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TECHNICAL MEMORANDUM FOR PHASE I RCRA FACILITY INVESTIGATION SOLID WASTE MANAGEMENT UNIT 32 (SWMU 32) FORMER FUEL OIL TANK FARM NSA CRANE IN

9/1/2010

TETRA TECH

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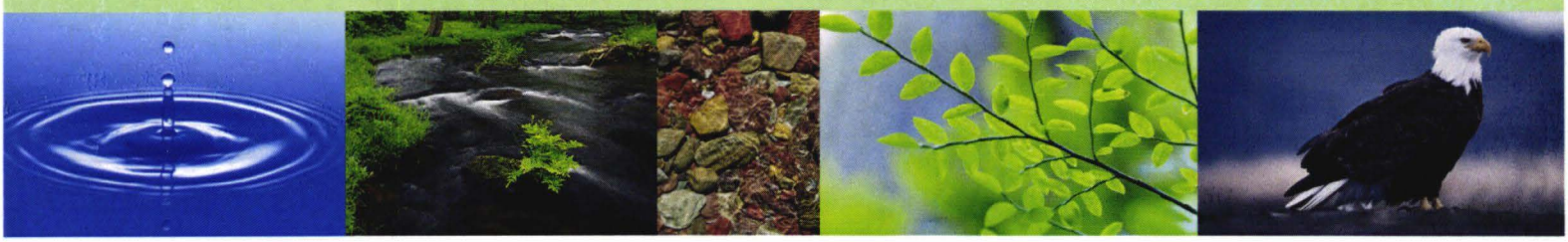
Comprehensive Long-term Environmental Action Navy

CONTRACT NUMBER N624707-08-D-1001



Technical Memorandum

For

Phase I RCRA Facility Investigation
SWMU 32 – Former Fuel Oil Tank Farm

Naval Support Activity Crane
Crane, Indiana

Contract Task Order F273

September 2010

Naval Facilities Engineering Command
Midwest
201 Decatur Avenue
Building 1A, Code EV
Great Lakes, Illinois 60088

TETRA TECH NUS, Inc.

TECHNICAL MEMORANDUM

DATE: September 21, 2010, Revision 1

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Project File – CTO F273

SUBJECT: NSA Crane - Additional Sampling and Analysis for SWMU 32

Tetra Tech performed RCRA Facility Investigation (RFI) sampling and analysis at SMWU 32 - Former Fuel Oil Tank Farm (site). RFI samples were collected in April 2010 in accordance with the January 2010 *Sampling and Analysis Plan (SAP)*. The sampling and analysis was performed to determine if any contaminants of potential concern (COPCs) exceeded the Project Screening Levels (PSLs) identified and established in the SAP, and, if present, to determine the nature and extent of those contaminants.

The analytical results have been obtained, validated, and reviewed; the contaminant levels in the majority of samples did not exceed the PSLs. Samples with concentrations that exceed PSLs are generally slightly above PSLs; most of the contamination is limited and bounded by samples with contaminant levels that are below PSLs. The results identified locations where contaminant levels exceed the PSLs for specific COPCs and where sufficient analytical data was not obtained to establish the extent of those contaminants.

The purpose of this memorandum is to: 1) present the analytical results, 2) identify locations where contaminants are not bounded, 3) present a preliminary assessment of the data, and 4) provide recommendations for additional sampling and analysis to delineate the extent of contamination and obtain sufficient data to prepare the RFI report.

Background

SWMU 32 - Former Fuel Oil Tank Farm was operational from 1947 to 1996 as a bulk fuel oil storage facility. There was a release of approximately 3,700 gallons of fuel oil at the site in 1987. Operations were discontinued and the site was dismantled and remediated in a phased manner. Although remediation was performed, there was insufficient analytical data to characterize the site and to determine if additional remediation and/or if no further action was appropriate for the site.

Investigation Results

In April 2010, surface and subsurface soil samples were collected from 57 locations on, and near, the site, and three sediment samples and three groundwater samples from near the site. The analytical data from those samples is presented on Tables 1 through 4 in Attachment A. Positive hits for contaminants are shown on Figures 1-1, 1-2, 1-3, 1-4 and 1-5 in Attachment B. As shown on those tables and figures, the most common COPCs that exceed the PSLs are naphthalene, benzo(a)pyrene, and benzene.

- **Surface Soil.** The analytical results for the surface soil samples are presented in Table 1 and the positive detections are shown on Figure 1-1. Surface soil samples were collected at 0 to 2 feet below ground surface (bgs). The revised PSLs shown in Table 1 are based on the IDEM RISC Residential Default Closure Level (DCL) criteria, which are different from those presented in Worksheet #15 in the SAP, but are deemed to be appropriate for this project and are the criteria that will be used to evaluate risk on the site. As shown in Table 1 and on Figure 1-1, there were 19 surface soil samples collected on the site with positive detections of one or more target analytes; 11 of those samples contained benzo(a)pyrene. As shown in Table 1, contaminant levels that exceed the revised PSLs for one or more target analytes were detected in two surface soil samples: 32SO-17 and 32SO-18. Sample 32SO-17 contained seven polycyclic aromatic hydrocarbons (PAH) contaminants, including benzo(a)pyrene, above the PSLs, and sample 32SO-18 contained benzo(a)pyrene above the PSL. Detected concentration levels of benzo(a)pyrene on the site ranged from 9.39 micrograms per kilogram (ug/Kg) in 32SO-28 to 2,900 ug/Kg in 32SO-17. As shown on Figure 1-1, the west side of the benzo(a)pyrene surface soil contamination on the west side of the site is not bounded. During the April 2010 field activities, there was no significant indication in the field of surface soil contamination in the area; no additional step-out samples were collected in the area.

- **Subsurface Soil.** The analytical results for the subsurface soil samples are presented in Table 2. The positive detections for BTEX contaminants in the subsurface soil are shown on Figure 1-2. The positive detections for PAH contaminants in the subsurface soil are shown on Figure 1-3. The revised PSLs are shown in Table 2 and are based on the IDEM RISC Residential DCL criteria.

These levels are different from the PSLs presented in Worksheet #15 of the SAP, but are appropriate for this project and are the concentrations that will be used to evaluate risk on the site. As shown in Table 2 and on Figure 1-2, there were nine subsurface soil samples with positive detections for BTEX compounds. Three of these samples contained BTEX (benzene only) concentrations that exceed the PSLs (32SO-06, 32SO-45, and 32SO-49). Concentrations in these three samples exceeded the migration to groundwater standard. Samples 32SO-06 and 32SO-49 were collected at 4 to 5 feet bgs, and sample 32SO-45 was collected at 6 to 7 feet bgs. As shown in Table 2 and on Figure 1-3, there were 15 subsurface soil samples with positive detections for PAH compounds; only 4 of these samples contained concentrations that exceed the PSLs (32SO-06, 32SO-17, 32SO-50, and 32SO-51). The concentration levels of naphthalene in these samples ranged from an estimated 1,360 ug/Kg (J) to 2,470 ug/Kg. Sample 32SO-06 was collected at 4 to 5 feet bgs, samples 32SO-17 and 32SO-50 were collected from 6 to 7 feet bgs, and sample 32SO-51 was collected at 7 to 8 feet bgs. A sand and gravel layer was encountered in soil borings 32SB-50 and 32SB-51 between 6 and 8 feet bgs that contained visible oil staining, strong fuel oil odors, and elevated photo ionization detector (PID) readings. As a result of these findings, some step-out samples were collected. However, sufficient step-out samples to delineate the extent of contamination and/or the sand and gravel layer could not be collected because the area had not been cleared of utilities.

- **Sediment.** The analytical results for the sediment samples are presented in Table 3 and the positive detections are shown on Figures 1-4 and 1-5 for BTEX and PAH parameters, respectively. All sediment samples were collected at 0 to 6 inches bgs. Three sediment samples were collected from Culpepper Branch approximately 400 feet south of the site in the area where the drainage channel from the site discharges into Culpepper Branch. One sample (32SD-01) was collected upgradient from where the drainage channel discharges into the branch, and two samples (32SD-02 and 32SD-03) were collected downgradient from the discharge point. As shown in Table 3, all three samples contained low but positive detections for contaminants. Two of these samples (32SD-02 and 32SD-03) contained benzo(a)pyrene at concentrations above the human health PSL. However, these concentrations are in the same order of magnitude as the PSLs. There were no visible signs of contamination in these samples during the field work.

- **Groundwater.** Three groundwater samples were collected from temporary wells in the vicinity of the site. One sample was collected northeast (and assumed upgradient) of the site, and two were collected south-southeast (and assumed downgradient) of the site. The groundwater samples were analyzed for BTEX and PAH compounds. Naphthalene was the only compound that was detected in the samples, and that was at an estimated value of 0.0402 micrograms per liter (ug/L) in Sample 32GW-02. The analytical results for naphthalene in groundwater samples are presented in Table 4.

As shown in Table 4, the groundwater results did not show any contamination above the PSLs and the detected naphthalene was two orders of magnitude below the naphthalene PSL.

Preliminary Data Assessment

There is some residual surface and subsurface soil contamination on the site above PSLs for benzo(a)pyrene and naphthalene. This contamination does not appear to be widespread, and there is no evidence of groundwater contamination above the PSLs. However, there is an area on the west side of the site where the surface soil contamination is not bounded for benzo(a)pyrene, an area on the south side of the site where the subsurface contamination is not bounded for naphthalene, and there is no groundwater data in the area southeast of the site, downgradient from the subsurface soil where naphthalene exceeds the PSL. Groundwater data is important to determine the potential need for more work at the site. If surface and subsurface soil contamination is not impacting groundwater at levels that exceed the COPC PSLs for groundwater, it may be reasonable to propose no further action.

Recommendations

Tetra Tech recommends that additional data be collected before proceeding with the RFI report. This includes performing sampling and analysis to bound and better define the extent of surface soil benzo(a)pyrene contamination, subsurface soil naphthalene contamination, volatile and PAH contamination in sediment, and the collection and analysis of additional groundwater samples to confirm that contamination is not entering the groundwater downgradient of the identified source areas. The proposed locations of these samples are shown on Figure 1-6 and listed in Table 5.

- **Surface soil on west side of site.** Six additional surface soil samples are proposed to be collected on the west side of the site to better delineate and bound the extent of surface soil benzo(a)pyrene contamination that exists at levels above the PSL. Four of these samples will be collected west of SB18, one south of SB18, and one northeast of SB17. The approximate locations are shown on Figure 1-6. These samples will be collected from 0 to 2 feet bgs and analyzed for benzo(a)pyrene.

- **Subsurface soil on south side of site.** Six additional soil borings are proposed to be collected on the south side of the site to delineate and bound the extent of subsurface soil naphthalene contamination. Contamination is expected to follow the sand and gravel layer encountered in the area. The proposed borings are southeast of soil borings 32SO-47 and 32SO-51, as shown on Figure 1-6. Multiple subsurface soil samples may be collected from soil borings based on field conditions. For example, if the sand and gravel layer is encountered at 7 feet deep, a sample will be collected at that depth and if it appears to be contaminated, a deeper sample will be collected to

confirm that contamination is confined to the sand and gravel layer. The total depth of the soil borings is expected to be between 10 and 15 feet bgs. Samples will be collected from the interval that shows the highest potential for contamination based on field observations and screening with a PID. Subsurface soil samples from the area will be analyzed for naphthalene only.

- **Sediment from Culpepper Branch.** Two additional sediment samples will be collected downgradient of sediment sample location 32SD-03. All sediment samples will be collected at 0 to 6 inches bgs. These samples will be analyzed for VOCs and BTEX.

- **Additional Groundwater Sample.** Three additional groundwater samples are proposed to be collected in the area downgradient of the subsurface soil naphthalene contamination, as shown on Figure 1-4; the location may be revised based on observations in the field. Temporary wells will be installed into the groundwater at an expected depth of approximately 20 feet bgs. The groundwater gradient, based on the three temporary wells placed during the April 2010 investigation, indicated groundwater flow to be east to southeast. The location of the proposed temporary wells will be southeast of the subsurface soil naphthalene contamination. The groundwater samples will be analyzed for VOCs and BTEX.

Tetra Tech proposes to perform recommended sampling and analysis as described in this Tech Memo and attachments in accordance with the step-out provisions contained in Section 11.4 of the January 2010 SAP. This work is scheduled to be performed during field activities that are scheduled for SWMU 21 in September 2010.

Attachment A - Tables

Table 1 - Analytical Results for Surface Soil Samples
Table 2 - Analytical Results for Subsurface Soil Samples
Table 3 - Analytical Results for Sediment Samples
Table 4 - Analytical Results for Groundwater Samples
Table 5 - Proposed Additional Sampling at SWMU 32 and Methods/SOP Requirements Table

Table 1 - Analytical Results for Surface Soil Samples

LOCATION				32SO-01		32SO-02	32SO-03	32SO-04	32SO-05
SAMPLE ID			32SS-01-0002	32SS-01-0002-	32SS-01-0002-D	32SS-02-0002	32SS-03-0002	32SS-04-0002	32SS-05-0002
SAMPLE DATE	Revised		20100426	20100426	20100426	20100426	20100426	20100426	20100426
SAMPLE CODE	Project		ORIG	AVG	DUP	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	Screening		SO	SO	SO	SO	SO	SO	SO
SAMPLE TYPE	Level		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	HHRA	ERA	0	0	0	0	0	0	0
BOTTOM DEPTH	UG/KG	UG/KG	2	2	2	2	2	2	2
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)									
BENZO(A)ANTHRACENE	5000	1100	1.56 U	1.565 U	1.57 U	1.61 U	1.56 U	1.64 U	1.53 U
BENZO(A)PYRENE	500	1100	1.56 U	1.565 U	1.57 U	1.61 U	1.56 U	1.64 U	1.53 U
BENZO(B)FLUORANTHENE	5000	1100	1.56 U	1.565 U	1.57 U	1.61 U	1.56 U	1.64 U	1.53 U
BENZO(K)FLUORANTHENE	50000	1100	1.56 U	1.565 U	1.57 U	1.61 U	1.56 U	1.64 U	1.53 U
CHRYSENE	500000	1100	1.56 U	1.565 U	1.57 U	1.61 U	1.56 U	1.64 U	1.53 U
DIBENZO(A,H)ANTHRACENE	500	1100	1.56 U	1.565 U	1.57 U	1.61 U	1.56 U	1.64 U	1.53 U
INDENO(1,2,3-CD)PYRENE	5000	1100	1.56 U	1.565 U	1.57 U	1.61 U	1.56 U	1.64 U	1.53 U
NAPHTHALENE	3200000	29000	1.56 U	1.565 U	1.57 U	1.61 U	1.56 U	1.64 U	51.4

Value Qualifier

XXXX Highlighted boxes - exceed revised project screening level

J - The result is an estimated quantity

UJ - The result is an estimated non-detected quantity

U - Value is a non-detect as reported by the laboratory

Table 1 - Analytical Results for Surface Soil Samples

LOCATION			32SO-06	32SO-07	32SO-08	32SO-09	32SO-10	32SO-11	32SO-12
SAMPLE ID			32SS-06-0002	32SS-07-0002	32SS-08-0002	32SS-09-0002	32SS-10-0002	32SS-11-0002	32SS-12-0002
SAMPLE DATE	Revised		20100426	20100426	20100427	20100426	20100426	20100427	20100427
SAMPLE CODE	Project		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	Screening		SO	SO	SO	SO	SO	SO	SO
SAMPLE TYPE	Level		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	HHRA	ERA	0	0	0	0	0	0	0
BOTTOM DEPTH	UG/KG	UG/KG	2	2	2	2	2	2	2
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)									
BENZO(A)ANTHRACENE	5000	1100	1.54 U	1.57 U	1.65 U	1.51 U	1.53 U	15.2 U	1.57 U
BENZO(A)PYRENE	500	1100	1.54 U	1.57 UJ	1.65 U	1.51 U	1.53 U	15.2 U	10.9
BENZO(B)FLUORANTHENE	5000	1100	13.5	1.57 UJ	1.65 U	1.51 U	1.53 U	15.2 U	1.57 U
BENZO(K)FLUORANTHENE	50000	1100	1.54 U	1.57 UJ	1.65 U	1.51 U	1.53 U	15.2 U	1.57 U
CHRYSENE	500000	1100	1.54 U	1.57 U	1.65 U	1.51 U	1.53 U	15.2 U	1.57 U
DIBENZO(A,H)ANTHRACENE	500	1100	1.54 U	1.57 UJ	1.65 U	1.51 U	1.53 U	15.2 UJ	1.57 U
INDENO(1,2,3-CD)PYRENE	5000	1100	1.54 U	1.57 UJ	1.65 U	1.51 U	1.53 U	15.2 UJ	1.57 U
NAPHTHALENE	3200000	29000	1.54 U	1.57 U	1.65 U	1.51 U	1.53 U	19 J	1.57 U

Value Qualifier

XXXX Highlighted boxes - exceed revised project s

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Table 1 - Analytical Results for Surface Soil Samples

LOCATION			32SO-13	32SO-14	32SO-15	32SO-16	32SO-17	32SO-18	32SO-19
SAMPLE ID			32SS-13-0002	32SS-14-0002	32SS-15-0002	32SS-16-0002	32SS-17-0002	32SS-18-0002	32SS-19-0002
SAMPLE DATE	Revised		20100427	20100426	20100427	20100427	20100427	20100427	20100427
SAMPLE CODE	Project		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	Screening		SO	SO	SO	SO	SO	SO	SO
SAMPLE TYPE	Level		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	HHRA	ERA	0	0	0	0	0	0	0
BOTTOM DEPTH	UG/KG	UG/KG	2	2	2	2	2	2	2
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)									
BENZO(A)ANTHRACENE	5000	1100	1.62 U	1.5 U	15.9 U	15.4 U	3670	689	15.7 U
BENZO(A)PYRENE	500	1100	1.62 U	1.5 U	15.9 U	15.4 U	2900	521	15.7 U
BENZO(B)FLUORANTHENE	5000	1100	1.62 U	1.5 U	15.9 U	15.4 U	4140	688	15.7 U
BENZO(K)FLUORANTHENE	50000	1100	1.62 U	1.5 U	15.9 U	15.4 U	1440	239	15.7 U
CHRYSENE	500000	1100	1.62 U	1.5 U	15.9 U	15.4 U	3980	637	15.7 U
DIBENZO(A,H)ANTHRACENE	500	1100	1.62 U	1.5 U	15.9 UJ	15.4 UJ	595 J	87.2 J	15.7 UJ
INDENO(1,2,3-CD)PYRENE	5000	1100	1.62 U	1.5 U	15.9 UJ	15.4 UJ	2530 J	435 J	15.7 UJ
NAPHTHALENE	3200000	29000	1.62 U	1.5 U	15.9 U	94.5	238	9.93	15.7 U

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Table 1 - Analytical Results for Surface Soil Samples

LOCATION			32SO-20		32SO-21		32SO-22	32SO-23	32SO-24
SAMPLE ID			32SS-20-0002	32SS-21-0002	32SS-21-0002-	32SS-21-0002-D	32SS-22-0002	32SS-23-0002	32SS-24-0002
SAMPLE DATE	Revised		20100427	20100427	20100427	20100427	20100427	20100427	20100427
SAMPLE CODE	Project		NORMAL	ORIG	AVG	DUP	NORMAL	NORMAL	NORMAL
MATRIX	Screening		SO	SO	SO	SO	SO	SO	SO
SAMPLE TYPE	Level		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	HHRA	ERA	0	0	0	0	0	0	0
BOTTOM DEPTH	UG/KG	UG/KG	2	2	2	2	2	2	2
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)									
BENZO(A)ANTHRACENE	5000	1100	1.7 U	16.8 J	10.3625 J	7.85 UJ	1.59 UJ	4.57 J	1.56 U
BENZO(A)PYRENE	500	1100	1.7 U	57.4 J	30.1725 J	5.89 UJ	1.59 U	31.8	1.56 U
BENZO(B)FLUORANTHENE	5000	1100	1.7 U	97.1 J	50.5125 J	7.85 UJ	1.59 U	44.1	1.56 U
BENZO(K)FLUORANTHENE	50000	1100	1.7 U	33.6 J	18.7625 J	7.85 UJ	1.59 U	16.2	1.56 U
CHRYSENE	500000	1100	1.7 U	21.9 J	12.9125 J	7.85 UJ	1.59 U	8.07	1.56 U
DIBENZO(A,H)ANTHRACENE	500	1100	1.7 UJ	10.7	6.8225 J	5.89 UJ	1.59 U	6.41	1.56 U
INDENO(1,2,3-CD)PYRENE	5000	1100	1.7 UJ	50.6 J	27.2625 J	7.85 UJ	1.59 U	32.1	1.56 U
NAPHTHALENE	3200000	29000	1.7 U	5.83 J	5.83 J	5.89 UJ	5.76 J	5.46 J	1.56 U

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Table 1 - Analytical Results for Surface Soil Samples

LOCATION			32SO-25	32SO-26	32SO-27	32SO-28	32SO-29	32SO-30	32SO-31
SAMPLE ID			32SS-25-0002	32SS-26-0002	32SS-27-0002	32SS-28-0002	32SS-29-0002	32SS-30-0002	32SS-31-0002
SAMPLE DATE	Revised		20100427	20100427	20100427	20100427	20100427	20100427	20100428
SAMPLE CODE	Project		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	Screening		SO	SO	SO	SO	SO	SO	SO
SAMPLE TYPE	Level		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	HHRA	ERA	0	0	0	0	0	0	0
BOTTOM DEPTH	UG/KG	UG/KG	2	2	2	2	2	2	2
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)									
BENZO(A)ANTHRACENE	5000	1100	15.6 U	5.24 J	1.65 U	1.53 UJ	1.51 U	1.59 U	1.55 UJ
BENZO(A)PYRENE	500	1100	15.6 U	23.1	1.65 U	9.39	1.51 U	1.59 U	1.55 UJ
BENZO(B)FLUORANTHENE	5000	1100	15.6 U	34.8	1.65 U	1.53 U	6.56 J	1.59 U	1.55 UJ
BENZO(K)FLUORANTHENE	50000	1100	15.6 U	11.4	1.65 U	1.53 U	1.51 U	1.59 U	1.55 UJ
CHRYSENE	500000	1100	15.6 U	6.13 J	1.65 U	1.53 UJ	1.51 U	1.59 U	1.55 UJ
DIBENZO(A,H)ANTHRACENE	500	1100	15.6 U	1.52 U	1.65 U	1.53 U	1.51 U	1.59 U	1.55 UJ
INDENO(1,2,3-CD)PYRENE	5000	1100	15.6 U	17.7	1.65 U	1.53 U	1.51 U	1.59 U	1.55 UJ
NAPHTHALENE	3200000	29000	15.6 U	3.02 J	1.65 U	1.53 UJ	1.51 U	1.59 U	1.55 UJ

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Table 1 - Analytical Results for Surface Soil Samples

LOCATION			32SO-32			32SO-33	32SO-34	32SO-35	32SO-36
SAMPLE ID			32SS-32-0002	32SS-32-0002-	32SS-32-0002-D	32SS-33-0002	32SS-34-0002	32SS-35-0002	32SS-36-0002
SAMPLE DATE	Revised		20100427	20100427	20100427	20100427	20100427	20100428	20100427
SAMPLE CODE	Project		ORIG	AVG	DUP	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	Screening		SO	SO	SO	SO	SO	SO	SO
SAMPLE TYPE	Level		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	HHRA	ERA	0	0	0	0	0	0	0
BOTTOM DEPTH	UG/KG	UG/KG	2	2	2	2	2	2	2
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)									
BENZO(A)ANTHRACENE	5000	1100	1.58 U	4.58 UJ	7.58 UJ	7.59 UJ	1.53 UJ	1.55 U	1.53 UJ
BENZO(A)PYRENE	500	1100	1.58 U	3.63 UJ	5.68 UJ	7.59 UJ	1.53 UJ	1.55 U	1.53 UJ
BENZO(B)FLUORANTHENE	5000	1100	1.58 U	4.58 UJ	7.58 UJ	7.59 UJ	1.53 UJ	1.55 U	1.53 UJ
BENZO(K)FLUORANTHENE	50000	1100	1.58 U	4.58 UJ	7.58 UJ	7.59 UJ	1.53 UJ	1.55 U	1.53 UJ
CHRYSENE	500000	1100	1.58 U	4.58 UJ	7.58 UJ	7.59 UJ	1.53 UJ	1.55 U	1.53 UJ
DIBENZO(A,H)ANTHRACENE	500	1100	1.58 U	3.63 UJ	5.68 UJ	7.59 UJ	1.53 UJ	1.55 UJ	1.53 UJ
INDENO(1,2,3-CD)PYRENE	5000	1100	1.58 U	4.58 UJ	7.58 UJ	7.59 UJ	1.53 UJ	1.55 UJ	1.53 UJ
NAPHTHALENE	3200000	29000	1.58 U	3.63 UJ	5.68 UJ	7.59 UJ	1.53 UJ	1.55 U	1.53 UJ

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Table 1 - Analytical Results for Surface Soil Samples

LOCATION			32SO-37	32SO-38	32SO-39	32SO-40	32SO-41		32SO-42
SAMPLE ID			32SS-37-0002	32SS-38-0002	32SS-39-0002	32SS-40-0002	32SS-41-0002	32SS-42-0002	32SS-42-0002-
SAMPLE DATE	Revised		20100427	20100427	20100428	20100427	20100428	20100427	20100427
SAMPLE CODE	Project		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	AVG
MATRIX	Screening		SO	SO	SO	SO	SO	SO	SO
SAMPLE TYPE	Level		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	HHRA	ERA	0	0	0	0	0	0	0
BOTTOM DEPTH	UG/KG	UG/KG	2	2	2	2	2	2	2
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)									
BENZO(A)ANTHRACENE	5000	1100	7.5 UJ	1.51 UJ	1.55 U	1.53 UJ	1.55 U	1.55 UJ	1.53 UJ
BENZO(A)PYRENE	500	1100	7.5 UJ	1.51 UJ	1.55 U	1.53 UJ	1.55 U	1.55 UJ	1.53 UJ
BENZO(B)FLUORANTHENE	5000	1100	7.5 UJ	1.51 UJ	1.55 U	1.53 UJ	1.55 U	1.55 UJ	1.53 UJ
BENZO(K)FLUORANTHENE	50000	1100	7.5 UJ	1.51 UJ	1.55 U	1.53 UJ	1.55 U	1.55 UJ	1.53 UJ
CHRYSENE	500000	1100	7.5 UJ	1.51 UJ	1.55 U	1.53 UJ	1.55 U	1.55 UJ	1.53 UJ
DIBENZO(A,H)ANTHRACENE	500	1100	7.5 UJ	1.51 UJ	1.55 UJ	1.53 UJ	1.55 UJ	1.55 UJ	1.53 UJ
INDENO(1,2,3-CD)PYRENE	5000	1100	7.5 UJ	1.51 UJ	1.55 UJ	1.53 UJ	1.55 UJ	1.55 UJ	1.53 UJ
NAPHTHALENE	3200000	29000	7.5 UJ	1.51 UJ	1.55 U	1.53 UJ	1.55 U	1.55 UJ	1.53 UJ

Value Qualifier

XXXX Highlighted boxes - exceed revised project s

J - The result is an estimated quantity

UJ - The result is an estimated non-detected quantity

U - Value is a non-detect as reported by the laboratory

Table 1 - Analytical Results for Surface Soil Samples

LOCATION				32SO-43	32SO-44	32SO-45	32SO-46	32SO-47	32SO-48
SAMPLE ID			32SS-42-0002-D	32SS-43-0002	32SS-44-0002	32SS-45-0002	32SS-46-0002	32SS-47-0002	32SS-48-0002
SAMPLE DATE	Revised		20100428	20100429	20100429	20100429	20100429	20100429	20100429
SAMPLE CODE	Project		DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	Screening		SO	SO	SO	SO	SO	SO	SO
SAMPLE TYPE	Level		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	HHRA	ERA	0	0	0	0	0	0	0
BOTTOM DEPTH	UG/KG	UG/KG	2	2	2	2	2	2	2
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)									
BENZO(A)ANTHRACENE	5000	1100	1.51 UJ	1.62 U	63.5	78.2	7.62 U	1.54 U	1.44 U
BENZO(A)PYRENE	500	1100	1.51 U	13.6	15.3	25.9	7.62 U	1.54 U	1.44 U
BENZO(B)FLUORANTHENE	5000	1100	1.51 U	13.8	16.8	24.8	7.62 U	1.54 U	1.44 U
BENZO(K)FLUORANTHENE	50000	1100	1.51 U	1.62 U	1.58 U	1.65 U	7.62 U	1.54 U	1.44 U
CHRYSENE	500000	1100	1.51 UJ	1.62 UJ	16.6 J	57.4 J	7.62 U	1.54 UJ	1.44 UJ
DIBENZO(A,H)ANTHRACENE	500	1100	1.51 UJ	1.62 U	1.58 U	1.65 U	7.62 UJ	1.54 U	1.44 U
INDENO(1,2,3-CD)PYRENE	5000	1100	1.51 UJ	1.62 U	1.58 U	1.65 U	7.62 U	1.54 U	1.44 U
NAPHTHALENE	3200000	29000	1.51 U	1.62 U	1.58 U	1.65 U	31.4	6	1.44 U

Value Qualifier

XXXX Highlighted boxes - exceed revised project s

J - The result is an estimated quantity

UJ - The result is an estimated non-detected quantity

U - Value is a non-detect as reported by the laboratory

Table 1 - Analytical Results for Surface Soil Samples

LOCATION			32SO-49	32SO-50			32SO-51	32SO-52	32SO-53
SAMPLE ID			32SS-49-0002	32SS-50-0002	32SS-50-0002-	32SS-50-0002-D	32SS-51-0002	32SS-52-0002	32SS-53-0002
SAMPLE DATE	Revised		20100429	20100429	20100429	20100429	20100429	20100429	20100429
SAMPLE CODE	Project		NORMAL	ORIG	AVG	DUP	NORMAL	NORMAL	NORMAL
MATRIX	Screening		SO	SO	SO	SO	SO	SO	SO
SAMPLE TYPE	Level		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	HHRA	ERA	0	0	0	0	0	0	0
BOTTOM DEPTH	UG/KG	UG/KG	2	2	2	2	2	2	2
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)									
BENZO(A)ANTHRACENE	5000	1100	61.5	1.57 U	38.035 UJ	74.5 UJ	1.56 U	1.47 U	1.49 U
BENZO(A)PYRENE	500	1100	1.48 U	1.57 U	38.035 UJ	74.5 UJ	1.56 U	1.47 U	1.49 U
BENZO(B)FLUORANTHENE	5000	1100	1.48 U	1.57 U	38.035 UJ	74.5 UJ	1.56 U	1.47 U	1.49 U
BENZO(K)FLUORANTHENE	50000	1100	1.48 U	1.57 U	38.035 UJ	74.5 UJ	1.56 U	1.47 UJ	1.49 UJ
CHRYSENE	500000	1100	18.9 J	1.57 UJ	38.035 UJ	74.5 UJ	1.56 UJ	1.47 U	1.49 U
DIBENZO(A,H)ANTHRACENE	500	1100	1.48 U	1.57 U	38.035 UJ	74.5 UJ	1.56 U	1.47 U	1.49 U
INDENO(1,2,3-CD)PYRENE	5000	1100	1.48 U	1.57 U	38.035 UJ	74.5 UJ	1.56 U	1.47 U	1.49 U
NAPHTHALENE	3200000	29000	273	1.57 U	38.035 UJ	74.5 UJ	1.56 U	1.47 U	1.49 U

Value Qualifier

XXXX Highlighted boxes - exceed revised project s

J - The result is an estimated quantity

UJ - The result is an estimated non-detected quantity

U - Value is a non-detect as reported by the laboratory

Table 1 - Analytical Results for Surface Soil Samples

LOCATION			32SOW01			32SOW02	32SOW03
SAMPLE ID			32SS-DW01-0002	32SS-DW01-0002-	32SSW01-0002-	32SS-DW02-0002	32SS-DW03-0002
SAMPLE DATE	Revised		20100428	20100428	20100428	20100428	20100428
SAMPLE CODE	Project		ORIG	DUP	AVG	NORMAL	NORMAL
MATRIX	Screening		SO	SO	SO	SO	SO
SAMPLE TYPE	Level		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SS	SS	SS	SS	SS
TOP DEPTH	HHRA	ERA	0	0	0	0	0
BOTTOM DEPTH	UG/KG	UG/KG	2	2	2	2	2
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)							
BENZO(A)ANTHRACENE	5000	1100	16.3 U	1.53 UJ	8.915 U	1.65 UJ	1.69 UJ
BENZO(A)PYRENE	500	1100	16.3 U	1.53 U	8.915 U	1.65 U	1.69 U
BENZO(B)FLUORANTHENE	5000	1100	16.3 U	1.53 U	8.915 U	1.65 U	1.69 U
BENZO(K)FLUORANTHENE	50000	1100	16.3 UJ	1.53 U	8.915 U	1.65 U	1.69 U
CHRYSENE	500000	1100	16.3 U	1.53 UJ	8.915 U	1.65 UJ	1.69 UJ
DIBENZO(A,H)ANTHRACENE	500	1100	16.3 U	1.53 UJ	8.915 UJ	1.65 UJ	1.69 UJ
INDENO(1,2,3-CD)PYRENE	5000	1100	16.3 U	1.53 UJ	8.915 U	1.65 UJ	1.69 UJ
NAPHTHALENE	3200000	29000	16.3 U	1.53 U	8.915 U	1.65 U	1.69 U

Value Qualifier

XXXX Highlighted boxes - exceed revised project s

J - The result is an estimated quantity

UJ - The result is an estimated non-detected quantity

U - Value is a non-detect as reported by the laboratory

Table 2 - Analytical Results for Subsurface Soil Samples

LOCATION			32SO-01			32SO-02	32SO-03	32SO-04	32SO-05
SAMPLE ID			32SB-01-	32SB-01-0708-	32SB-01-0708-D	32SB-02-0607	32SB-03-0607	32SB-04-0506	32SB-05-0506
SAMPLE DATE			20100426	20100426	20100426	20100426	20100426	20100426	20100426
SAMPLE CODE			ORIG	AVG	DUP	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX			SO	SO	SO	SO	SO	SO	SO
SAMPLE TYPE	Residential	Migration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	Direct	to	SB	SB	SB	SB	SB	SB	SB
TOP DEPTH	Contact	Groundwater	7	7	7	6	6	5	5
BOTTOM DEPTH	UG/KG	UG/KG	8	8	8	7	7	6	6
VOLATILES (UG/KG)									
BENZENE	8400	34	0.535 U	0.53 U	0.525 U	32.4 U	0.486 UJ	0.461 U	0.472 UJ
ETHYLBENZENE	4600000	13000	0.853 U	0.845 U	0.837 U	51.6 U	0.775 UJ	0.735 U	0.972 J
TOLUENE	8800000	12000	0.978 U	0.969 U	0.96 U	59.2 U	0.889 UJ	0.843 U	0.863 UJ
TOTAL XYLENES	690000	170000	0.796 U	0.7885 U	0.781 U	48.2 U	0.724 UJ	0.686 U	1.27 J
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)									
BENZO(A)ANTHRACENE	5000	5000	1.56 U	1.555 U	1.55 U	16.4 U	1.62 U	1.55 U	1.59 U
BENZO(A)PYRENE	500	500	1.56 U	1.555 U	1.55 U	16.4 U	1.62 U	1.55 U	1.59 U
BENZO(B)FLUORANTHENE	5000	5000	1.56 U	1.555 U	1.55 U	16.4 U	1.62 U	1.55 U	1.59 U
BENZO(K)FLUORANTHENE	50000	39000	1.56 U	1.555 U	1.55 U	16.4 U	1.62 U	1.55 U	1.59 U
CHRYSENE	500000	25000	1.56 U	1.555 U	1.55 U	16.4 U	1.62 U	1.55 U	1.59 U
DIBENZO(A,H)ANTHRACENE	500	18000	1.56 U	1.555 U	1.55 U	16.4 U	1.62 U	1.55 U	1.59 U
INDENO(1,2,3-CD)PYRENE	5000	3100	1.56 U	1.555 U	1.55 U	16.4 U	1.62 U	1.55 U	1.59 U
NAPHTHALENE	3200000	700	1.56 U	1.555 U	1.55 U	16.4 U	1.62 U	1.55 U	1.59 U

Value Qualifier

XXXX Highlighted boxes - exceed revised residential direct contact/migration to groundwater

J - The result is an estimated quantity

UJ - The result is an estimated non-detected quantity

U - Value is a non-detect as reported by the laboratory

Table 2 - Analytical Results for Subsurface Soil Samples

LOCATION			32SO-06	32SO-07	32SO-08	32SO-09	32SO-10	32SO-11	32SO-12	32SO-13
SAMPLE ID			32SB-06-0405	32SB-07-0607	32SB-08-0607	32SB-09-0607	32SB-10-0506	32SB-11-0607	32SB-12-0607	32SB-13-0607
SAMPLE DATE			20100426	20100426	20100427	20100426	20100426	20100427	20100427	20100427
SAMPLE CODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX			SO	SO	SO	SO	SO	SO	SO	SO
SAMPLE TYPE	Residential	Migration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	Direct	to	SB	SB	SB	SB	SB	SB	SB	SB
TOP DEPTH	Contact	Groundwater	4	6	6	6	5	6	6	6
BOTTOM DEPTH	UG/KG	UG/KG	5	7	7	7	6	7	7	7
VOLATILES (UG/KG)										
BENZENE	8400	34	1810	1.77 J	0.467 U	0.573 U	0.497 U	0.463 UJ	0.483 UJ	0 U
ETHYLBENZENE	4600000	13000	82 J	4.32 J	0.745 U	0.914 U	0.794 U	0.738 UJ	0.77 UJ	1 U
TOLUENE	8800000	12000	112 J	0.935 U	0.854 U	1.05 U	0.91 U	0.847 UJ	0.883 UJ	1 U
TOTAL XYLENES	690000	170000	527 J	8.93 J	0.695 U	0.853 U	0.741 U	0.689 UJ	0.719 UJ	1 U
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)										
BENZO(A)ANTHRACENE	5000	5000	15.3 U	1.59 U	1.55 U	69.8	1.62 U	1.57 U	1.61 U	2 U
BENZO(A)PYRENE	500	500	15.3 U	1.59 U	1.55 U	1.56 U	1.62 U	1.57 U	1.61 U	2 U
BENZO(B)FLUORANTHENE	5000	5000	15.3 U	1.59 U	1.55 U	1.56 U	1.62 U	1.57 U	1.61 U	2 U
BENZO(K)FLUORANTHENE	50000	39000	15.3 U	1.59 U	1.55 U	1.56 U	1.62 U	1.57 U	1.61 U	2 U
CHRYSENE	500000	25000	15.3 U	1.59 U	1.55 U	75.5	1.62 U	1.57 U	1.61 U	2 U
DIBENZO(A,H)ANTHRACENE	500	18000	15.3 U	1.59 U	1.55 U	1.56 U	1.62 U	1.57 U	1.61 U	2 U
INDENO(1,2,3-CD)PYRENE	5000	3100	15.3 U	1.59 U	1.55 U	1.56 U	1.62 U	1.57 U	1.61 U	2 U
NAPHTHALENE	3200000	700	1390	1.59 U	1.55 U	11.6	1.62 U	1.57 U	1.61 U	2 U

Value Qualifier

XXXX Highlighted boxes - exceed revised residential direct

J - The result is an estimated quantity

UJ - The result is an estimated non-detected quantity

U - Value is a non-detect as reported by the laboratory

Table 2 - Analytical Results for Subsurface Soil Samples

LOCATION			32SO-14	32SO-15	32SO-16	32SO-17		32SO-18	32SO-19
SAMPLE ID			32SB-14-0910	32SB-15-0506	32SB-16-0607	32SB-17-0607	32SB-17-1112	32SB-18-0506	32SB-19-0506
SAMPLE DATE			20100426	20100427	20100427	20100427	20100427	20100427	20100427
SAMPLE CODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX			SO	SO	SO	SO	SO	SO	SO
SAMPLE TYPE	Residential	Migration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	Direct	to	SB	SB	SB	SB	SB	SB	SB
TOP DEPTH	Contact	Groundwater	9	5	6	6	11	5	5
BOTTOM DEPTH	UG/KG	UG/KG	10	6	7	7	12	6	6
VOLATILES (UG/KG)									
BENZENE	8400	34	0.542 U	0.556 U	0.487 U	27.4 U	0.535 U	0.471 UJ	0.488 U
ETHYLBENZENE	4600000	13000	0.865 U	0.887 U	0.777 U	43.7 U	0.853 U	0.752 UJ	0.778 U
TOLUENE	8800000	12000	0.992 U	1.02 U	0.89 U	50.1 U	0.978 U	0.862 UJ	0.892 U
TOTAL XYLENES	690000	170000	0.808 U	0.828 U	0.725 U	40.7 U	0.796 U	0.702 UJ	0.726 U
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)									
BENZO(A)ANTHRACENE	5000	5000	1.55 U	46.3	1.56 U	213	1.55 U	1.57 U	1.62 U
BENZO(A)PYRENE	500	500	1.55 U	56.6	1.56 U	112	1.55 U	1.57 U	1.62 U
BENZO(B)FLUORANTHENE	5000	5000	1.55 U	74.4	1.56 U	104	1.55 U	1.57 U	1.62 U
BENZO(K)FLUORANTHENE	50000	39000	1.55 U	34.5	1.56 U	16.1 U	1.55 U	1.57 U	1.62 U
CHRYSENE	500000	25000	1.55 U	48.4	1.56 U	289	1.55 U	1.57 U	1.62 U
DIBENZO(A,H)ANTHRACENE	500	18000	1.55 U	1.58 U	1.56 UJ	16.1 UJ	1.55 UJ	1.57 UJ	1.62 UJ
INDENO(1,2,3-CD)PYRENE	5000	3100	1.55 U	35.3	1.56 UJ	16.1 UJ	1.55 UJ	1.57 UJ	1.62 UJ
NAPHTHALENE	3200000	700	1.55 U	35.5	1.56 U	2470	1.55 U	1.57 U	1.62 U

Value Qualifier

XXXX Highlighted boxes - exceed revised residential direct

J - The result is an estimated quantity

UJ - The result is an estimated non-detected quantity

U - Value is a non-detect as reported by the laboratory

Table 2 - Analytical Results for Subsurface Soil Samples

LOCATION			32SO-20	32SO-21			32SO-22	32SO-23	32SO-24
SAMPLE ID			32SB-20-0506	32SB-21-0506	32SB-21-0506-	32SB-21-0506-	32SB-22-0506	32SB-23-0506	32SB-24-0506
SAMPLE DATE			20100427	20100427	20100427	20100427	20100427	20100427	20100427
SAMPLE CODE			NORMAL	ORIG	AVG	DUP	NORMAL	NORMAL	NORMAL
MATRIX			SO	SO	SO	SO	SO	SO	SO
SAMPLE TYPE	Residential	Migration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	Direct	to	SB	SB	SB	SB	SB	SB	SB
TOP DEPTH	Contact	Groundwater	5	5	5	5	5	5	5
BOTTOM DEPTH	UG/KG	UG/KG	6	6	6	6	6	6	6
VOLATILES (UG/KG)									
BENZENE	8400	34	0.457 UJ	0.466 U	0.472 U	0.478 U	0.548 U	0.582 UJ	0.511 U
ETHYLBENZENE	4600000	13000	1.02 J	0.743 U	0.7525 U	0.762 U	0.874 U	0.929 UJ	0.815 U
TOLUENE	8800000	12000	0.836 UJ	0.852 U	0.863 U	0.874 U	1 U	1.06 UJ	0.934 U
TOTAL XYLENES	690000	170000	1.41 J	0.694 U	0.7025 U	0.711 U	0.816 U	0.867 UJ	0.76 U
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)									
BENZO(A)ANTHRACENE	5000	5000	1.56 UJ	1.57 U	1.57 UJ	1.57 UJ	1.57 UJ	1.75 U	1.61 U
BENZO(A)PYRENE	500	500	1.56 U	1.57 U	1.57 UJ	1.57 UJ	10.4	1.75 U	1.61 U
BENZO(B)FLUORANTHENE	5000	5000	1.56 U	1.57 U	1.57 UJ	1.57 UJ	6.9 J	1.75 U	1.61 U
BENZO(K)FLUORANTHENE	50000	39000	1.56 U	1.57 U	1.57 UJ	1.57 UJ	1.57 U	1.75 U	1.61 U
CHRYSENE	500000	25000	1.56 UJ	1.57 U	1.57 UJ	1.57 UJ	1.57 U	1.75 U	1.61 U
DIBENZO(A,H)ANTHRACENE	500	18000	1.56 U	1.57 U	1.57 UJ	1.57 UJ	1.57 U	1.75 U	1.61 U
INDENO(1,2,3-CD)PYRENE	5000	3100	1.56 U	1.57 U	1.57 UJ	1.57 UJ	1.57 U	1.75 U	1.61 U
NAPHTHALENE	3200000	700	1.56 UJ	1.57 U	1.57 UJ	1.57 UJ	1.57 U	1.75 U	1.61 U

Value Qualifier

XXXX Highlighted boxes - exceed revised residential direct

J - The result is an estimated quantity

UJ - The result is an estimated non-detected quantity

U - Value is a non-detect as reported by the laboratory

Table 2 - Analytical Results for Subsurface Soil Samples

LOCATION			32SO-25	32SO-26	32SO-27	32SO-28	32SO-29	32SO-30	32SO-31
SAMPLE ID			32SB-25-0607	32SB-26-0405	32SB-27-0506	32SB-28-0506	32SB-29-0304	32SB-30-0506	32SB-31-0607
SAMPLE DATE			20100427	20100427	20100427	20100427	20100427	20100427	20100428
SAMPLE CODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX			SO	SO	SO	SO	SO	SO	SO
SAMPLE TYPE	Residential	Migration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	Direct	to	SB	SB	SB	SB	SB	SB	SB
TOP DEPTH	Contact	Groundwater	6	4	5	5	6	5	6
BOTTOM DEPTH	UG/KG	UG/KG	7	5	6	6	7	6	7
VOLATILES (UG/KG)									
BENZENE	8400	34	0.442 U	0.412 U	0.426 U	0.449 UJ	0.525 U	0.519 U	0.467 U
ETHYLBENZENE	4600000	13000	0.706 U	0.657 U	0.68 U	0.717 UJ	0.837 U	0.827 U	0.746 U
TOLUENE	8800000	12000	0.81 U	0.754 U	0.78 U	0.822 UJ	0.96 U	0.949 U	0.855 U
TOTAL XYLENES	690000	170000	0.659 U	0.614 U	0.635 U	0.669 UJ	0.781 U	0.772 U	0.696 U
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)									
BENZO(A)ANTHRACENE	5000	5000	1.56 U	1.58 U	1.54 U	1.58 U	1.57 U	1.56 U	1.53 U
BENZO(A)PYRENE	500	500	1.56 U	1.58 U	1.54 U	1.58 U	1.57 U	1.56 U	1.53 U
BENZO(B)FLUORANTHENE	5000	5000	1.56 U	1.58 U	1.54 U	1.58 U	1.57 U	1.56 U	1.53 U
BENZO(K)FLUORANTHENE	50000	39000	1.56 U	1.58 U	1.54 U	1.58 U	1.57 U	1.56 U	1.53 U
CHRYSENE	500000	25000	1.56 U	3.2 J	1.54 U	1.58 U	1.57 U	1.56 U	1.53 U
DIBENZO(A,H)ANTHRACENE	500	18000	1.56 U	1.58 U	1.54 U	1.58 U	1.57 U	1.56 U	1.53 UJ
INDENO(1,2,3-CD)PYRENE	5000	3100	1.56 U	1.58 U	1.54 U	1.58 U	1.57 U	1.56 U	1.53 UJ
NAPHTHALENE	3200000	700	1.56 U	1.58 U	1.54 U	1.58 U	1.57 U	1.56 U	1.53 U

Value Qualifier

XXXX Highlighted boxes - exceed revised residential direct

J - The result is an estimated quantity

UJ - The result is an estimated non-detected quantity

U - Value is a non-detect as reported by the laboratory

Table 2 - Analytical Results for Subsurface Soil Samples

LOCATION			32SO-32			32SO-33	32SO-34	32SO-35	32SO-36
SAMPLE ID			32SB-32-0506	32SB-32-0506-	32SB-32-0506-D	32SB-33-0506	32SB-34-0607	32SB-35-0507	32SB-36-0506
SAMPLE DATE			20100427	20100427	20100427	20100427	20100427	20100428	20100427
SAMPLE CODE			ORIG	AVG	DUP	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX			SO	SO	SO	SO	SO	SO	SO
SAMPLE TYPE	Residential	Migration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	Direct	to	SB	SB	SB	SB	SB	SB	SB
TOP DEPTH	Contact	Groundwater	5	5	5	5	6	5	5
BOTTOM DEPTH	UG/KG	UG/KG	6	6	6	6	7	7	6
VOLATILES (UG/KG)									
BENZENE	8400	34	0.463 U	0.449 U	0.435 U	0.484 U	0.459 U	0.481 U	0.462 UJ
ETHYLBENZENE	4600000	13000	0.739 U	0.716 U	0.693 U	0.772 U	0.732 U	0.767 U	0.737 UJ
TOLUENE	8800000	12000	0.848 U	0.8215 U	0.795 U	0.885 U	0.839 U	0.879 U	0.846 UJ
TOTAL XYLENES	690000	170000	0.69 U	0.6685 U	0.647 U	0.72 U	0.683 U	0.716 U	0.688 UJ
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)									
BENZO(A)ANTHRACENE	5000	5000	1.58 UJ	4.59 UJ	7.6 UJ	1.54 UJ	1.57 UJ	1.55 U	1.54 UJ
BENZO(A)PYRENE	500	500	1.58 UJ	3.635 UJ	5.69 UJ	1.54 UJ	1.57 UJ	1.55 U	1.54 UJ
BENZO(B)FLUORANTHENE	5000	5000	1.58 UJ	4.59 UJ	7.6 UJ	1.54 UJ	1.57 UJ	1.55 U	1.54 UJ
BENZO(K)FLUORANTHENE	50000	39000	1.58 UJ	4.59 UJ	7.6 UJ	1.54 UJ	1.57 UJ	1.55 U	1.54 UJ
CHRYSENE	500000	25000	1.58 UJ	4.59 UJ	7.6 UJ	1.54 UJ	1.57 UJ	1.55 U	1.54 UJ
DIBENZO(A,H)ANTHRACENE	500	18000	1.58 UJ	3.635 UJ	5.69 UJ	1.54 UJ	1.57 UJ	1.55 UJ	1.54 UJ
INDENO(1,2,3-CD)PYRENE	5000	3100	1.58 UJ	4.59 UJ	7.6 UJ	1.54 UJ	1.57 UJ	1.55 UJ	1.54 UJ
NAPHTHALENE	3200000	700	1.58 UJ	3.635 UJ	5.69 UJ	1.54 UJ	1.57 UJ	1.55 U	1.54 UJ

Value Qualifier

XXXX Highlighted boxes - exceed revised residential direct

J - The result is an estimated quantity

UJ - The result is an estimated non-detected quantity

U - Value is a non-detect as reported by the laboratory

Table 2 - Analytical Results for Subsurface Soil Samples

LOCATION			32SO-37	32SO-38	32SO-39	32SO-40	32SO-41		32SO-42
SAMPLE ID			32SB-37-0506	32SB-38-0506	32SB-39-0507	32SB-40-0506	32SB-41-0506	32SB-42-0506	32SB-42-0506-AVG
SAMPLE DATE			20100427	20100427	20100428	20100427	20100428	20100427	20100427
SAMPLE CODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	AVG
MATRIX			SO	SO	SO	SO	SO	SO	SO
SAMPLE TYPE	Residential	Migration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	Direct	to	SB	SB	SB	SB	SB	SB	SB
TOP DEPTH	Contact	Groundwater	5	5	5	5	5	5	5
BOTTOM DEPTH	UG/KG	UG/KG	6	6	7	6	6	6	6
VOLATILES (UG/KG)									
BENZENE	8400	34	0.575 U	0.471 U	0.479 U	0.474 UJ	0.487 U	0.486 UJ	0.471 UJ
ETHYLBENZENE	4600000	13000	0.918 U	0.752 U	0.764 U	0.757 UJ	0.778 U	0.776 UJ	0.752 UJ
TOLUENE	8800000	12000	1.05 U	0.862 U	0.876 U	0.868 UJ	0.892 U	0.889 UJ	0.862 UJ
TOTAL XYLENES	690000	170000	0.857 U	0.702 U	0.713 U	1.72 J	0.726 U	0.724 UJ	0.702 UJ
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)									
BENZO(A)ANTHRACENE	5000	5000	394 J	1.61 UJ	1.62 U	1.56 UJ	1.55 UJ	1.51 UJ	3.5825 J
BENZO(A)PYRENE	500	500	121 J	1.61 UJ	1.62 U	1.56 UJ	1.55 U	1.51 UJ	2.5575 J
BENZO(B)FLUORANTHENE	5000	5000	8.35 UJ	1.61 UJ	1.62 U	1.56 UJ	1.55 U	1.51 UJ	2.7375 J
BENZO(K)FLUORANTHENE	50000	39000	8.35 UJ	1.61 UJ	1.62 U	1.56 UJ	1.55 U	1.51 UJ	2.8425 J
CHRYSENE	500000	25000	341 J	1.61 UJ	1.62 U	1.56 UJ	1.55 UJ	1.51 UJ	3.3725 J
DIBENZO(A,H)ANTHRACENE	500	18000	8.35 UJ	1.61 UJ	1.62 UJ	1.56 UJ	1.55 UJ	1.51 UJ	3.3625 J
INDENO(1,2,3-CD)PYRENE	5000	3100	8.35 UJ	1.61 UJ	1.62 UJ	1.56 UJ	1.55 UJ	1.51 UJ	3.1975 J
NAPHTHALENE	3200000	700	8.35 UJ	1.61 UJ	1.62 U	1.56 UJ	1.55 U	1.51 UJ	2.2975 J

Value Qualifier

XXXX Highlighted boxes - exceed revised residential direct

J - The result is an estimated quantity

UJ - The result is an estimated non-detected quantity

U - Value is a non-detect as reported by the laboratory

Table 2 - Analytical Results for Subsurface Soil Samples

LOCATION				32SO-43	32SO-44	32SO-45	32SO-46	32SO-47	32SO-48	32SO-49
SAMPLE ID			32SB-42-0506-D	32SB-43-	32SB-44-	32SB-45-0607	32SB-46-0304	32SB-47-0506	32SB-48-0405	32SB-49-0405
SAMPLE DATE			20100428	20100429	20100429	20100429	20100429	20100429	20100429	20100429
SAMPLE CODE			DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX			SO	SO	SO	SO	SO	SO	SO	SO
SAMPLE TYPE	Residential	Migration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	Direct	to	SB	SB	SB	SB	SB	SB	SB	SB
TOP DEPTH	Contact	Groundwater	5	5	5	6	3	5	4	4
BOTTOM DEPTH	UG/KG	UG/KG	6	6	6	7	4	6	5	5
VOLATILES (UG/KG)										
BENZENE	8400	34	0.456 U	23.2 UJ	25.3 UJ	46.9 J	23.7 UJ	22.5 UJ	21.4 UJ	327 J
ETHYLBENZENE	4600000	13000	0.728 U	37 UJ	40.3 UJ	304 J	37.8 UJ	35.9 UJ	34.2 UJ	114 J
TOLUENE	8800000	12000	0.835 U	42.4 UJ	46.2 UJ	46.8 UJ	43.3 UJ	41.2 UJ	39.2 UJ	64.4 J
TOTAL XYLENES	690000	170000	0.68 U	34.5 UJ	91.2 J	1200 J	35.3 UJ	77 J	31.9 UJ	608 J
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)										
BENZO(A)ANTHRACENE	5000	5000	6.41 J	1.6 U	1.63 U	1.61 U	7.61 U	1.57 U	1.54 U	1.6 U
BENZO(A)PYRENE	500	500	4.36 J	1.6 U	1.63 U	21.3	7.61 U	1.57 U	1.54 U	1.6 U
BENZO(B)FLUORANTHENE	5000	5000	4.72 J	1.6 U	1.63 U	22.2	7.61 U	1.57 U	1.54 U	1.6 U
BENZO(K)FLUORANTHENE	50000	39000	4.93 J	1.6 U	1.63 U	1.61 U	7.61 U	1.57 U	1.54 U	1.6 U
CHRYSENE	500000	25000	5.99 J	1.6 UJ	1.63 UJ	1.61 UJ	7.61 U	1.57 UJ	1.54 UJ	1.6 UJ
DIBENZO(A,H)ANTHRACENE	500	18000	5.97 J	1.6 U	1.63 U	1.61 U	7.61 UJ	1.57 U	1.54 U	1.6 U
INDENO(1,2,3-CD)PYRENE	5000	3100	5.64 J	1.6 U	1.63 U	1.61 U	7.61 U	1.57 U	1.54 U	1.6 U
NAPHTHALENE	3200000	700	3.84 J	1.6 U	1.63 U	1.61 U	7.61 U	103	1.54 U	1.6 U

Value Qualifier

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Table 2 - Analytical Results for Subsurface Soil Samples

LOCATION			32SO-50			32SO-51		32SO-52	32SO-52	32S
SAMPLE ID			32SB-50-0607	32SB-50-	32SB-50-0607-D	32SB-51-	32SB-51-1415	32SB-52-0809	32SB-52-1415	32SB-53-0910
SAMPLE DATE			20100429	20100429	20100429	20100429	20100429	20100429	20100429	20100429
SAMPLE CODE			ORIG	AVG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX			SO	SO	SO	SO	SO	SO	SO	SO
SAMPLE TYPE	Residential	Migration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	Direct	to	SB	SB	SB	SB	SB	SB	SB	SB
TOP DEPTH	Contact	Groundwater	6	6	6	7	14	8	14	9
BOTTOM DEPTH	UG/KG	UG/KG	7	7	7	8	15	9	15	10
VOLATILES (UG/KG)										
BENZENE	8400	34	27.4 UJ	25.55 UJ	23.7 UJ	0.488 UJ	23.2 UJ	0.556 UJ	0.482 UJ	0.553 UJ
ETHYLBENZENE	4600000	13000	87.5 J	53.2 J	37.8 UJ	0.778 UJ	37 UJ	0.887 UJ	0.769 UJ	0.882 UJ
TOLUENE	8800000	12000	50.1 UJ	46.75 UJ	43.4 UJ	0.893 UJ	42.4 UJ	1.02 UJ	0.882 UJ	1.01 UJ
TOTAL XYLENES	690000	170000	803 J	546 J	289 J	0.726 UJ	34.5 UJ	0.828 UJ	0.718 UJ	0.824 UJ
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)										
BENZO(A)ANTHRACENE	5000	5000	14.5 UJ	8.005 UJ	1.51 UJ	14.5 U	3.77 J	15.7 U	1.55 U	15.6 U
BENZO(A)PYRENE	500	500	14.5 U	8.005 UJ	1.51 UJ	14.5 U	9.57	15.7 U	1.55 U	15.6 U
BENZO(B)FLUORANTHENE	5000	5000	14.5 U	8.005 UJ	1.51 UJ	14.5 U	9.47	15.7 U	1.55 U	15.6 U
BENZO(K)FLUORANTHENE	50000	39000	14.5 U	8.005 UJ	1.51 UJ	14.5 U	4.37 J	15.7 UJ	1.55 UJ	15.6 UJ
CHRYSENE	500000	25000	14.5 UJ	8.005 UJ	1.51 UJ	14.5 U	5 J	15.7 U	1.55 U	15.6 U
DIBENZO(A,H)ANTHRACENE	500	18000	14.5 U	8.005 UJ	1.51 UJ	14.5 U	1.5 U	15.7 U	1.55 U	15.6 U
INDENO(1,2,3-CD)PYRENE	5000	3100	14.5 U	8.005 UJ	1.51 UJ	14.5 U	1.5 U	15.7 U	1.55 U	15.6 U
NAPHTHALENE	3200000	700	1360 J	680.3775 J	1.51 UJ	1560	1.5 U	305	1.55 U	15.6 U

Value Qualifier

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Table 2 - Analytical Results for Subsurface Soil Samples

LOCATION			D-53	32SO-ST01	32SOW01		32SOW02	32SOW03
SAMPLE ID			32SB-53-1415	32SB-ST01-0203	32SB-DW01-	32SB-DW01-	32SB-DW02-	32SB-DW03-0304
SAMPLE DATE			20100429	20100428	20100428	20100428	20100428	20100428
SAMPLE CODE			NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX			SO	SO	SO	SO	SO	SO
SAMPLE TYPE	Residential	Migration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	Direct	to	SB	SB	SB	SB	SB	SB
TOP DEPTH	Contact	Groundwater	14	2	8	8	5	3
BOTTOM DEPTH	UG/KG	UG/KG	15	3	9	9	6	4
VOLATILES (UG/KG)								
BENZENE	8400	34	0.447 UJ	0.482 U	0.522 UJ	0.527 U	0.593 U	0.503 U
ETHYLBENZENE	4600000	13000	0.713 UJ	0.77 U	0.833 UJ	0.841 U	0.946 U	0.803 U
TOLUENE	8800000	12000	0.818 UJ	0.883 U	0.955 UJ	0.964 U	1.09 U	0.92 U
TOTAL XYLENES	690000	170000	0.666 UJ	0.718 U	0.777 UJ	0.785 U	0.883 U	0.749 U
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)								
BENZO(A)ANTHRACENE	5000	5000	1.55 U	1.6 UJ	9.44 J	16.7 U	1.7 UJ	1.61 UJ
BENZO(A)PYRENE	500	500	6.23	1.6 U	7.43	16.7 U	1.7 U	1.61 U
BENZO(B)FLUORANTHENE	5000	5000	4.39 J	1.6 U	7.78	16.7 U	1.7 U	1.61 U
BENZO(K)FLUORANTHENE	50000	39000	1.55 UJ	1.6 U	9.45	16.7 UJ	1.7 U	1.61 U
CHRYSENE	500000	25000	1.55 U	1.6 UJ	15.3 J	16.7 U	1.7 UJ	1.61 UJ
DIBENZO(A,H)ANTHRACENE	500	18000	1.55 U	1.6 UJ	9.23 J	16.7 U	1.7 UJ	1.61 UJ
INDENO(1,2,3-CD)PYRENE	5000	3100	1.55 U	1.6 UJ	7.05 J	16.7 U	1.7 UJ	1.61 UJ
NAPHTHALENE	3200000	700	1.55 U	1.6 U	1.54 U	16.7 U	1.7 U	1.61 U

Value Qualifier

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Table 3 - Analytical Results for Sediment Samples

LOCATION			32SD-01	32SD-02			32SD-03
SAMPLE ID			32SD-01-0006	32SD-02-0006	32SD-02-0006-AVG	32SD-02-0006-D	32SD-03-0006
SAMPLE DATE			20100430	20100430	20100430	20100430	20100430
SAMPLE CODE	Project		NORMAL	ORIG	AVG	DUP	NORMAL
MATRIX	Screening		SD	SD	SD	SD	SD
SAMPLE TYPE	Level		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD
TOP DEPTH	HHRA	ERA	0	0	0	0	0
BOTTOM DEPTH	UG/KG	UG/KG	0.5	0.5	0.5	0.5	0.5
VOLATILES (UG/KG)							
BENZENE	1100	142	0.537 UJ	56.1 J	34.175 J	24.5 UJ	0.54 UJ
ETHYLBENZENE	5400	175	0.857 UJ	65.7 J	42.625 J	39.1 UJ	0.862 UJ
TOLUENE	5000000	1220	0.983 UJ	62.6 J	42.5 J	44.8 UJ	0.989 UJ
TOTAL XYLENES	650000	433	0.8 UJ	220 J	119.125 J	36.5 UJ	0.805 UJ
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)							
BENZO(A)ANTHRACENE	150	108	2.81 J	6.59 J	21.495 J	36.4 J	11
BENZO(A)PYRENE	15	150	7.59	16.7 J	50.8 J	84.9 J	20.1
BENZO(B)FLUORANTHENE	150	10400	1.63 U	21.8 J	60.05 J	98.3 J	25.2
BENZO(K)FLUORANTHENE	1500	240	1.63 UJ	8.07 J	24.085 J	40.1 J	7.67 J
CHRYSENE	15000	166	2.97 J	6.69 J	26.095 J	45.5 J	21.5
DIBENZO(A,H)ANTHRACENE	15	33	1.63 U	1.65 UJ	7.3125 J	13.8 J	1.65 U
INDENO(1,2,3-CD)PYRENE	150	200	1.63 U	8.51 J	41.555 J	74.6 J	9.62
NAPHTHALENE	3600	176	1.63 U	1.65 UJ	1.4425 J	2.06 J	1.65 U

Value Qualifier

XXXX Highlighted boxes - exceed revised project screening level

J - The result is an estimated quantity

UJ - The result is an estimated non-detected quantity

U - Value is a non-detect as reported by the laboratory

Table 4 - Analytical Results for Groundwater Samples

LOCATION	Project	32MW-01	32MW-02	32MW-03		
SAMPLE ID	Screening	32GW-01	32GW-02	32GW-03	32GW-03-AVG	32GW-03-D
SAMPLE DATE	Level	20100428	20100428	20100427	20100427	20100427
SAMPLE CODE	HHRA	NORMAL	NORMAL	ORIG	AVG	DUP
MATRIX	(ug/L)	GW	GW	GW	GW	GW
SAMPLE TYPE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
POLYCYCLIC AROMATIC HYDROCARBONS (UG/L)						
NAPHTHALENE	8.3	0.0189 UJ	0.0402 J	0.0187 UJ	0.0187 UJ	0.0187 UJ

Value Qualifier

XXXX Highlighted boxes - exceed revised project screening level

J - The result is an estimated quantity

UJ - The result is an estimated non-detected quantity

U - Value is a non-detect as reported by the laboratory

Table 5 – Proposed Additional Sampling at SWMU 32 and Methods/SOP Requirements Table

Sampling Location	ID Number	Matrix	Depth (feet bgs)	Analysis	Number of Samples	Sampling SOP Reference[1]
SWMU 32 Decision Unit 1-54	32SB-54-XXXX[2]	Soil	>2 [2]	Naphthalene	1	SOP-07, SOP-08
	32SB-54-YYYY[3]	Soil	>2 [3]	Naphthalene	1	
SWMU 32 Decision Unit 1-55	32SB-55-XXXX[2]	Soil	>2 [2]	Naphthalene	1	SOP-07, SOP-08
	32SB-55-YYYY[3]	Soil	>2 [3]	Naphthalene	1	
SWMU 32 Decision Unit 1-56	32SB-56-XXXX[2]	Soil	>2 [2]	Naphthalene	1	SOP-07, SOP-08
	32SB-56-YYYY[3] and 32SB-FDXXXXXX[4]	Soil	>2 [3]	Naphthalene	1 + 1 FD[4]	
SWMU 32 Decision Unit 1-57	32SB-57-XXXX[2]	Soil	>2 [2]	Naphthalene	1	SOP-07, SOP-08
	32SB-57-YYYY[3]	Soil	>2 [3]	Naphthalene	1	
SWMU 32 Decision Unit 1-58	32SB-58-XXXX[2]	Soil	>2 [2]	Naphthalene	1	SOP-07, SOP-08
	32SB-58-YYYY[3]	Soil	>2 [3]	Naphthalene	1	
SWMU 32 Decision Unit 1-59	32SB-59-XXXX[2]	Soil	>2 [2]	Naphthalene	1	SOP-07, SOP-08
	32SB-59-YYYY[3]	Soil	>2 [3]	Naphthalene	1	
SWMU 32 Decision Unit 1-60	32SS-60-0002	Soil	0 - 2	Benzo(a)pyrene	1	SOP-07, SOP-08
SWMU 32 Decision Unit 1-61	32SS-61-0002	Soil	0 - 2	Benzo(a)pyrene	1	SOP-07, SOP-08
SWMU 32 Decision Unit 1-62	32SS-62-0002	Soil	0 - 2	Benzo(a)pyrene	1	SOP-07, SOP-08
SWMU 32 Decision Unit 1-63	32SS-63-0002	Soil	0 - 2	Benzo(a)pyrene	1	SOP-07, SOP-08
SWMU 32 Decision Unit 1-64	32SS-64-0002	Soil	0 - 2	Benzo(a)pyrene	1	SOP-07, SOP-08
SWMU 32 Decision Unit 1-65	32SS-65-0002 and 32SS-FDXXXXXX[4]	Soil	0 - 2	Benzo(a)pyrene	1+ 1 FD[4]	SOP-07, SOP-08

Table 5 – Proposed Additional Sampling at SWMU 32 and Methods/SOP Requirements Table

Sampling Location	ID Number	Matrix	Depth (feet bgs)	Analysis	Number of Samples	Sampling SOP Reference[1]
SWMU 32 Sediment 04	32SD-04-0006 and 32SD-FDXXXXXX[4]	Sediment	0 – 0.5	VOCs (BTEX)	1 + 1 FD[4]	SOP-09
				Select SVOCs	1 + 1 FD[4]	
SWMU 32 Sediment 05	32SD-05-0006	Sediment	0 – 0.5	VOCs (BTEX)	1	SOP-09
				Select SVOCs	1	
SWMU 32 Groundwater 04	32GW-04 and 32GW-FDXXXXXX[4]	Groundwater	Shallow	VOCs (BTEX)	1 + 1 FD[4]	SOP-11, SOP-14, SOP-15, SOP-16, SOP-17
				Select SVOCs	1 + 1 FD[4]	
SWMU 32 Groundwater 05	32GW-05	Groundwater	Shallow	VOCs (BTEX)	1	SOP-11, SOP-14, SOP-15, SOP-16, SOP-17
				Select SVOCs	1	
SWMU 32 Groundwater 06	32GW-06	Groundwater	Shallow	VOCs (BTEX)	1	SOP-11, SOP-14, SOP-15, SOP-16, SOP-17
				Select SVOCs	1	

Notes:

(1) SOP in SWMU 32 SAP describes the sample collection procedures (Worksheet No. 21).

(2) A minimum of one subsurface soil sample will be collected from sampling locations 54 through 59. "XXXX" represents depth of the sample, which will be determined in the field. For example, if sample is collected from 4 to 5 feet, the depth will be recorded as 0405.

(3) A second (or more) subsurface soil samples may be collected from sampling locations 54 through 59 based on field observations and conditions. "YYYY" represents the depth of the sample.

(4) Field duplicate (FD) locations may change in the field based on visual observations and field conditions. "XXXXXX" or "YYYYYY" represents date collected.

Attachment B - Figures

Figure 1-1 – PAH Detections in Surface Soil
Figure 1-2 – BTEX Detections in Subsurface Soil
Figure 1-3 – PAH Detections in Subsurface Soil
Figure 1-4 – BTEX Detections in Sediment
Figure 1-5 – PAH Detections in Sediment
Figure 1-6 – Proposed Additional Sample Locations

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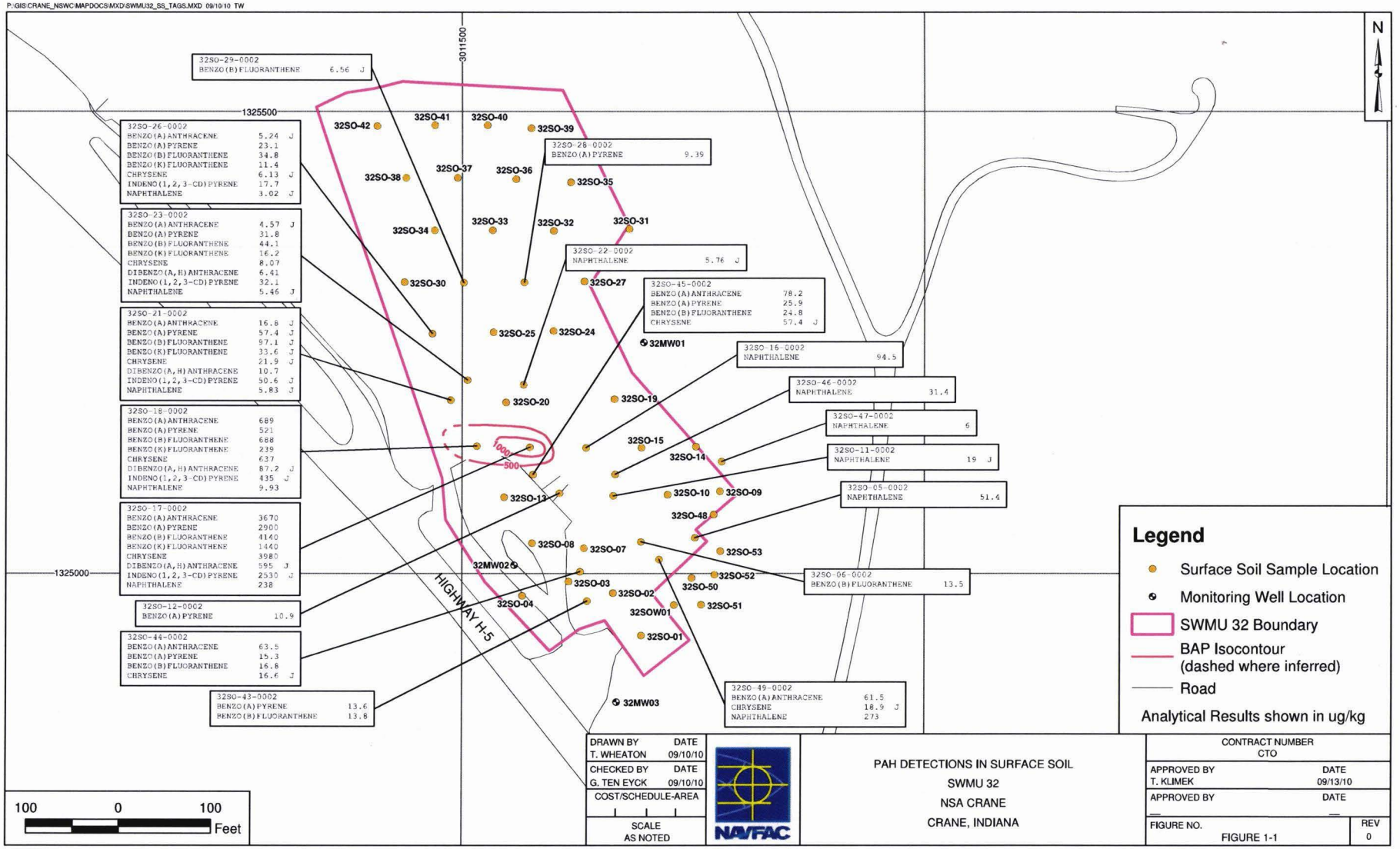


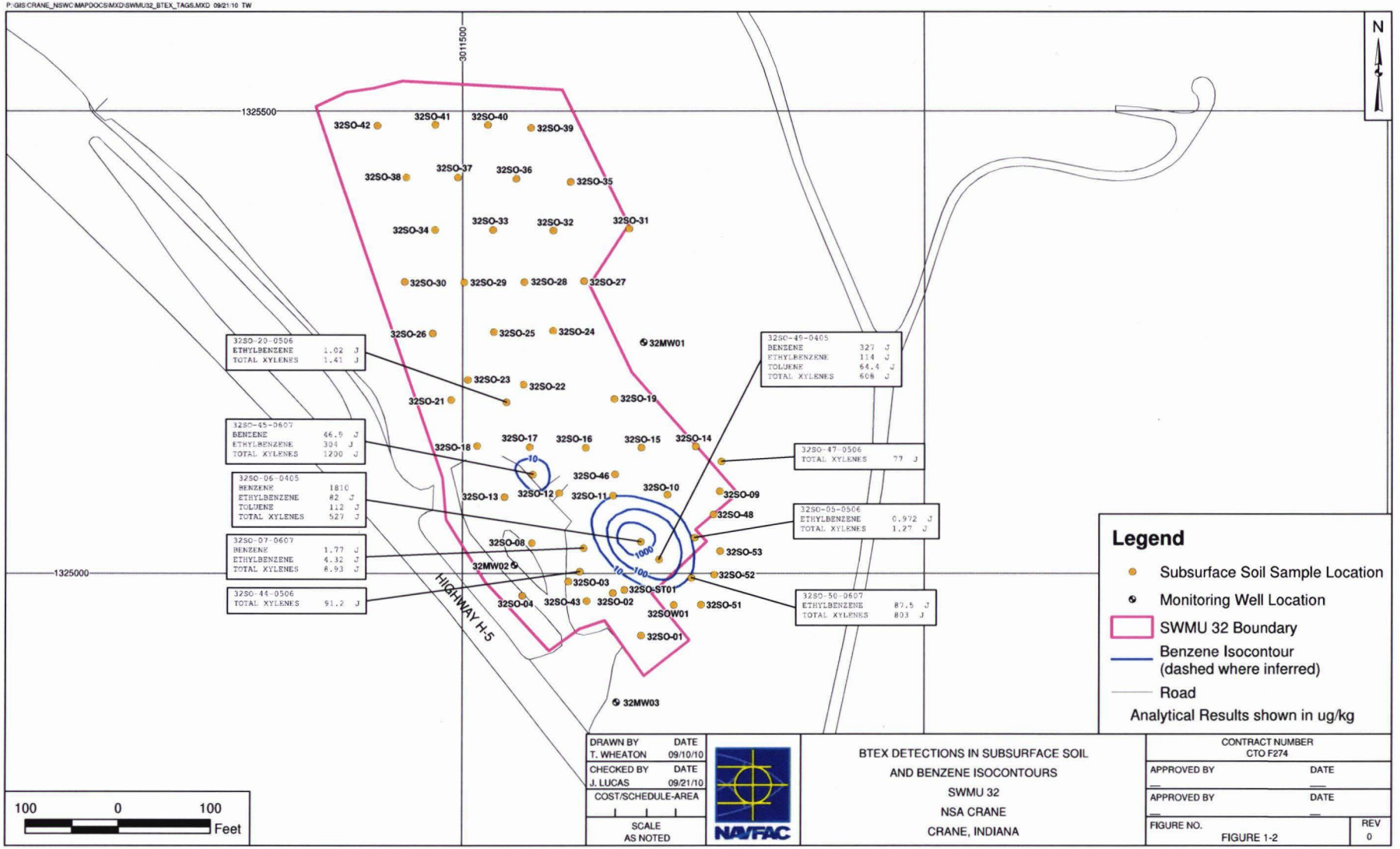
DRAWN BY	DATE
T. WHEATON	09/10/10
CHECKED BY	DATE
G. TEN EYCK	09/10/10
COST/SCHEDULE-AREA	
SCALE AS NOTED	

NAVFAC

PAH DETECTIONS IN SURFACE SOIL
SWMU 32
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER CTO	
APPROVED BY T. KLIMEK	DATE 09/13/10
APPROVED BY —	DATE —
FIGURE NO. FIGURE 1-1	REV 0

P:\GIS\CRANE_NSWC\MAPDOCS\MXD\SWMU32_BTEX_TAGS.MXD 09/21/10 TW



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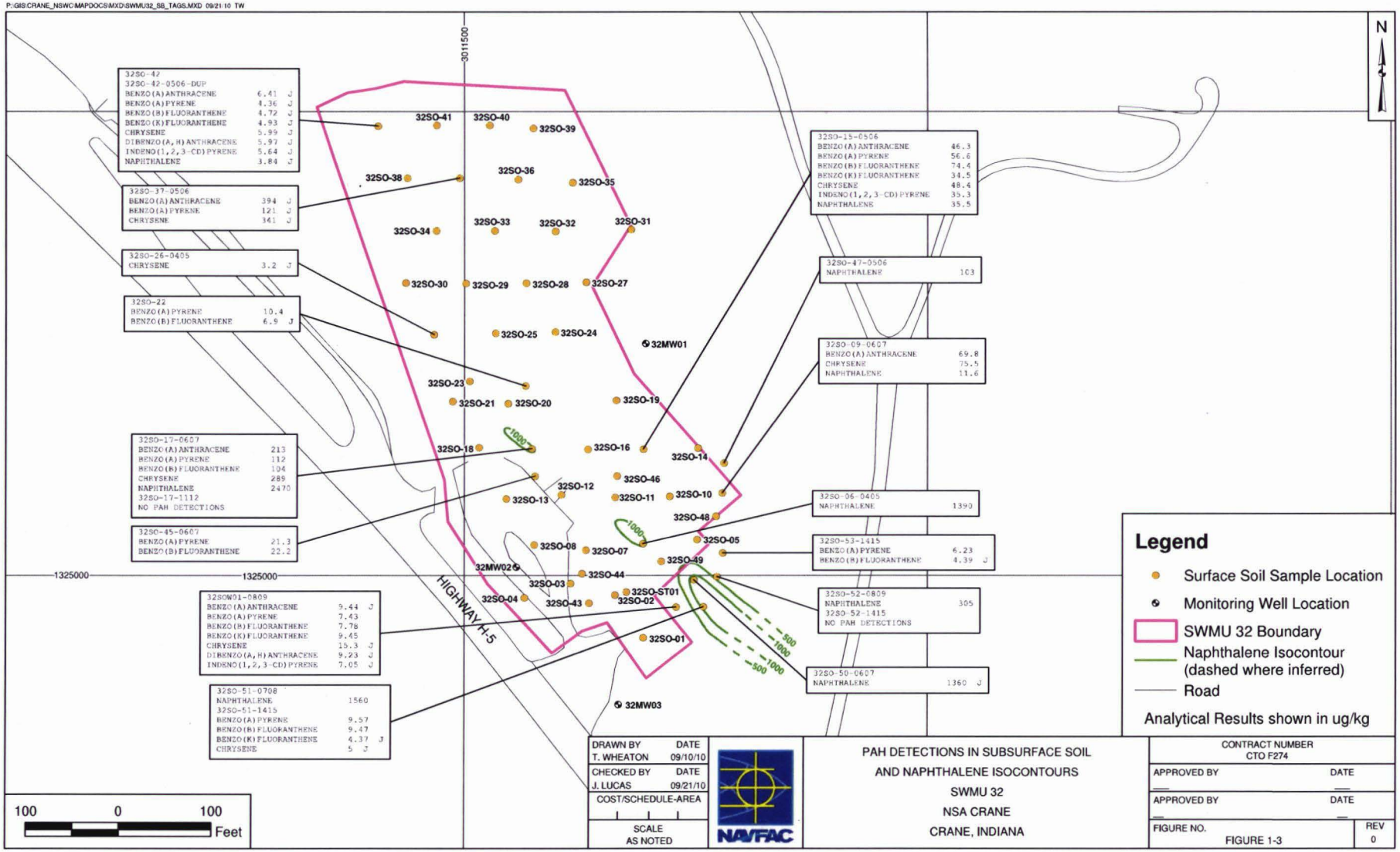
CHECKED BY J. LUCAS	DATE 09/21/10
COST/SCHEDULE-AREA	
SCALE AS NOTED	

NAVFAC

BTEX DETECTIONS IN SUBSURFACE SOIL
AND BENZENE ISOCONTOURS
SWMU 32
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER CTO F274	
APPROVED BY —	DATE —
APPROVED BY —	DATE —
FIGURE NO. FIGURE 1-2	REV 0

P:\GIS\CRANE_NSWC\MAPDOCS\MXD\SWMU32_SB_TAGS.MXD 09/21/10 TW



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T. WHEATON	09/10/10
CHECKED BY	DATE
J. LUCAS	09/21/10
COST/SCHEDULE-AREA	
SCALE AS NOTED	

NAVFAC

PAH DETECTIONS IN SUBSURFACE SOIL AND NAPHTHALENE ISOCONTOURS
SWMU 32
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER CTO F274	
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO. FIGURE 1-3	REV 0

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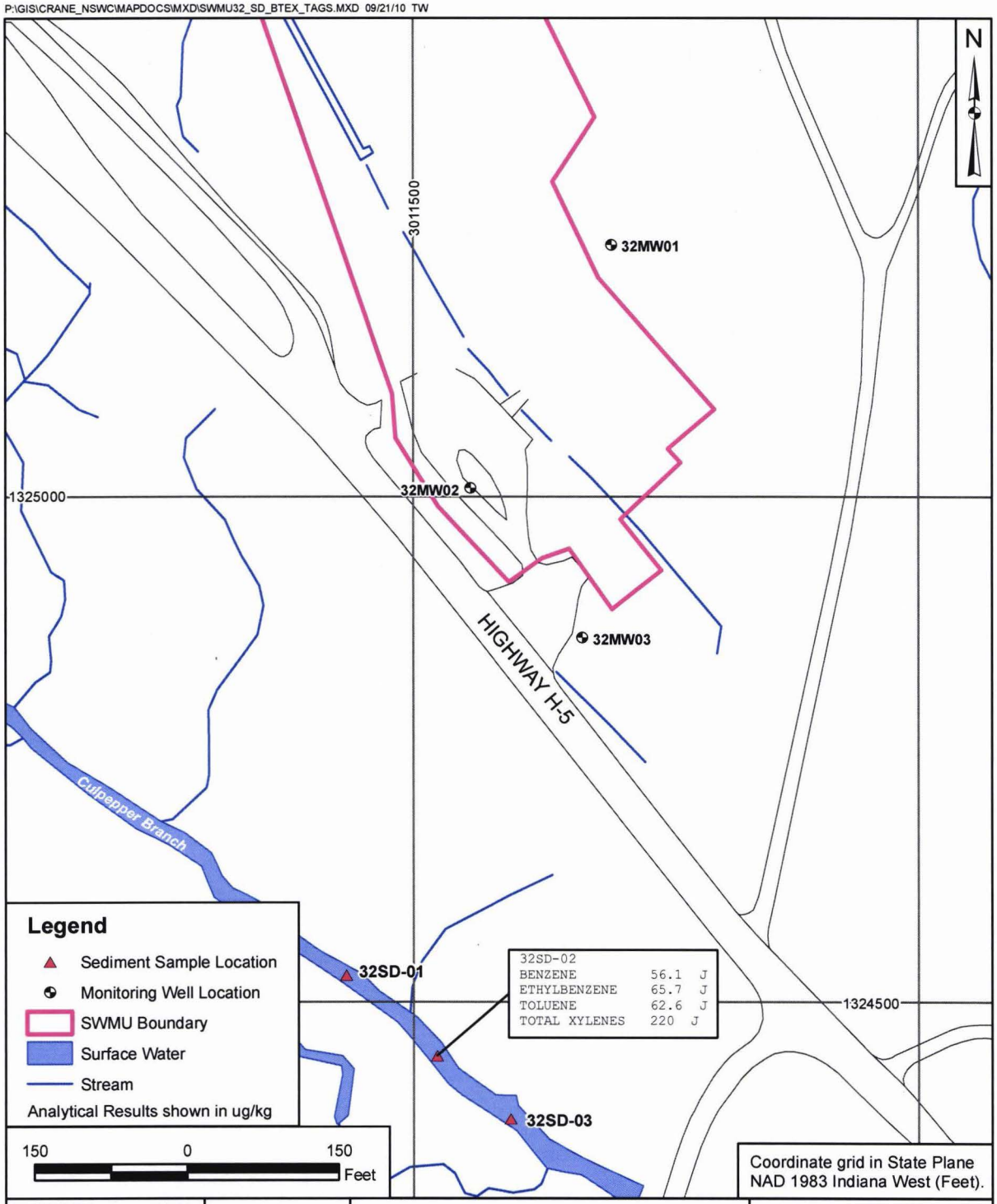

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CHECKED BY	DATE
J. LUCAS	09/21/10
REVISED BY	DATE
—	—
SCALE	
AS NOTED	

NAVFAC

BTEX DETECTIONS IN SEDIMENT
SWMU 32
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER	
CTO F274	
OWNER NUMBER	
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APPROVED BY	DATE
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FIGURE NO.	REV
FIGURE 1-4	0

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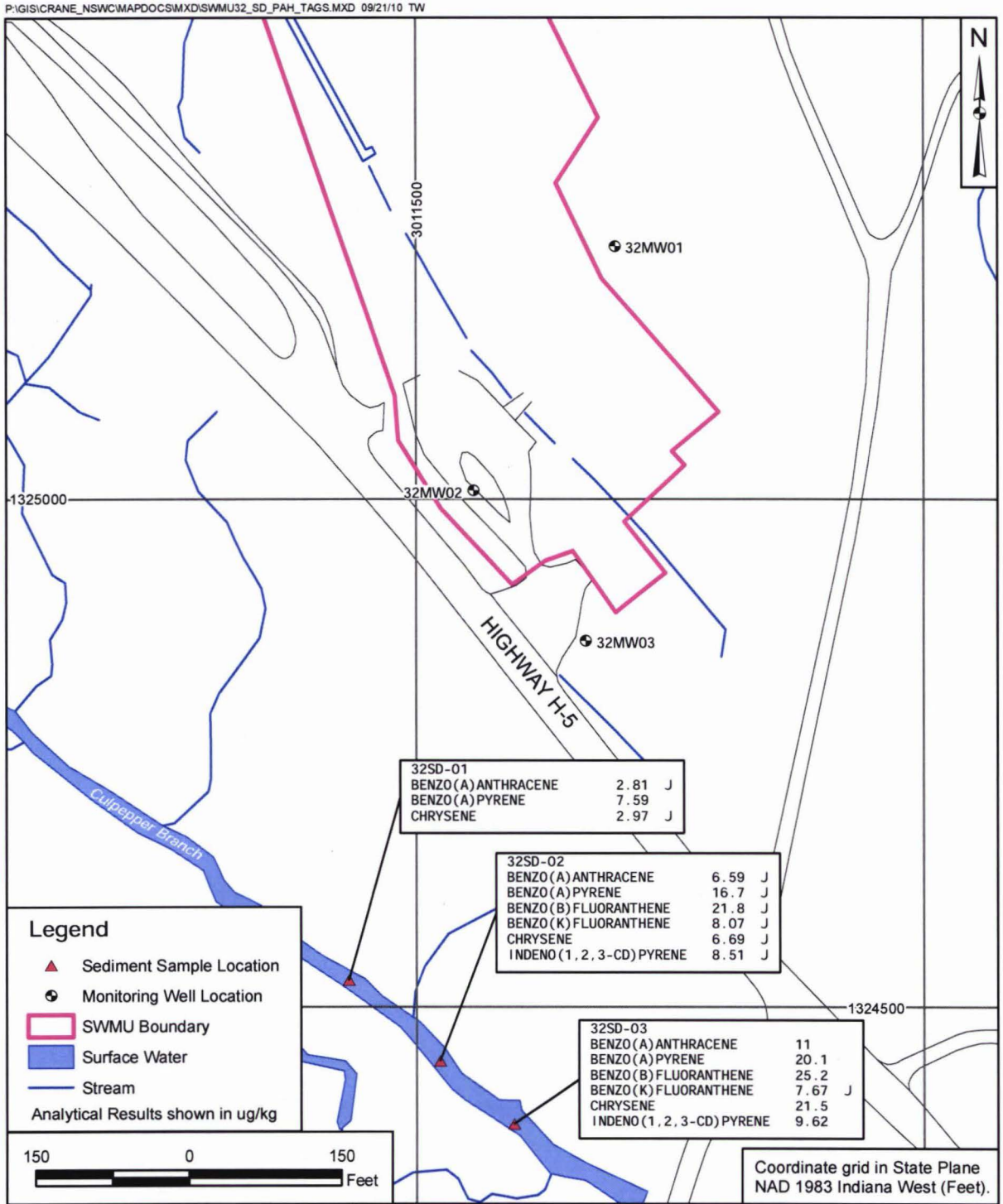

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J. LUCAS	09/21/10
REVISED BY	DATE
—	—
SCALE	
AS NOTED	

NAVFAC

PAH DETECTIONS IN SEDIMENT
SWMU 32
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER	
CTO F274	
OWNER NUMBER	
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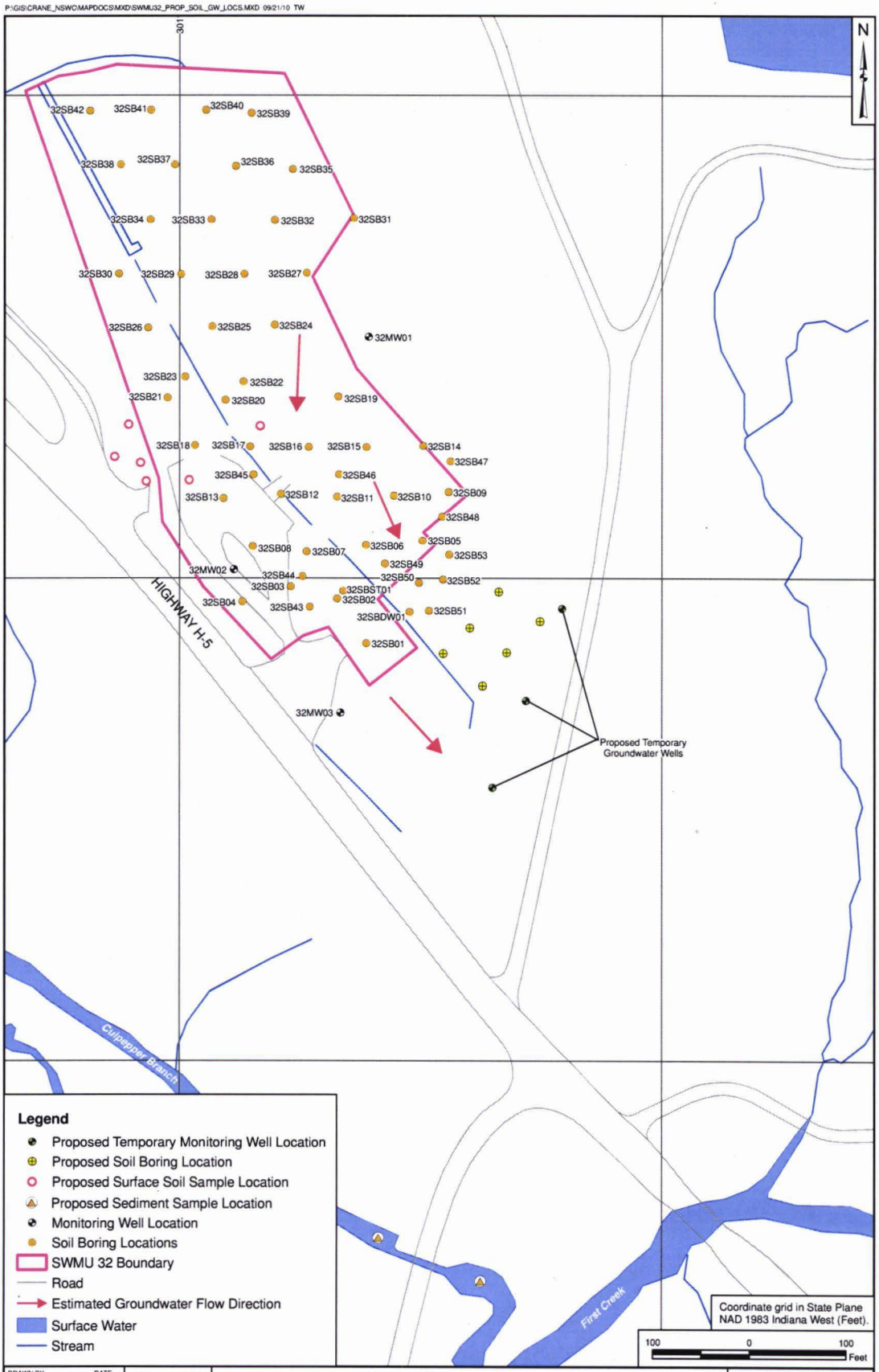
FIGURE NO.	REV
FIGURE 1-5	0

P:\GIS\CRANE_NSWC\MAPDOCS\MXD\SWMU32_PROP_SOIL_GW_LOCS.MXD 09/21/10 TW



DRAWN BY T. WHEATON	DATE 09/01/10	PROPOSED ADDITIONAL SAMPLE LOCATIONS SWMU 32 NSA CRANE CRANE, INDIANA	CONTRACT NUMBER CTO F274
CHECKED BY J. LUCAS	DATE 09/21/10		APPROVED BY / DATE
REVISED BY	DATE		APPROVED BY / DATE
SCALE AS NOTED	NAVFAC		FIGURE NO. FIGURE 1-6 / REV 0