NA

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Soft	BR	Top Soil	OH					
				6"									
					M Stiff	BR	Silty Clay	CL					
	1												
	2												
				EOB									
	3												
	4												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): NA

Remarks: Hand Auger to 2 feet

Converted to Well: Yes _____ No x _____ Well I.D. #: _____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: NA
DRILLING RIG: NA

BORING No.: 16SB233
DATE: 10/5/2012
GEOLOGIST: K Losekamp
DRILLER: NA

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Soft	BR	Top Soil	OH					
				6"									
					M Stiff	BR	Silty Clay	CL					
	1												
	2												
				EOB									
	3												
	4												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): NA

Remarks: Hand Auger to 2 feet

Converted to Well: Yes _____ No x _____ Well I.D. #: _____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: NA
DRILLING RIG: NA

BORING No.: 16SB234
DATE: 10/5/2012
GEOLOGIST: K Losekamp
DRILLER: NA

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Soft	BR	Top Soil	OH					
				6"									
					M Stiff	BR	Silty Clay	CL					
	1												
	2												
				EOB									
	3												
	4												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): NA

Remarks: Hand Auger to 2 feet

Converted to Well: Yes _____ No x _____ Well I.D. #: _____

Tetra Tech

BORING LOG

Page ___ of ___

PROJECT NAME: SWMU 16 Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: NA
DRILLING RIG: NA

BORING No.: 16SB235
DATE: 10/5/2012
GEOLOGIST: K Losekamp
DRILLER: NA

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					Soft	BR	Top Soil	OH					
				6"									
					M Stiff	BR	Silty Clay	CL					
	1												
	2												
				EOB									
	3												
	4												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): NA

Remarks: Hand Auger to 2 feet

Converted to Well: Yes _____ No x _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NSA Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Chase
DRILLING RIG: DPT - Geoprobe
BORING NUMBER: 16SB 336
DATE: 11/30/12
GEOLOGIST: K. Loseckamp
DRILLER: Nathan Free

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth /Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0												
	0.5				stiff	BRN	Silty Clay some gravel to 1.5'	CL	Dry	0			
	1		3.5										
	1.2									0			
	2												
	2.5		4.0							0			
	3												
	3.5									0			
	4												
	4.5		1.5							0			
	5												
	5.5		1.7	5.3	m. Hard	ORNG	weathered Sandstone			0			
	6			EOB 5.7									
	6.5												
	7												
	7.5												
	8												
	8.5												
	9												
	9.5												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Refusal at 5.7'.

Drilling Area Background (ppm): 0

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: NSA Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Chase
DRILLING RIG: DPT - Geoprobe
BORING NUMBER: 16SB 237
DATE: 11/30/12
GEOLOGIST: K. Losekamp
DRILLER: Norton Free

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth /Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0.5				Stiff	BRN	Silty Clay	CL		0			
	1		3.7				some gravel to 1.0'						
	1.2									0			
	2												
	2.5		4.0							0			
	3												
	3.5									0			
	4												
	4.5		1.0							0			
	5		1.2	5.0									
	5.5			5.2'	M. Hard	ORNG	weathered sandstone			0			
	6												
	6.5												
	7												
	7.5												
	8												
	8.5												
	9												
	9.5												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Refusal at 5.2'

Drilling Area Background (ppm):

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: NSA Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Chase
DRILLING RIG: DPT - Geoprobe

BORING NUMBER: 16SB 238
DATE: 11/30/12
GEOLOGIST: K. Gosekamp
DRILLER: Naton Free

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth /Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0.5			.25	Soft	DK BRN	TOPSOIL	OH		0			
	1				Stiff	BRN	silty Clay	CL					
	1.2		3.2				Some gravel			0			
	2												
	2.5									0			
	3		4.0						Some Sandstone				
	3.5								frags at 3.2'	0			
	4												
	4.5		1.0							0			
	5												
	5.5		1.4	5.2 / 5.4	Hard	ORNG	weathered Sandstone			0			
	6												
	6.5												
	7												
	7.5												
	8												
	8.5												
	9												
	9.5												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Refusal at 5.4',

Drilling Area Background (ppm): 0

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NSA Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Chase
DRILLING RIG: DPT - Geoprobe
BORING NUMBER: 16SB238
DATE: 11/30
GEOLOGIST: K. Losekamp
DRILLER: Nathan Free

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth /Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Drillier BZ**
	0.5			.25	Soft	DK Brn	Topsoil	OH	Dry	0			
	1				Stiff	Brn	Silty Clay	CL					
	1.2		3.3										
	2									0			
	2.5		4.0										
	3												
	3.5								S.S. frags at 3.3-3.5				
	4									0			
	4.5		1.3										
	5												
	5.5		1.7							0			
	6			5.5 / 5.7	M. Hard	OLIVE	Weathered Sandstone						
	6.5									0			
	7												
	7.5												
	8												
	8.5												
	9												
	9.5												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Refusal at 5.7'.

Drilling Area Background (ppm): 0

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NSA Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Chase
DRILLING RIG: DPT - Geoprobe
BORING NUMBER: 16SB 240
DATE: 11/30/12
GEOLOGIST: K. Loeckamp
DRILLER: Nathan Fice

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth /Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0.5			.25	Soft	PK BRN	Topsoil	OH		0			
	1		3.6		Stiff	BRN	Silty clay	CL					
	1.2									0			
	2												
	2.5		4.0										
	3									0			
	3.5												
	4												
	4.5		1.5							0			
	5												
	5.5		1.9							0			
	6			5.5'	m. Hard	orange	Weathered Sandstone						
	6.5			5.9'						0			
	7												
	7.5												
	8												
	8.5												
	9												
	9.5												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Refusal at 5.9'.

Drilling Area Background (ppm):

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NSA Crane
PROJECT NUMBER: 112G02127
DRILLING COMPANY: Chase
DRILLING RIG: DPT - Geoprobe
BORING NUMBER: 16SB 241
DATE: 11/30/12
GEOLOGIST: K. Coseckamp
DRILLER: Nathan Free

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth /Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0.5				Stiff	BRN	silty clay	CL		0			
	1		3.7'										
	1.2									0			
	2												
	2.5		4.0'							0			
	3								Some S.S. frags at 3.0'.				
	3.5									0			
	4												
	4.5									0			
	5		1.6'										
	5.5									0			
	6		2.1'	5.8'									
	6.5			6.1	Hard	BRN	weathered Sandstone			0			
	7												
	7.5												
	8												
	8.5												
	9												
	9.5												
	10												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Refusal at 6.1

Drilling Area Background (ppm):

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: NSA CRANE, SWMU16
Project No.: 112G02127

Sample ID No.: 16SB5523600002
Sample Location: 16SB 236
Sampled By: KL + CR
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 11/30/12 Time: 0845 Method: DPT Monitor Reading (ppm):	0-2	BRN	Silty Clay / Topsoil

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
NA	NA	NA	NA	NA
Method:				
NA				
Monitor Readings				
(Range in ppm):				
NA				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
VOA	(1) 40ml Vial w/Methanol	Yes/No	
VOA	(2) 40ml Vial w/Free reagent water	Yes/No	
Percent Moisture	(1) 2oz Jar	Yes/No	
~~Zinc~~	~~(1) 4oz Jar~~	~~Yes/No~~	
~~Zinc and Lead~~	~~(1) 4oz Jar~~	Yes/No	

OBSERVATIONS / NOTES:

MAP:

See Figure 4-1 or 4-2

Circle if Applicable:

MS/MSD	Duplicate ID No.:
	16FD113012-01

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: 16SS2070002
Sample Location: 16S13207
Sampled By: KL, JG
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: ~~1335~~ 10/6/12 Time: 1335 Method:DPT Monitor Reading (ppm NA	0-2	BRN	silty Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
~~Metals~~	~~1 4 OZ Jar~~		
VOCs	3 40 mil VOA		

OBSERVATIONS / NOTES:

Refusal at 2'6".

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS2080002
Sample Location: 16SB208
Sampled By: KL, JG
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/6/12 Time: 1345 Method:DPT Monitor Reading (ppm NA	0-2	BRN	silty Sandy clay

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
~~Metals~~	~~1 4 OZ Jar~~		
VOCs	3 40 mil VOA		

OBSERVATIONS / NOTES:

Refusal at 1.7'

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS2096002
Sample Location: 16S13209[illegible]
Sampled By: KL, JG
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/6/12 Time: 1350 Method:DPT Monitor Reading (ppm NA	0-2	BRN	Silty Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
~~Metals~~	1 4 OZ Jar		
VOCs	3 40 mil VOA		

OBSERVATIONS / NOTES:

Refusal at 3.0'

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB2090203
Sample Location: 16SB209
Sampled By: KL, JG
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/6/12	2-3	BRN	Sandy Clay
Time: 1355			
Method:DPT			
Monitor Reading (ppm NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
~~Metals~~	1 4 OZ Jar		
VOCs	3 40 mil VOA		

OBSERVATIONS / NOTES:

Refusal at 3.0

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: 16552100002
Sample Location: 16513210
Sampled By: KL, JG
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/6/12 Time: 1400 Method:DPT Monitor Reading (ppm NA	0-2	BRN	Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
~~Metals~~	~~1 4 OZ Jar~~		
VOCs	3 40 mil VOA		

OBSERVATIONS / NOTES:

Refusal at 1'8"

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: 16SS2110002
Sample Location: 16SB211
Sampled By: KL, JG
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/6/12	0-2	BRN	Silty Sandy Clay
Time: 1410			
Method: DPT			
Monitor Reading (ppm NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
~~Metals~~	~~1 4 OZ Jar~~		
VOCs	3 40 mil VOA		

OBSERVATIONS / NOTES:

Refusal at 2.5'.

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: 16SS2120002
Sample Location: 16SB212
Sampled By: KL, JG
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/6/12 Time: 1415 Method:DPT Monitor Reading (ppm NA	0-2	BRN	Sandy Silty Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
~~Metals~~	~~1 4 OZ Jar~~		
VOCs	3 40 mil VOA		

OBSERVATIONS / NOTES:

Refusal at 2.0'

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16552130002
Sample Location: 16513213
Sampled By: KL, JG
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/6/12 Time: 1420 Method:DPT Monitor Reading (ppm NA	0-2	BRN	Sandy Silty Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
~~Metals~~	~~1 4 OZ Jar~~		
VOCs	3 40 mil VOA		

OBSERVATIONS / NOTES:

Refusal at 2.0'

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS2140002
Sample Location: 16S
Sampled By: KL, JG
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/6/12 Time: 1430 Method:DPT Monitor Reading (ppm NA	0-2	BRN	Sandy silty Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
~~Metals~~	~~1 4 OZ Jar~~		
VOCs	3 40 mil VOA		

OBSERVATIONS / NOTES:

Refusal at 2.5'

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS2150002
Sample Location: 16S13215
Sampled By: KL, JG
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/6/12			
Time: 1320			
Method:DPT			
Monitor Reading (ppm NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
Metals	1 4 OZ Jar		
VOCs	3 40 mil VOA		

OBSERVATIONS / NOTES:

Refusal at

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.: 16FD100612-02

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

Sample ID No.: 16SS2160002
Sample Location: 16SB216
Sampled By: KL, JG
C.O.C. No.:

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Other:
- [ ] QA Sample Type:

Type of Sample:
- [ ] Low Concentration
- [ ] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/6/12 Time: 1300 Method: DPT Monitor Reading (ppm NA	0-2	BRN	Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
~~Metals~~	~~1 4 OZ Jar~~		
VOCs / % moisture	3 40 mil VOA	✓	

OBSERVATIONS / NOTES:

Refusal at

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: 16SS217 0002
Sample Location: 16SB217
Sampled By: KL, JG
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/6/12 Time: 1330 Method: DPT Monitor Reading (ppm NA	0-2	BRN	Sandy Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
~~Metals~~	~~1 4 OZ Jar~~		
VOCs	3 40 mil VOA		

OBSERVATIONS / NOTES:

Refusal at 2'3"

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: 16SS2180002
Sample Location: 16SB218
Sampled By: KL, JG
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/6/12 Time: 1435 Method: DPT Monitor Reading (ppm NA	0-2	BRN	Sandy silty Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
~~Metals~~	~~1 4 OZ Jar~~		
VOCs	3 40 mil VOA		

OBSERVATIONS / NOTES:

Refusal at 2.5'.

Very strong fuel odor.

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16S13219020 6
Sample Location: 16S13219
Sampled By: KL, JG
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/6/12	2-6	BRN	silty clay
Time: 1450			
Method:DPT			
Monitor Reading (ppm NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
Metals	1 4 OZ Jar		
VOCs	3 40 mil VOA		

OBSERVATIONS / NOTES:

Refusal at

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[x] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: 16SS2190002
Sample Location: 16SB219
Sampled By: KL, JG
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/6/12 Time: 1445 Method:DPT Monitor Reading (ppm NA	0-2	BRN	Silty clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
Metals	1 4 OZ Jar		
VOCs	3 40 mil VOA		

OBSERVATIONS / NOTES:

Refusal at

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: 16SS220 0002
Sample Location: 16SB220
Sampled By: KL, JG
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/6/12 Time: 1515 Method:DPT Monitor Reading (ppm NA	0-2	BRN	Silty Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
Metals	~~1 4 OZ Jar~~		
VOCs	3 40 mil VOA		

OBSERVATIONS / NOTES:

Refusal at 6.0

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16513220020
Sample Location: 16513220
Sampled By: KL, JG
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/6/12	2-6	BRN	silty clay
Time: 1520			
Method:DPT			
Monitor Reading (ppm NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
Metals	1 4 OZ Jar		
VOCs	3 40 mil VOA		

OBSERVATIONS / NOTES:

Refusal at 6.0'.

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[x] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS 2210002
Sample Location: 16SB 221
Sampled By: KL, JF
C.O.C. No.: 100512-04

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:10/05/12	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1115	0-2	Brn	0-6" topsoil/6"-2' Silty Clay
Method:Hand Auger			
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
Metals	1 4oz Jar	X	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):
K.Losekamp

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[x] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS 2220042
Sample Location: 16SB 222
Sampled By: KL, JF
C.O.C. No.: 100512-04

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:10/05/12 Time: 1120 Method:Hand Auger Monitor Reading (ppm):	0-2	Brn	0-6" topsoil/6"-2' Silty Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
Metals	1 4oz Jar	X	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):
K.Losekamp

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[x] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS2230002
Sample Location: 16SB223
Sampled By: KL, JF
C.O.C. No.: 100512-04

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:10/05/12	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1130	0-2	Brn	0-6" topsoil/6"-2' Silty Clay
Method:Hand Auger			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
Metals	1 4oz Jar	X	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):
K.Losekamp

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[x] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS224 0002
Sample Location: 16SB 224
Sampled By: KL, JF
C.O.C. No.: 100512-04

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:10/05/12			
Time: 1135	0-2	Brn	0-6" topsoil/6"-2' Silty Clay
Method:Hand Auger			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
Metals	1 4oz Jar	X	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):
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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[x] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS 225 0002
Sample Location: 16SB 225
Sampled By: KL, JF
C.O.C. No.: 100512-04

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:10/05/12	0-2	Brn	0-6" topsoil/6"-2' Silty Clay
Time: 1205			
Method:Hand Auger			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
Metals	1 4oz Jar	X	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):
K.Losekamp

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[x] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS 226 0002
Sample Location: 16SB 226
Sampled By: KL, JF
C.O.C. No.: 100512-04

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:10/05/12	0-2	Brn	0-6" topsoil/6"-2' Silty Clay
Time: 1150			
Method:Hand Auger			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
Metals	1 4oz Jar	X	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):
K.Losekamp

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[x] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS2270002
Sample Location: 16SB 227
Sampled By: KL, JF
C.O.C. No.: 100512-04

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:10/05/12	0-2	Brn	0-6" topsoil/6"-2' Silty Clay
Time: 1045			
Method:Hand Auger			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
Metals	1 4oz Jar	X	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):
K.Losekamp

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[x] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS 228 0002
Sample Location: 16SB 228
Sampled By: KL, JF
C.O.C. No.: 100512-04

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/05/12			
Time: 1200	0-2	Brn	0-6" topsoil/6"-2' Silty Clay
Method: Hand Auger			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
Metals	1 4oz Jar	X	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):
K.Losekamp

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[x] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS 229 0021
Sample Location: 16SB 229
Sampled By: KL, JF
C.O.C. No.: 100512-04

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:10/05/12	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1100	0-2	Brn	0-6" topsoil/6"-2' Silty Clay
Method:Hand Auger			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
Metals	1 4oz Jar	X	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.: 16FD 100512-01

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[x] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS 2300002
Sample Location: 16SB 230
Sampled By: KL, JF
C.O.C. No.: 100512-04

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:10/05/12	0-2	Brn	0-6" topsoil/6"-2' Silty Clay
Time: 1210			
Method:Hand Auger			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
Metals	1 4oz Jar	X	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):
K.Losekamp

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[x] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS 2310002
Sample Location: 16SB 231
Sampled By: KL, JF
C.O.C. No.: 100512-04

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:10/05/12	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1215	0-2	Brn	0-6" topsoil/6"-2' Silty Clay
Method:Hand Auger			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
Metals	1 4oz Jar	X	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):
K.Losekamp

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[x] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS 232 0002
Sample Location: 16SB 232
Sampled By: KL, JF
C.O.C. No.: 100512-04

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:10/05/12	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1220	0-2	Brn	0-6" topsoil/6"-2' Silty Clay
Method:Hand Auger			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
Metals	1 4oz Jar	X	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):
K.Losekamp

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[x] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS 2330002
Sample Location: 16SB 233
Sampled By: KL, JF
C.O.C. No.: 100512-04

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:10/05/12			
Time: 1230			
Method:Hand Auger	0-2	Brn	0-6" topsoil/6"-2' Silty Clay
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
Metals	1 4oz Jar	X	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):
K.Losekamp

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[x] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS 2340002
Sample Location: 16SB 234
Sampled By: KL, JF
C.O.C. No.: 100512-04

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:10/05/12			
Time: 1240	0-2	Brn	0-6" topsoil/6"-2' Silty Clay
Method:Hand Auger			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
Metals	1 4oz Jar	X	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):
K.Losekamp

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: SWMU 16 Crane
Project No.: 112G02127

[x] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SS 235 0002
Sample Location: 16SB 235
Sampled By: KL, JF
C.O.C. No.: 100512-04

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:10/05/12			
Time: 1250			
Method:Hand Auger	0-2	Brn	0-6" topsoil/6"-2' Silty Clay
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
Metals	1 4oz Jar	X	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):
K.Losekamp

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NSA CRANE, SWMU16
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB 2360206
Sample Location: 16SB 236
Sampled By:
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 11/30/12 Time: 0850 Method: DPT Monitor Reading (ppm):	2-6	BRN	Silty Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
NA	NA	NA	NA	NA
Method:				
NA				
Monitor Readings				
(Range in ppm):				
NA				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
VOA	(1) 40ml Vial w/Methanol	Yes/No	
VOA	(2) 40ml Vial w/Free reagent water	Yes/No	
Percent Moisture	(1) 2oz Jar	Yes/No	
~~Zinc~~	(1) 4oz Jar	~~Yes/No~~	
~~Zinc and Lead~~	~~(1) 4oz Jar~~	~~Yes/No~~	

OBSERVATIONS / NOTES:

MAP:

See Figure 4-1 or 4-2

Circle If Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: NSA CRANE, SWMU16
Project No.: 112G02127

Sample ID No.: 16SB2370002
Sample Location: 16SB237
Sampled By:
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 11/30/12 Time: 0905 Method: DPT Monitor Reading (ppm):	0-2	BRN	Silty Clay some Topsoil 0-2"

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
NA	NA	NA	NA	NA
Method:				
NA				
Monitor Readings				
(Range in ppm):				
NA				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
VOA	(1) 40ml Vial w/Methanol	Yes/No	
VOA	(2) 40ml Vial w/Free reagent water	Yes/No	
Percent Moisture	(1) 2oz Jar	Yes/No	
~~Zinc~~	~~(1) 4oz Jar~~	~~Yes/No~~	
~~Zinc and Lead~~	~~(1) 4oz Jar~~	~~Yes/No~~	

OBSERVATIONS / NOTES:

MAP:

See Figure 4-1 or 4-2

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: NSA CRANE, SWMU16
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB23702006
Sample Location: 16SB237
Sampled By:
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:			
Time: 0915	2-6	BRW	Silty Clay
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
NA	NA	NA	NA	NA
Method:				
NA				
Monitor Readings				
(Range in ppm):				
NA				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
VOA	(1) 40ml Vial w/Methanol	Yes/No	
VOA	(2) 40ml Vial w/Free reagent water	Yes/No	
Percent Moisture	(1) 2oz Jar	Yes/No	
~~Zinc~~	~~(1) 4oz Jar~~	~~Yes/No~~	
~~Zinc and Lead~~	~~(1) 4oz Jar~~	~~Yes/No~~	

OBSERVATIONS / NOTES:

MAP:

See Figure 4-1 or 4-2

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: NSA CRANE, SWMU16
Project No.: 112G02127

Sample ID No.: 16SB2380002
Sample Location: 16SB 238
Sampled By:
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 11/30/12 Time: 0920 Method: DPT Monitor Reading (ppm):	0-2	BRN	Silty Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
NA	NA	NA	NA	NA
Method:				
NA				
Monitor Readings				
(Range in ppm):				
NA				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
VOA	(1) 40ml Vial w/Methanol	Yes/No	
VOA	(2) 40ml Vial w/Free reagent water	Yes/No	
Percent Moisture	(1) 2oz Jar	Yes/No	
~~Zinc~~	~~(1) 4oz Jar~~	~~Yes/No~~	
~~Zinc and Lead~~	~~(1) 4oz Jar~~	~~Yes/No~~	

OBSERVATIONS / NOTES:

MAP:

See Figure 4-1 or 4-2

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: NSA CRANE, SWMU16
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB2380206
Sample Location: 16SB238
Sampled By:
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 11/30/12 Time: 0925 Method: DPT Monitor Reading (ppm): 0	2-6	BRN	Silty Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
NA	NA	NA	NA	NA
Method:				
NA				
Monitor Readings				
(Range in ppm):				
NA				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
VOA	(1) 40ml Vial w/Methanol	Yes/No	
VOA	(2) 40ml Vial w/Free reagent water	Yes/No	
Percent Moisture	(1) 2oz Jar	Yes/No	
~~Zinc~~	~~(1) 4oz Jar~~	~~Yes/No~~	
~~Zinc and Lead~~	~~(1) 4oz Jar~~	~~Yes/No~~	

OBSERVATIONS / NOTES:

MAP:

See Figure 4-1 or 4-2

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: NSA CRANE, SWMU16
Project No.: 112G02127

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB2390002
Sample Location: 16SB 239
Sampled By:
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 11/30/12 Time: 0930 Method: DPT Monitor Reading (ppm): 0	0-2	BRN	Topsoil / silty Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
NA	NA	NA	NA	NA
Method:				
NA				
Monitor Readings				
(Range in ppm):				
NA				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
VOA	(1) 40ml Vial w/Methanol	Yes/No	
VOA	(2) 40ml Vial w/Free reagent water	Yes/No	
Percent Moisture	(1) 2oz Jar	Yes/No	
~~Zinc~~	~~(1) 4oz Jar~~	~~Yes/No~~	
~~Zinc and Lead~~	~~(1) 4oz Jar~~	~~Yes/No~~	

OBSERVATIONS / NOTES:

MAP:

See Figure 4-1 or 4-2

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: NSA CRANE, SWMU16
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB2390206
Sample Location: 16SB 239
Sampled By:
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 11/30/12 Time: 0935 Method: DPT Monitor Reading (ppm): 0	2-6	BRN	silty Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
NA	NA	NA	NA	NA
Method:				
NA				
Monitor Readings				
(Range in ppm):				
NA				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
VOA	(1) 40ml Vial w/Methanol	Yes/No	
VOA	(2) 40ml Vial w/Free reagent water	Yes/No	
Percent Moisture	(1) 2oz Jar	Yes/No	
Zinc	(1) 4oz Jar	Yes/No	
Zinc and Lead	(1) 4oz Jar	Yes/No	

OBSERVATIONS / NOTES:

MAP:

See Figure 4-1 or 4-2

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: NSA CRANE, SWMU16
Project No.: 112G02127

Sample ID No.: 16SB5240002
Sample Location: 16SB 240
Sampled By:
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 11/30/12 Time: 0940 Method: DPT Monitor Reading (ppm): 0	0-2	BRN	Silty Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
NA	NA	NA	NA	NA
Method:				
NA				
Monitor Readings				
(Range in ppm):				
NA				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
VOA	(1) 40ml Vial w/Methanol	Yes/No	
VOA	(2) 40ml Vial w/Free reagent water	Yes/No	
Percent Moisture	(1) 2oz Jar	Yes/No	
Zinc	(1) 4oz Jar	Yes/No	
Zinc and Lead	(1) 4oz Jar	Yes/No	

OBSERVATIONS / NOTES:

MAP:

See Figure 4-1 or 4-2

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: NSA CRANE, SWMU16
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB 240006
Sample Location: 16SB 240
Sampled By:
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 11/30/12 Time: 0945 Method: DPT Monitor Reading (ppm): 0	2-6	BRN	Silty Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
NA	NA	NA	NA	NA
Method:				
NA				
Monitor Readings				
(Range in ppm):				
NA				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
VOA	(1) 40ml Vial w/Methanol	Yes/No	
VOA	(2) 40ml Vial w/Free reagent water	Yes/No	
Percent Moisture	(1) 2oz Jar	Yes/No	
Zinc	(1) 4oz Jar	Yes/No	
Zinc and Lead	(1) 4oz Jar	Yes/No	

OBSERVATIONS / NOTES:

MAP:

See Figure 4-1 or 4-2

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: NSA CRANE, SWMU16
Project No.: 112G02127

Sample ID No.: 16SB241 0002
Sample Location: 16SB 241
Sampled By: Cerkc
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 11/30/12 Time: 0950 Method: DPT Monitor Reading (ppm): 0	0-2	BRN	Silty Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
NA	NA	NA	NA	NA
Method:				
NA				
Monitor Readings				
(Range in ppm):				
NA				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
VOA	(1) 40ml Vial w/Methanol	Yes/No	
VOA	(2) 40ml Vial w/Free reagent water	Yes/No	
Percent Moisture	(1) 2oz Jar	Yes/No	
~~Zinc~~	~~(1) 4oz Jar~~	~~Yes/No~~	
~~Zinc and Lead~~	~~(1) 4oz Jar~~	~~Yes/No~~	

OBSERVATIONS / NOTES:

MAP:

See Figure 4-1 or 4-2

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: NSA CRANE, SWMU16
Project No.: 112G02127

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: 16SB 241 0206
Sample Location: 16SB 241
Sampled By:
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 11/30/12 Time: 0955 Method: DPT Monitor Reading (ppm): 0	2-6	BRN	Silty Clay

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
NA	NA	NA	NA	NA
Method:				
NA				
Monitor Readings				
(Range in ppm):				
NA				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
VOA	(1) 40ml Vial w/Methanol	Yes/No	
VOA	(2) 40ml Vial w/Free reagent water	Yes/No	
Percent Moisture	(1) 2oz Jar	Yes/No	
~~Zinc~~	~~(1) 4oz Jar~~	~~Yes/No~~	
~~Zinc and Lead~~	~~(1) 4oz Jar~~	Yes/No	

OBSERVATIONS / NOTES:

MS/MSD

MAP:

See Figure 4-1 or 4-2

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER NO 2335 | PAGE ___ OF ___

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02127	NSA Crane	Ralph Barinski	412-921-8308	Brian Richards / Empirical
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
DK-BJP		Kevin Loskamp	513-333-3680	6021 Mainstream Dr Suite 270
		CARRIER/WAYBILL NUMBER		CITY, STATE
		8011 1642 8173		Nashville, TN 37228

STANDARD TAT ☐
RUSH TAT ☑
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☑ 7 day ☐ 14 day

7 day turn

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G

PRESERVATIVE USED: H2O, MeOH ice HCL

TYPE OF ANALYSIS: VOCs | % Moisture | VOCs

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	VOCs	% Moisture	VOCs						COMMENTS
11/30	0845	165S2360002	SB 236	0	2	SO	G	4	X	X							7 day turn
	0850	165B2360206	⊥	2	6			4									
	0905	165S2370002	SB 237	0	2			4									
	0915	165B2370206	⊥	2	6			4									
	0920	165S2380002	SB 238	0	2			4									
	0925	165B2380206	⊥	2	6			4									
	0930	165S2390002	SB 239	0	2			4									
	0935	165B2390206	⊥	2	6			4									
	0940	165S2400002	SB 240	0	2			4									
	0945	165B2400206	⊥	2	6			4									
	0950	165S2410002	SB 241	0	2			4									
	0955	165B2410206	⊥	2	6			12									MS/MSD
	xxxx	16FD113012-01	FD	—	—	QC	G	4									

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
Kevin Loskamp	11/30/12	1600			
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER NB 2341 | PAGE 2 OF 2

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02127	NSA Crane	Ralph Basinski	412-921-8308	Brain Richards / Empirical
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
		Kevin Loselkamp	513-333-3680	621 Mainstream Dr Suite 270
		CARRIER/WAYBILL NUMBER		CITY, STATE
		8011 1642 8173		Nashville TN 37228

STANDARD TAT ☐
RUSH TAT ☒
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☒ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: HCL
TYPE OF ANALYSIS: VOCs

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	VOCs								COMMENTS
11/30	1200	16RB113012-01	RB 01	–	–	QC	G	3	X								7day turn

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
Kevin Loselkamp	11/30/12	1600			
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

APPENDIX A.3

CHAIN-OF-CUSTODY FORMS
ROUND 1 SAMPLING EVENT (AUGUST 2011)

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 1613 | PAGE _1_ OF _2__

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02127	NSA Crane - SWMU 16	Ralph Basinski	412-921-8425	RTI Laboratories, Inc. / Chino Cortiz 734-422-8000
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER John Floyd	PHONE NUMBER 502-693-1417	ADDRESS 31628 Glendale Street
		CARRIER/WAYBILL NUMBER Fed Ex / 8731 7167 0587		CITY, STATE Livonia, MI 48150

STANDARD TAT ☐X
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR: 2011	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	Container Type Plastic (P) or Glass (G)	G						COMMENTS
									Preservative Used	6⁰ C						
									TYPE OF ANALYSIS	Metals						
8/25	1509	16SS1540002	154	0	2	SO	G	1		1						
8/25	1507	16SS1550002	155	0	2	SO	G	1		1						
8/25	1517	16SS1560002	156	0	2	SO	G	1		1						
8/25	1405	16SS1570002	157	0	2	SO	G	1		1						
8/25	1355	16SS1580002	158	0	2	SO	G	1		1						
8/25	1400	16SS1590002	159	0	2	SO	G	1		1						
8/25	1350	16SS1600002	160	0	2	SO	G	1		1						
8/25	1345	16SS1610002	161	0	2	SO	G	1		1						
8/25	1335	16SS1620002	162	0	2	SO	G	1		1						
8/25	1434	16SS1630002	163	0	2	SO	G	1		1						
8/25	1431	16SS1640002	164	0	2	SO	G	1		1						
8/25	1428	16SS1650002	165	0	2	SO	G	1		1						
8/25	1423	16SS1660002	166	0	2	SO	G	1		1						

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 1614 | PAGE _2_ OF _2__

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02127	NSA Crane - SWMU 16	Ralph Basinski	412-921-8425	RTI Laboratories, Inc. / Chino Cortiz 734-422-8000
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER John Floyd	PHONE NUMBER 502-693-1417	ADDRESS 31628 Glendale Street
		CARRIER/WAYBILL NUMBER Fed Ex / 8731 7167 0587		CITY, STATE Livonia, MI 48150

STANDARD TAT ☐X
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR: 2011	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	Container Type Plastic (P) or Glass (G)	G	P					COMMENTS
									Preservative Used	6⁰ C	6⁰ C					
									TYPE OF ANALYSIS	Metals	Metals					
8/25	1425	16SS1670002	167	0	2	SO	G	1		1						
8/25	1416	16SS1680002	168	0	2	SO	G	1		1						
8/25	1420	16SS1690002	169	0	2	SO	G	1		1						
8/25	1410	16SS1700002	170	0	2	SO	G	1		1						
8/25	1525	16SS1710002	171	0	2	SO	G	1		1						
8/25	1410	16SS1720002	172	0	2	SO	G	1		1						
8/25	1515	16SS1730002	173	0	2	SO	G	1		1						
8/25	1412	16SS1740002	174	0	2	SO	G	1		1						
8/25	1500	16SS1750002	175	0	2	SO	G	1		1						
8/25	0000	16FD082511-04	QC	—	—	QC	G	1		1						
8/25	1710	16RB082511-01	QC	—	—	QC	G	1			1					

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 1616 | PAGE _2_ OF _2__

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02127	NSA Crane - SWMU 16	Ralph Basinski	412-921-8425	RTI Laboratories, Inc. / Chino Cortiz 734-422-8000
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER John Floyd	PHONE NUMBER 502-693-1417	ADDRESS 31628 Glendale Street
		CARRIER/WAYBILL NUMBER Fed Ex / 8731 7167 0602		CITY, STATE Livonia, MI 48150

STANDARD TAT ☐X
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR: 2011	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	Container Type Plastic (P) or Glass (G)	G						COMMENTS
									Preservative Used	6⁰ C						
									TYPE OF ANALYSIS	Metals						
8/26		16SS1890002	189	0	2	SO	G	1		1						
8/26		16SS1900002	190	0	2	SO	G	1		1						
8/26	0000	16FD082611-01	QC	—	—	QC	G	1		1						

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 1615 | PAGE _1_ OF _2__

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02127	NSA Crane - SWMU 16	Ralph Basinski	412-921-8425	RTI Laboratories, Inc. / Chino Cortiz 734-422-8000
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER John Floyd	PHONE NUMBER 502-693-1417	ADDRESS 31628 Glendale Street
		CARRIER/WAYBILL NUMBER Fed Ex / 8731 7167 0602		CITY, STATE Livonia, MI 48150

STANDARD TAT ☐X
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

									Container Type Plastic (P) or Glass (G)	G							
									Preservative Used	6⁰ C							
DATE YEAR: 2011	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS	Metals							COMMENTS
8/26		16SS1760002	176	0	2	SO	G	1		1							
8/26		16SS1770002	177	0	2	SO	G	1		1							
8/26		16SS1780002	178	0	2	SO	G	1		1							
8/26		16SS1790002	179	0	2	SO	G	1		1							
8/26		16SS1800002	180	0	2	SO	G	1		1							
8/26		16SS1810002	181	0	2	SO	G	1		1							
8/26		16SS1820002	182	0	2	SO	G	1		1							
8/26		16SS1830002	183	0	2	SO	G	1		1							
8/26		16SS1840002	184	0	2	SO	G	1		1							
8/26		16SS1850002	185	0	2	SO	G	1		1							
8/26		16SS1860002	186	0	2	SO	G	1		1							
8/26		16SS1870002	187	0	2	SO	G	1		1							
8/26		16SS1880002	188	0	2	SO	G	1		1							

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 1604 | PAGE _1_ OF _5__

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02127	NSA Crane - SWMU 16	Ralph Basinski	412-921-8425	RTI Laboratories, Inc. / Chino Cortiz 734-422-8000
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER John Floyd	PHONE NUMBER 502-693-1417	ADDRESS 31628 Glendale Street
		CARRIER/WAYBILL NUMBER Fed Ex / 8731 7167 0598		CITY, STATE Livonia, MI 48150

STANDARD TAT ☐X
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR: 2011	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	Container Type Plastic (P) or Glass (G)	G	G					COMMENTS
									Preservative Used	MeOH NaHSO3	6^0 C					
									TYPE OF ANALYSIS	TCE	% Moisture					
8/24	1045	16SB1180206	118	2	6	SO	G	5		4	1					
8/24	1050	16SB1180607	118	6	7	SO	G	5		4	1					
8/24	1030	16SB1190406	119	4	6	SO	G	5		4	1					
8/24	1035	16SB1190608	119	6	8	SO	G	5		4	1					
8/24	1010	16SB1200406	120	4	6	SO	G	13		12	1					MS/MSD
8/24	1015	16SB1200608	120	6	8	SO	G	5		4	1					
8/24	0950	16SB1210306	121	3	6	SO	G	5		4	1					
8/24	1000	16SB1210607	121	6	7	SO	G	5		4	1					
8/24	0935	16SB1220406	122	4	6	SO	G	5		4	1					
8/24	0945	16SB1220910	122	9	10	SO	G	5		4	1					
8/24	0925	16SB1230306	123	3	6	SO	G	5		4	1					
8/24	0930	16SB1230608	123	6	8	SO	G	5		4	1					
8/24	0905	16SB1240306	124	3	6	SO	G	5		4	1					

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 1605 | PAGE _2_ OF _5__

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02127	NSA Crane - SWMU 16	Ralph Basinski	412-921-8425	RTI Laboratories, Inc. / Chino Cortiz 734-422-8000
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER John Floyd	PHONE NUMBER 502-693-1417	ADDRESS 31628 Glendale Street
		CARRIER/WAYBILL NUMBER Fed Ex / 8731 7167 0598		CITY, STATE Livonia, MI 48150

STANDARD TAT ☐X
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

									Container Type Plastic (P) or Glass (G)	G	G					COMMENTS
									Preservative Used	MeOH NaHSO3	6⁰ C					
DATE YEAR: 2011	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS	TCE	% Moisture					
8/24	0915	16SB1240911	124	9	11	SO	G	5		4	1					
8/24	0845	16SB1250306	125	3	6	SO	G	5		4	1					
8/24	0900	16SB1250607	125	6	7	SO	G	5		4	1					
8/24	1325	16SS1260002	126	0	2	SO	G	5		4	1					
8/24	1330	16SB1260205	126	2	5	SO	G	13		12	1					MS/MSD
8/24	1310	16SS1270002	127	0	2	SO	G	5		4	1					
8/24	1320	16SB1270206	127	2	6	SO	G	5		4	1					
8/24	1250	16SS1280002	128	0	2	SO	G	5		4	1					
8/24	1300	16SB1280206	128	2	6	SO	G	5		4	1					
8/24	1305	16SB1280607	128	6	7	SO	G	5		4	1					
8/24	1335	16SS1290002	129	0	2	SO	G	5		4	1					
8/24	1345	16SB1290206	129	2	6	SO	G	5		4	1					
8/24	1350	16SS1300002	130	0	2	SO	G	5		4	1					

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 1606 | PAGE _3_ OF _5__

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02127	NSA Crane - SWMU 16	Ralph Basinski	412-921-8425	RTI Laboratories, Inc. / Chino Cortiz 734-422-8000
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: John Floyd	PHONE NUMBER: 502-693-1417	ADDRESS: 31628 Glendale Street
		CARRIER/WAYBILL NUMBER: Fed Ex / 8731 7167 0598		CITY, STATE: Livonia, MI 48150

STANDARD TAT ☐X
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR: 2011	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	Container Type Plastic (P) or Glass (G)	G	G					COMMENTS
									Preservative Used	MeOH NaHSO3	6^0 C					
									TYPE OF ANALYSIS	TCE	% Moisture					
8/24	1355	16SB1300206	130	2	6	SO	G	5		4	1					
8/24	1405	16SB1300607	130	6	7	SO	G	5		4	1					
8/24	1410	16SS1310002	131	0	2	SO	G	5		4	1					
8/24	1420	16SB1310206	131	2	6	SO	G	5		4	1					
8/24	1425	16SS1320002	132	0	2	SO	G	5		4	1					
8/24	1430	16SB1320206	132	2	6	SO	G	5		4	1					
8/24	1440	16SB1320608	132	6	8	SO	G	5		4	1					
8/24	1445	16SS1330002	133	0	2	SO	G	5		4	1					
8/24	1455	16SB1330206	133	2	6	SO	G	5		4	1					
8/24	1500	16SS1340002	134	0	2	SO	G	5		4	1					
8/24	1505	16SB1340206	134	2	6	SO	G	5		4	1					
8/24	1510	16SB1340607	134	6	7	SO	G	5		4	1					
8/24	1525	16SB1350206	135	2	6	SO	G	5		4	1					

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE / TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE / TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE / TIME

COMMENTS

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 1607 | PAGE _4_ OF _5__

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02127	NSA Crane - SWMU 16	Ralph Basinski	412-921-8425	RTI Laboratories, Inc. / Chino Cortiz 734-422-8000
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: John Floyd	PHONE NUMBER: 502-693-1417	ADDRESS: 31628 Glendale Street
		CARRIER/WAYBILL NUMBER: Fed Ex / 8731 7167 0598		CITY, STATE: Livonia, MI 48150

STANDARD TAT ☐X
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR: 2011	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	Container Type Plastic (P) or Glass (G)	G	G					COMMENTS
									Preservative Used	MeOH NaHSO3	6⁰ C					
									TYPE OF ANALYSIS	TCE	% Moisture					
8/24	1545	16SS1360002	136	0	2	SO	G	5		4	1					
8/24	1550	16SB1360206	136	2	6	SO	G	13		12	1					MS/MSD
8/24	1555	16SB1360607	136	6	7	SO	G	5		4	1					
8/24	1600	16SS1370002	137	0	2	SO	G	5		4	1					
8/24	1610	16SB1370205	137	2	5	SO	G	5		4	1					
8/24	1615	16SS1380002	138	0	2	SO	G	5		4	1					
8/24	1620	16SB1380206	138	2	6	SO	G	5		4	1					
8/24	1630	16SB1380608	138	6	8	SO	G	5		4	1					
8/24	1640	16SS1390002	139	0	2	SO	G	5		4	1					
8/24	1645	16SB1390206	139	2	6	SO	G	5		4	1					
8/24	1650	16SS1400002	140	0	2	SO	G	5		4	1					
8/24	1700	16SB1400206	140	2	6	SO	G	5		4	1					
8/24	1100	16SB1990406	199	4	6	SO	G	5		4	1					

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE / TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE / TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE / TIME

COMMENTS

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 1608 | PAGE _5_ OF _5__

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02127	NSA Crane - SWMU 16	Ralph Basinski	412-921-8425	RTI Laboratories, Inc. / Chino Cortiz 734-422-8000
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER John Floyd	PHONE NUMBER 502-693-1417	ADDRESS 31628 Glendale Street
		CARRIER/WAYBILL NUMBER Fed Ex / 8731 7167 0598		CITY, STATE Livonia, MI 48150

STANDARD TAT ☐X
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

									Container Type Plastic (P) or Glass (G)	G	G					
									Preservative Used	MeOH NaHSO3	6⁰ C					
DATE YEAR: 2011	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS	TCE	% Moisture					COMMENTS
8/24	1105	16SB1990709	199	7	9	SO	G	5		4	1					
8/24	0000	16FD082411-01	QC	—	—	QC	G	4		4	—					
8/24	0000	16FD082411-02	QC	—	—	QC	G	4		4	—					
8/24	0000	16FD082411-03	QC	—	—	QC	G	4		4	—					
8/24	1730	16TB082411-01	QC	—	—	QC	G	1		1	—					
8/24	1730	16TB082411-02	QC	—	—	QC	G	1		1	—					
8/24	1730	16TB082411-03	QC	—	—	QC	G	1		1	—					
8/24	1730	16TB082411-04	QC	—	—	QC	G	1		1	—					
8/24	1730	16TB082411-05	QC	—	—	QC	G	1		1	—					

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

TETRA TECH NUS, INC. CHAIN OF CUSTODY NUMBER 1609 PAGE _1_ OF _4__

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02127	NSA Crane - SWMU 16	Ralph Basinski	412-921-8425	RTI Laboratories, Inc. / Chino Cortiz 734-422-8000
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER John Floyd	PHONE NUMBER 502-693-1417	ADDRESS 31628 Glendale Street
		CARRIER/WAYBILL NUMBER Fed Ex / 8731 7167 0587		CITY, STATE Livonia, MI 48150

STANDARD TAT ☐X
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR: 2011	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	Container Type Plastic (P) or Glass (G)	G	G					COMMENTS
									Preservative Used	MeOH NaHSO3	6^0 C					
									TYPE OF ANALYSIS	TCE	% Moisture					
8/25	1450	16SB1400206	140	2	6	SO	G	1		—	1					
8/25	0755	16SS1410002	141	0	2	SO	G	5		4	1					
8/25	0805	16SB1410206	141	2	6	SO	G	5		4	1					
8/25	0815	16SB1410709	141	7	9	SO	G	5		4	1					
8/25	0820	16SS1420002	142	0	2	SO	G	5		4	1					
8/25	0825	16SB1420204	142	2	4	SO	G	13		12	1					MS/MSD
8/25	0835	16SS1430002	143	0	2	SO	G	5		4	1					
8/25	0840	16SB1430205	143	2	5	SO	G	5		4	1					
8/25	0845	16SS1440002	144	0	2	SO	G	5		4	1					
8/25	0850	16SB1440204	144	2	4	SO	G	5		4	1					
8/25	0855	16SS1450002	145	0	2	SO	G	5		4	1					
8/25	0900	16SB1450203	145	2	3	SO	G	5		4	1					
8/25	0905	16SS1460002	146	0	2	SO	G	5		4	1					

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE / TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE / TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE / TIME

COMMENTS

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 1610 | PAGE _2_ OF _4__

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02127	NSA Crane - SWMU 16	Ralph Basinski	412-921-8425	RTI Laboratories, Inc. / Chino Cortiz 734-422-8000
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER John Floyd	PHONE NUMBER 502-693-1417	ADDRESS 31628 Glendale Street
		CARRIER/WAYBILL NUMBER Fed Ex / 8731 7167 0587		CITY, STATE Livonia, MI 48150

STANDARD TAT ☐X
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

									Container Type Plastic (P) or Glass (G)	G	G						
									Preservative Used	MeOH NaHSO3	6⁰ C						
DATE YEAR: 2011	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS	TCE	% Moisture						COMMENTS
8/25	0910	16SB1460205	146	2	5	SO	G	5		4	1						
8/25	0915	16SS1470002	147	0	2	SO	G	5		4	1						
8/25	0920	16SB1470206	147	2	6	SO	G	13		12	1						MS/MSD
8/25	0930	16SS1480002	148	0	2	SO	G	5		4	1						
8/25	0940	16SB1480206	148	2	6	SO	G	5		4	1						
8/25	0945	16SS1490002	149	0	2	SO	G	13		12	1						MS/MSD
8/25	0950	16SB1490206	149	2	6	SO	G	5		4	1						
8/25	1000	16SB1500002	150	2	5	SO	G	5		4	1						
8/25	1005	16SB1500205	150	2	5	SO	G	5		4	1						
8/25	1010	16SS1510002	151	0	2	SO	G	5		4	1						
8/25	1015	16SB1510204	151	2	4	SO	G	5		4	1						
8/25	1017	16SS1520002	152	0	2	SO	G	5		4	1						
8/25	1020	16SB1520203	152	2	3	SO	G	5		4	1						

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 1611 | PAGE _3_ OF _4__

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02127	NSA Crane - SWMU 16	Ralph Basinski	412-921-8425	RTI Laboratories, Inc. / Chino Cortiz 734-422-8000
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: John Floyd	PHONE NUMBER: 502-693-1417	ADDRESS: 31628 Glendale Street
		CARRIER/WAYBILL NUMBER: Fed Ex / 8731 7167 0587		CITY, STATE: Livonia, MI 48150

STANDARD TAT ☐X
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR: 2011	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	Container Type Plastic (P) or Glass (G)	G	G					COMMENTS
									Preservative Used	MeOH NaHSO3	6⁰ C					
									TYPE OF ANALYSIS	TCE	% Moisture					
8/25	1025	16SS1530002	153	0	2	SO	G	5		4	1					
8/25	1030	16SB1530206	153	2	6	SO	G	5		4	1					
8/25	1045	16SB2000204	200	2	4	SO	G	5		4	1					
8/25	1050	16SB2010203	201	2	3	SO	G	5		4	1					
8/25	1055	16SB2020204	202	2	4	SO	G	5		4	1					
8/25	1100	16SB2030203	203	2	3	SO	G	5		4	1					
8/25	1110	16SS2040002	204	0	2	SO	G	5		4	1					
8/25	1115	16SB2040206	204	2	6	SO	G	5		4	1					
8/25	1120	16SB2040709	204			SO	G	5		4	1					
8/25	1125	16SS2050002	205	0	2	SO	G	5		4	1					
8/25	1130	16SB2050206	205	2	6	SO	G	5		4	1					
8/25	1135	16SB2050607	205	6	7	SO	G	5		4	1					
8/25	1140	16SS2060002	202	0	2	SO	G	5		4	1					

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE / TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE / TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE / TIME

COMMENTS

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 1612 | PAGE _4_ OF _4__

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02127	NSA Crane - SWMU 16	Ralph Basinski	412-921-8425	RTI Laboratories, Inc. / Chino Cortiz 734-422-8000
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER John Floyd	PHONE NUMBER 502-693-1417	ADDRESS 31628 Glendale Street
		CARRIER/WAYBILL NUMBER Fed Ex / 8731 7167 0587		CITY, STATE Livonia, MI 48150

STANDARD TAT ☐X
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

									Container Type Plastic (P) or Glass (G)	G	G					COMMENTS
									Preservative Used	MeOH NaHSO3	6^0 C					
DATE YEAR: 2011	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS	TCE	% Moisture	VOCs	TPH-GRO	TPH-DRO		
8/25	1145	16SB2060204	206	2	4	SO	G	5		4	1					
8/25	0000	16FD082511-01	QC	—	—	QC	G	4		4	—					
8/25	0000	16FD082511-02	QC	—	—	QC	G	4		4	—					
8/25	0000	16FD082511-03	QC	—	—	QC	G	4		4	—					
8/25	1600	16TB082511-01	QC	—	—	QC	G	1		1	—					
8/25	1600	16TB082511-02	QC	—	—	QC	G	1		1	—					
8/25	1600	16TB082511-03	QC	—	—	QC	G	1		1	—					
8/25	1600	16TB082511-04	QC	—	—	QC	G	1		1	—					
8/25	1710	16RB082511-01	QC	—	—	QC	G	4		4	—					
8/25	1710	16RB082511-01	QC	—	—	QC	G	4		—	—	4				
8/25	1710	16RB082511-01	QC	—	—	QC	G	2		—	—	—	2			
8/25	1710	16RB082511-01	QC	—	—	QC	G	2		—	—	—	—	1		
8/25																

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 1601 | PAGE _1_ OF _3__

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02127	NSA Crane - SWMU 16	Ralph Basinski	412-921-8425	RTI Laboratories, Inc. / Chino Cortiz 734-422-8000
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER John Floyd	PHONE NUMBER 502-693-1417	ADDRESS 31628 Glendale Street
		CARRIER/WAYBILL NUMBER Fed Ex / 8731 7167 0602		CITY, STATE Livonia, MI 48150

STANDARD TAT ☐X
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR: 2011	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	Container Type Plastic (P) or Glass (G)	G	G	G	G	G		COMMENTS
									Preservative Used	MeOH NaHSO3	MeOH	6⁰ C	6⁰ C	6⁰ C		
									TYPE OF ANALYSIS	VOCs	TPH-GRO	TPH-DRO	Lead	% Moisture		
8/23	1045	16SS1910002	191	0	2	SO	G	9		4	2	1	1	1		
8/23	1110	16SB1910206	191	2	6	SO	G	9		4	2	1	1	1		
8/23	1120	16SB1910608	191	6	8	SO	G	9		4	2	1	1	1		
8/23	1225	16SS1920002	192	0	2	SO	G	9		4	2	1	1	1		
8/23	1245	16SB1920206	192	2	6	SO	G	9		4	2	1	1	1		
8/23	1300	16SB1920709	192	7	9	SO	G	9		4	2	1	1	1		
8/23	1310	16SS1930002	193	0	2	SO	G	9		4	2	1	1	1		
8/23	1320	16SB1930206	193	2	6	SO	G	9		4	2	1	1	1		
8/23	1335	16SB1930608	193	6	8	SO	G	9		4	2	1	1	1		
8/23	1340	16SS1940002	194	0	2	SO	G	9		4	2	1	1	1		
8/23	1350	16SB1940206	194	2	6	SO	G	9		4	2	1	1	1		
8/23	1355	16SB1940810	194	8	10	SO	G	9		4	2	1	1	1		
8/23	1410	16SS1950002	195	0	2	SO	G	9		4	2	1	1	1		

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 1602 | PAGE _2_ OF _3__

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02127	NSA Crane - SWMU 16	Ralph Basinski	412-921-8425	RTI Laboratories, Inc. / Chino Cortiz 734-422-8000
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: John Floyd	PHONE NUMBER: 502-693-1417	ADDRESS: 31628 Glendale Street
		CARRIER/WAYBILL NUMBER: Fed Ex / 8731 7167 0602		CITY, STATE: Livonia, MI 48150

STANDARD TAT ☐X
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR: 2011	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	Container Type Plastic (P) or Glass (G)	G	G	G	G	G		COMMENTS
									Preservative Used	MeOH NaHSO3	MeOH	6⁰ C	6⁰ C	6⁰ C		
									TYPE OF ANALYSIS	VOCs	Lead	TPH-DRO	Lead	% Moisture		
8/23	1415	16SS1950206	195	2	6	SO	G	9		4	2	1	1	1		
8/23	1425	16SB1950709	195	7	9	SO	G	9		4	2	1	1	1		
8/23	1435	16SS1960002	196	0	2	SO	G	9		4	2	1	1	1		
8/23	1500	16SB1960206	196	2	6	SO	G	9		4	2	1	1	1		
8/23	1520	16SB1961012	196	10	12	SO	G	9		4	2	1	1	1		
8/23	1530	16SS1970002	197	0	2	SO	G	9		4	2	1	1	1		
8/23	1540	16SB1970206	197	2	6	SO	G	25		12	6	3	3	1		MS/MSD
8/23	1605	16SB1970607	197	6	7	SO	G	9		4	2	1	1	1		
8/23	1610	16SS1980002	198	0	2	SO	G	9		4	2	1	1	1		
8/23	1625	16SB1980206	198	2	6	SO	G	25		12	6	3	3	1		MS/MSD
8/23	1645	16SB1980607	198	6	7	SO	G	9		4	2	1	1	1		
8/23	0000	16FD082311-01	QC	—	—	SO	G	9		4	2	1	1	1		
8/23	0000	16FD082311-02	QC	—	—	SO	G	9		4	2	1	1	1		

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 1603 | PAGE _3_ OF _3__

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02127	NSA Crane - SWMU 16	Ralph Basinski	412-921-8425	RTI Laboratories, Inc. / Chino Cortiz 734-422-8000
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER John Floyd	PHONE NUMBER 502-693-1417	ADDRESS 31628 Glendale Street
		CARRIER/WAYBILL NUMBER Fed Ex / 8731 7167 0602		CITY, STATE Livonia, MI 48150

STANDARD TAT ☐X
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR: 2011	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	Container Type Plastic (P) or Glass (G)	G	G	G	G	G		COMMENTS
									Preservative Used	MeOH NaHSO3	MeOH	6⁰ C	6⁰ C	6⁰ C		
									TYPE OF ANALYSIS	VOCs	TPH-GRO	TPH-DRO	Lead	% Moisture		
8/23	1730	16TB082311-01	QC	—	—	SO	G	1		1						
8/23	1730	16TB082311-02	QC	—	—	SO	G	1		1						
8/23	1730	16TB082311-03	QC	—	—	SO	G	1		1						
8/23	1730	16TB082311-04	QC	—	—	SO	G	1		1						

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

APPENDIX A.4

CHAIN-OF-CUSTODY FORMS
ROUND 2 SAMPLING EVENT (OCTOBER/NOVEMBER 2012)

TETRA TECH, INC. | CHAIN OF CUSTODY | NUMBER 100512-04 | PAGE _1_ OF _2_

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02127	NSA Crane – SWMU 16	Ralph Basinski	412-921-8308	Empirical Labs / Brian Richard (615-345-1115)
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Jim Goerdt	PHONE NUMBER: 412-921-8425	ADDRESS: 621 Mainstream Drive, Suite 270
		CARRIER/WAYBILL NUMBER: Fed Ex / 8013 8269 1063		CITY, STATE: Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR: 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS	Metals (Zn, Pb)						COMMENTS
									Container Type Plastic (P) or Glass (G)	G						
									Preservative Used	6ºC						
10/5	1115	16SS221-0002	221	0	2	SO	G	1		1						
10/5	1120	16SS222-0002	222	0	2	SO	G	1		1						
10/5	1130	16SS223-0002	223	0	2	SO	G	1		1						
10/5	1135	16SS224-0002	224	0	2	SO	G	1		1						
10/5	1205	16SS225-0002	225	0	2	SO	G	1		1						
10/5	1150	16SS226-0002	226	0	2	SO	G	1		1						
10/5	1045	16SS227-0002	227	0	2	SO	G	1		1						
10/5	1200	16SS228-0002	228	0	2	SO	G	1		1						
10/5	1100	16SS229-0002	229	0	2	SO	G	3		3						MS/MSD
10/5	1210	16SS230-0002	230	0	2	SO	G	1		1						
10/5	1215	16SS231-0002	231	0	2	SO	G	1		1						
10/5	1220	16SS232-0002	232	0	2	SO	G	1		1						
10/5	1230	16SS233-0002	233	0	2	SO	G	1		1						

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

TETRA TECH, INC. | CHAIN OF CUSTODY | NUMBER 100512-01 | PAGE _1_ OF _2_

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02127	NSA Crane – SWMU 16	Ralph Basinski	412-921-8308	Empirical Labs / Brian Richard (615-345-1115)
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER Jim Goerdt	PHONE NUMBER 412-921-8425	ADDRESS 621 Mainstream Drive, Suite 270
		CARRIER/WAYBILL NUMBER Fed Ex / 8013 8269 0950		CITY, STATE Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR: 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS	VOCs	% Moisture	Metals	Metals (total)	Metals (dissolved)	VOCs	COMMENTS
									Container Type Plastic (P) or Glass (G)	G	G	G	P	P	G	
									Preservative Used	6ºC / CH4O/ NaSH 04	6ºC	6ºC	6ºC / HNO3	6ºC / HNO3	6ºC / HCL	
10/6	1335	16SS207-0002	207	0	2	SO	G	12		9	3					MS/MSD
10/6	1345	16SS208-0002	208	0	2	SO	G	4		3	1					
10/6	1350	16SS209-0002	209	0	2	SO	G	4		3	1					
10/6	1355	16SB209-0203	209	2	3	SO	G	4		3	1					
10/6	1400	16SS210-0002	210	0	2	SO	G	4		3	1					
10/6	1410	16SS211-0002	211	0	2	SO	G	4		3	1					
10/6	1415	16SS212-0002	212	0	2	SO	G	4		3	1					
10/6	1420	16SS213-0002	213	0	2	SO	G	4		3	1					
10/6	1430	16SS214-0002	214	0	2	SO	G	4		3	1					
10/6	1320	16SS215-0002	215	0	2	SO	G	4		3	1					
10/6	1300	16SS216-0002	216	0	2	SO	G	4		3	1					
10/6	1330	16SS217-0002	217	0	2	SO	G	4		3	1					
10/6	1435	16SS218-0002	218	0	2	SO	G	4		3	1					

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE / TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE / TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE / TIME

COMMENTS

TETRA TECH, INC. | CHAIN OF CUSTODY | NUMBER 100512-04 | PAGE _1_ OF _2_

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02127	NSA Crane – SWMU 16	Ralph Basinski	412-921-8308	Empirical Labs / Brian Richard (615-345-1115)
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Jim Goerdt	PHONE NUMBER: 412-921-8425	ADDRESS: 621 Mainstream Drive, Suite 270
		CARRIER/WAYBILL NUMBER: Fed Ex / 8013 8269 1063		CITY, STATE: Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR: 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS	Metals (Zn, Pb)						COMMENTS
									Container Type Plastic (P) or Glass (G)	G						
									Preservative Used	6ºC						
10/5	1115	16SS221-0002	221	0	2	SO	G	1		1						
10/5	1120	16SS222-0002	222	0	2	SO	G	1		1						
10/5	1130	16SS223-0002	223	0	2	SO	G	1		1						
10/5	1135	16SS224-0002	224	0	2	SO	G	1		1						
10/5	1205	16SS225-0002	225	0	2	SO	G	1		1						
10/5	1150	16SS226-0002	226	0	2	SO	G	1		1						
10/5	1045	16SS227-0002	227	0	2	SO	G	1		1						
10/5	1200	16SS228-0002	228	0	2	SO	G	1		1						
10/5	1100	16SS229-0002	229	0	2	SO	G	3		3						MS/MSD
10/5	1210	16SS230-0002	230	0	2	SO	G	1		1						
10/5	1215	16SS231-0002	231	0	2	SO	G	1		1						
10/5	1220	16SS232-0002	232	0	2	SO	G	1		1						
10/5	1230	16SS233-0002	233	0	2	SO	G	1		1						

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

TETRA TECH, INC. | CHAIN OF CUSTODY | NUMBER 100512-05 | PAGE _2_ OF _2_

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02127	NSA Crane – SWMU 16	Ralph Basinski	412-921-8308	Empirical Labs / Brian Richard (615-345-1115)
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Jim Goerdt	PHONE NUMBER: 412-921-8425	ADDRESS: 621 Mainstream Drive, Suite 270
		CARRIER/WAYBILL NUMBER: Fed Ex / 8013 8269 1063		CITY, STATE: Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR: 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS	Container Type Plastic (P) or Glass (G): G	Preservative Used: 6ºC						COMMENTS
										Metals (Zn, Pb)							
10/5	1240	16SS234-0002	234	0	2	SO	G	1		1							
10/5	1250	16SS235-0002	235	0	2	SO	G	1		1							
10/5	0000	16FD100512-01	QC	—	—	QC	G	1		1							

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

TETRA TECH NUS, INC. | **CHAIN OF CUSTODY** | **NUMBER** NE 2335 | **PAGE** ___ **OF** ___

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02127	NSA Crane	Ralph Berinski	412-921-8308	Brian Richards / Empirical
SAMPLERS (SIGNATURE)		**FIELD OPERATIONS LEADER**	**PHONE NUMBER**	**ADDRESS**
OK-BP		Kevin Loskamp	513-333-3680	1021 Mainstream Dr Suite 270
		CARRIER/WAYBILL NUMBER		**CITY, STATE**
		8011 1642 8173		Nashville TN 37228

STANDARD TAT ☐
RUSH TAT ☒ 7 day turn
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☒ 7 day ☐ 14 day

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	VOCs	% Moisture	VOCs						COMMENTS
								CONTAINER TYPE PLASTIC (P) or GLASS (G)	G	G							
								PRESERVATIVE USED		Ice	HCL						
11/30	0845	1655236 0002	SB 236	0	2	SO	G	4	X	X							7 day turn
	0850	165B2360206	⊥	2	6			4									
	0905	1655237 0002	SB 237	0	2			4									
	0915	165B2370206	⊥	2	6			4									
	0920	1655238 0002	SB 238	0	2			4									
	0925	165B2380206	⊥	2	6			4									
	0930	1655239 0002	SB 239	0	2			4									
	0935	165B2390206	⊥	2	6			4									
	0940	1655240 0002	SB 240	0	2			4									
	0945	165B2400206	⊥	2	6			4									
	0950	1655241 0002	SB 241	0	2			4									
	0955	165B2410206	⊥	2	6			12									MS/MSD
	xxxx	16FD113012-01	FD	—	—	QC	G	4									

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
Kevin Loskamp	11/30/12	1600			
2. RELINQUISHED BY	**DATE**	**TIME**	**2. RECEIVED BY**	**DATE**	**TIME**
3. RELINQUISHED BY	**DATE**	**TIME**	**3. RECEIVED BY**	**DATE**	**TIME**

COMMENTS

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4/02R

TETRA TECH NUS, INC.

CHAIN OF CUSTODY

NUMBER NB 2341

PROJECT NO: 112G02127	FACILITY: NSA Crane	PROJECT MANAGER: Ralph Basinski	PHONE NUMBER: 412-921-8308	LABORATORY NAME AND CONTACT: Brain Richards / Empirical
SAMPLERS (SIGNATURE): [signature]		FIELD OPERATIONS LEADER: Kevin Loselkamp	PHONE NUMBER: 513-333-3680	ADDRESS: 621 Mainstream Dr Suite 270
		CARRIER/WAYBILL NUMBER: 8011 1642 8173		CITY, STATE: Nashville TN 37228

STANDARD TAT ☐
RUSH TAT ☒
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☒ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: HCL
TYPE OF ANALYSIS: VOCs

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	VOCs								COMMENTS
11/30	1200	16RB113012-01	RB 01	–	–	QC	G	3	X								7day turn

1. RELINQUISHED BY: Kevin Loselkamp	DATE: 11/30/12	TIME: 1600	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)