



**Supplemental River Sediment  
Investigation  
Former Hammond MGP Site  
Hammond, Indiana**

Prepared by:

**ThermoRetec Consulting Corporation  
9245 North Meridian Street  
Indianapolis, Indiana 46260**

**ThermoRetec Project No.:** NIPS2-03933-250

Prepared for:

**Northern Indiana Public Service Company  
801 East 86<sup>th</sup> Avenue  
Merrillville, Indiana 46410**

**September 7, 1999**



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September 7, 1999

Mr. Brian Stage  
Environmental Project Manager  
Northern Indiana Public Service Company  
801 East 86<sup>th</sup> Avenue  
Merrillville, Indiana 46410

**Re: Supplemental River Sediment Investigation  
Former Hammond MGP Site  
Hammond, Indiana  
ThermoRetec Project No. NIPS2-03933-250**

Dear Brian,

This letter report, including attachments, summarizes the activities and reports the findings of the supplemental river sediment investigation of the former Hammond MGP Site in Hammond, Indiana (Figure 1). The details regarding previous investigations are covered in the *River Sediment Investigation Report, Grand Calumet River, Hammond, Indiana*, dated January 14, 1999 (ThermoRetec Project No. 3-3933-600). The purpose of the current investigation was to further delineate the presence, extent, and concentrations of the constituents of interest (COI) in the river sediments adjacent to the site.

Field activities, completed June 14-16<sup>th</sup>, 1999, included mobilization and demobilization of a pontoon barge on the Grand Calumet River, completion of 12 river sediment cores between the Hohman Avenue and railroad bridges, and collection and archiving of river sediment samples for chemical analysis. The sediment cores were obtained using hand-pushed, 2 inch PVC pipe with a Waterloo type plunger (to maintain the integrity of the sediment sample). The pipe was advanced to either 6 feet (ft) below the top of sediment (bts) for shallow cores or 10 ft-bts for deep cores. Recovery of sediment ranged from 4.5-7.5 ft for both shallow and deep cores. Complete descriptions of the sediment sampling can be found in the attached boring logs. The sampling location coordinates are listed in Table 1 and each location is depicted appropriately on both Figures 2 and 3.

Mr. Brian Stage  
September 7, 1999  
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Multiple samples from each sediment core were collected and submitted for chemical analysis or archived at the laboratory (Test America, Inc., Indianapolis, IN). For shallow sediment cores, two 4-ounce sample jars were filled with a composite sample from 0-6 ft-bts. These composite samples were analyzed using the toxic characteristic leaching procedure for benzene (TCLP-benzene). Sediment samples from 0-3 ft-bts and 3-6 ft-bts were also collected in separate 4-ounce jars and archived. For deep sediment cores, the same sampling regime was implemented with additional samples collected in 4-ounce jars and submitted for analysis of benzene, toluene, ethylbenzene, and xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAHs), using USEPA SW-846 methods 8021B and 8270C, respectively. Samples were also collected from the lower portion of the deep sediment cores for physical characterization, however, the laboratory was unable to perform these analyses due to the highly impacted nature of the samples.

The results of the chemical analysis are listed in the attached tables and laboratory report. Included in both tables are the respective Tier II Cleanup Goals for the Nonresidential Scenario for the State of Indiana (Tier II Criteria). Table 2 contains results from the TCLP-benzene analysis and Table 3 contains results for BTEX and PAHs analyses. The complete analytical results for all samples can be found in the attached laboratory report from Test America, Inc.

Visual inspection of the river sediment samples indicated that impacted strata and product layers existed throughout the core lengths. Chemical analysis confirmed the presence of benzene in the composite samples. Eight of the twelve composite samples (SD-99-03, -04, -05, -06, -07, -08, -09, and -11) had TCLP-benzene concentration above the Tier II Criteria of 0.5 mg/L (Figure 2). The concentrations for these samples ranged from 0.76 - 3.1 mg/L. The other four samples (SD-99-01, -02, -10, and -12) had benzene concentrations just below the Tier II Criteria, ranging from 0.40 - 0.48 mg/L.

Chemical analysis of the non-composite samples confirmed the presence of BTEX in all five samples submitted (including one duplicate). Benzene concentrations reported for SD-99-06-4-5' and its duplicate DUP-99-01 were 6.9 and 5.5 mg/kg, both of which are above the Tier II Criteria of 4.77 mg/kg (Figure 3). Benzene concentrations for SD-99-01-0-3', SD-99-01-3-6', and SD-99-09-5-6' were 4.6, 2.3, and 4.1 mg/kg, respectively, and are below the Tier II Criteria. Concentrations for toluene, ethylbenzene, and xylenes were below the Tier II Criteria for all five samples.

The presence of PAHs in non-composite samples was also confirmed by chemical analysis. Concentrations of benzo(a)anthracene and benzo(a)pyrene were above the Tier II Criteria in

Mr. Brian Stage  
September 7, 1999  
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samples SD-99-01-0-3' and DUP-99-01 (Figure 3). The respective concentrations of benzo(a)anthracene were 170 and 130 mg/kg, with a Tier II Criteria of 103.88 mg/kg. The respective concentrations of benzo(a)pyrene were 120 and 89 mg/kg, with a Tier II Criteria of 69.85 mg/kg. The original sample of DUP-99-01, SD-99-06-4-5', did not exceed the Tier II Criteria for benzo(a)anthracene and benzo(a)pyrene, but the values (89 and 65 mg/kg, respectively) were close to the Tier II Criteria.

The quality assurance and quality control (QA/QC) samples returned expected results. The equipment blank and the trip blank reported no detectable levels of BTEX compounds or PAHs, indicating that no contamination of the samples occurred via the sampling equipment or during storage and transportation to the laboratory. The matrix spike/matrix spike duplicate samples were out of the control limits due to matrix interference.

In conclusion, the river sediments adjacent to the former Hammond MGP site are impacted with the COI and exceed the Tier II Criteria for the compounds and locations as described above. This site, at your discretion, should receive further attention in regards to these exceedances. Should you or your staff have any questions regarding the information contained in this report, please contact us at your convenience.

Sincerely,

**ThermoRetec Consulting Corporation**

William A. Raatz  
Environmental Engineer

Kevin Burns  
Project Manager

Enclosures

cc: Debra Howell



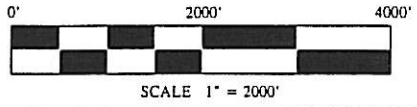
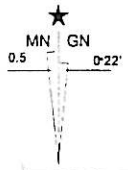
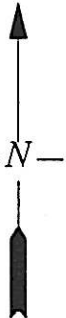
CALUMET CITY, LAKE CALUMET, HIGHLAND, & WHITING QUADRANGLES

INDIANA - LAKE COUNTY

7.5 MINUTE TOPOGRAPHIC MAP



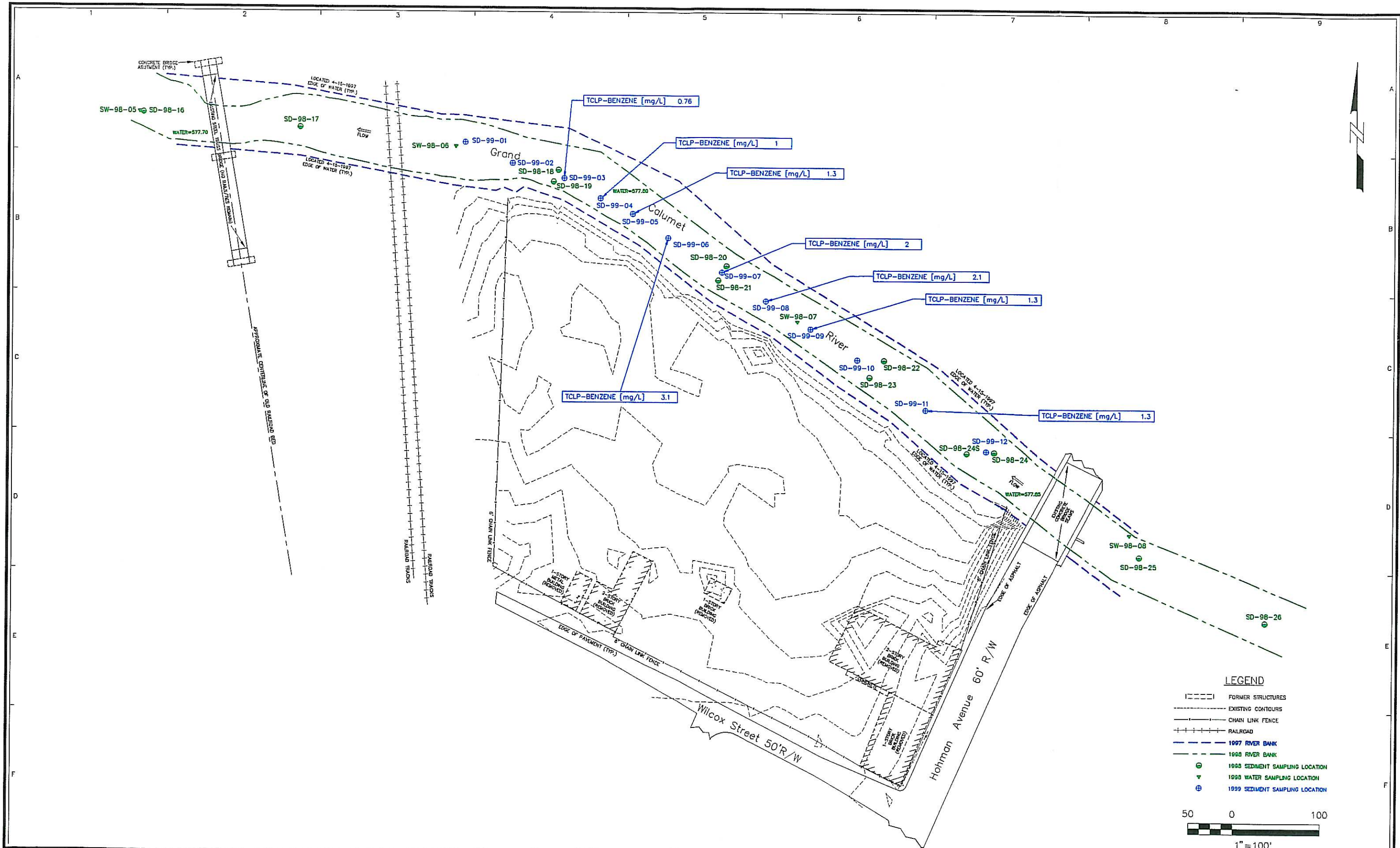
SITE



QUADRANGLE LOCATION

**FIGURE 1**  
SITE LOCATION MAP  
FORMER MANUFACTURED GAS PLANT  
HAMMOND, INDIANA

<b>RENEC</b>	
INDIANAPOLIS	INDIANA
PROJECT NUMBER 3-3933-250	



5									
4									
3									
2									
1	IGZ	9/07/99	GENERAL REVISION						
0	IGZ	8/17/99	INITIAL ISSUE						
NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE		

**FORMER MANUFACTURED GAS PLANT  
HAMMOND, INDIANA**  
3-3933-250

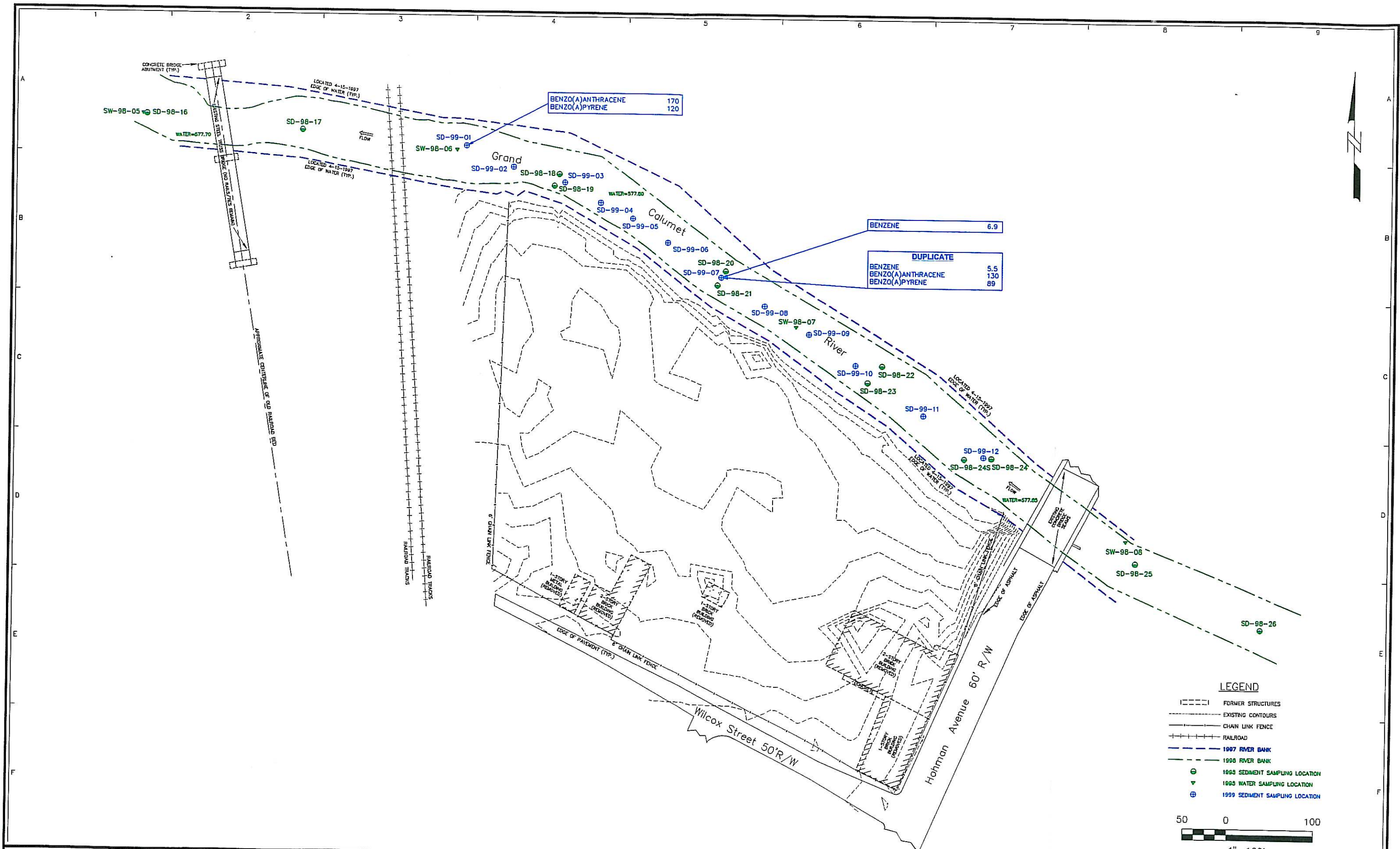
CURRENT DATE 9/07/99 CADD FILE 3933SA17

**FIGURE 2  
TIER II CRITERIA  
EXCEEDANCES - TCLP - BENZENE [mg/L]  
1999 COMPOSITE RIVER SEDIMENT SAMPLES**

DRAWING NO. 3933SA17 REVISION 1







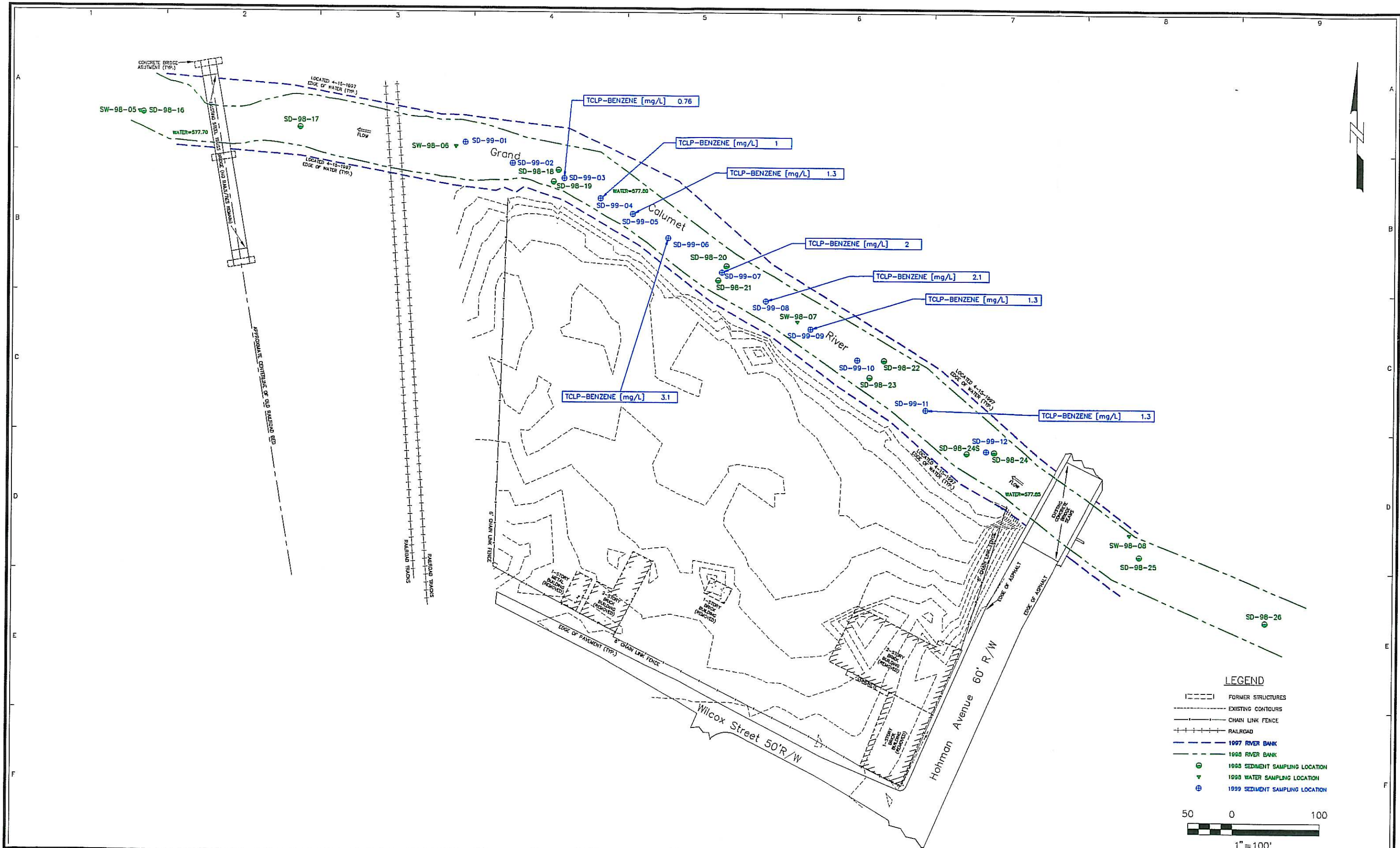
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4							
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1	IGZ	9/07/99	GENERAL REVISION				
0	IGZ	8/17/99	INITIAL ISSUE				
	NO. DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE

**FORMER MANUFACTURED GAS PLANT  
 HAMMOND, INDIANA**  
 3-3933-250  
 CURRENT DATE 9/07/99    CADD FILE 3933SA18

**FIGURE 3**  
**TIER II CRITERIA EXCEEDANCES**  
**BTEX AND PAHs [mg/kg]**  
**1999 RIVER SEDIMENT SAMPLES**

DRAWING NO. 3933SA18    REVISION 1





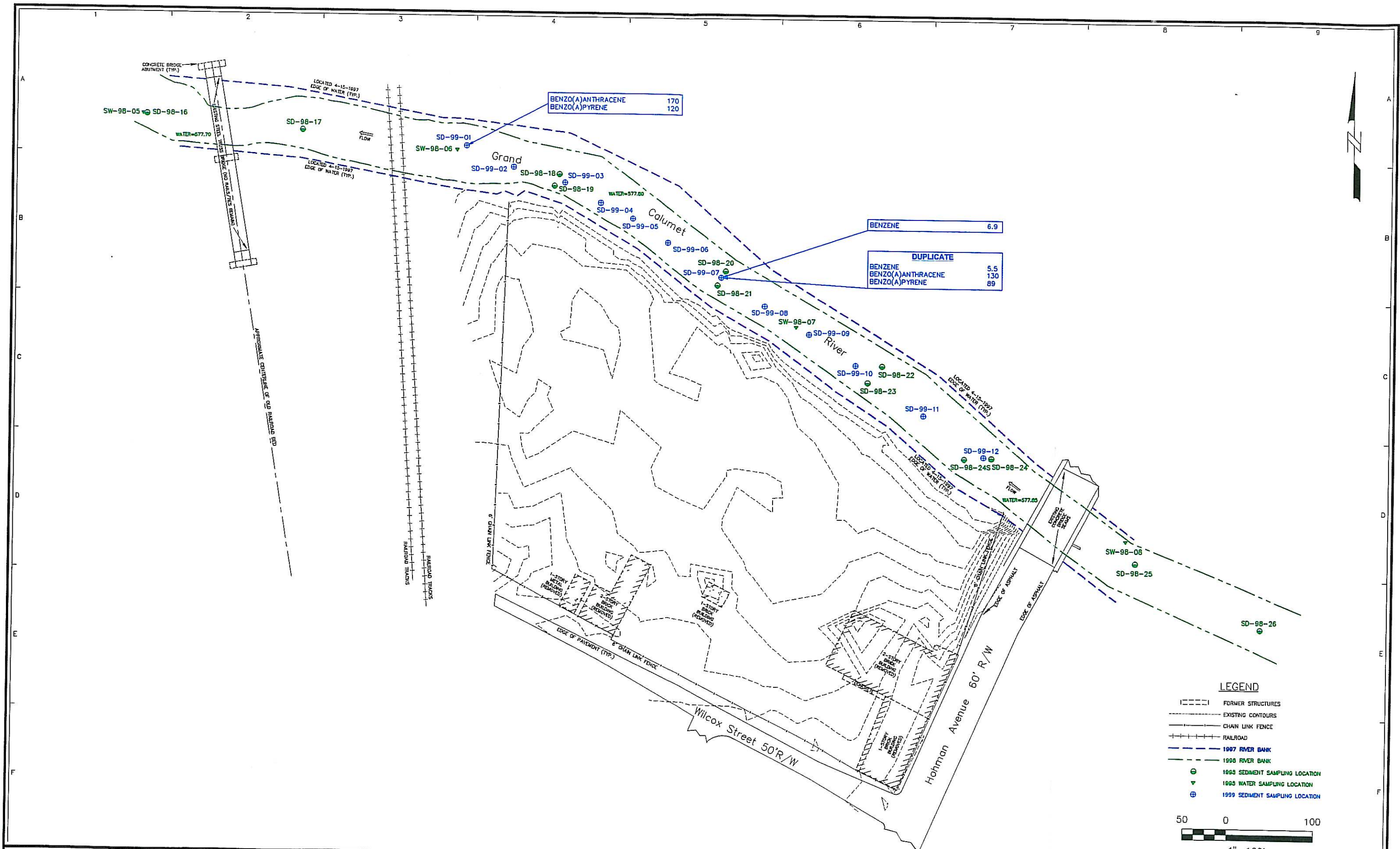
5									
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1	IGZ	9/07/99	GENERAL REVISION						
0	IGZ	8/17/99	INITIAL ISSUE						
NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE		

**FORMER MANUFACTURED GAS PLANT**  
**HAMMOND, INDIANA**  
 3-3933-250  
 CURRENT DATE 9/07/99 CADD FILE 3933SA17

**FIGURE 2**  
**TIER II CRITERIA**  
**EXCEEDANCES - TCLP - BENZENE [mg/L]**  
**1999 COMPOSITE RIVER SEDIMENT SAMPLES**  
 DRAWING NO. 3933SA17 REVISION 1







5							
4							
3							
2							
1	IGZ	9/07/99	GENERAL REVISION				
0	IGZ	8/17/99	INITIAL ISSUE				
	NO. DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE

**FORMER MANUFACTURED GAS PLANT  
HAMMOND, INDIANA**  
 3-3933-250  
 CURRENT DATE 9/07/99    CADD FILE 3933SA18

**FIGURE 3**  
**TIER II CRITERIA EXCEEDANCES**  
**BTEX AND PAHs [mg/kg]**  
**1999 RIVER SEDIMENT SAMPLES**

DRAWING NO. 3933SA18    REVISION 1

**Table 1 Coordinates of River Sediment Sampling Locations**

SAMPLE LOCATION	NORTHING	EASTING	ELEVATION [ft-asl]
SD-99-01	2323257.77	2833211.86	577.32
SD-99-02	2323234.38	2833266.00	575.38
SD-99-03	2323217.50	2833324.91	574.93
SD-99-04	2323194.80	2833366.40	574.84
SD-99-05	2323177.33	2833403.25	574.85
SD-99-06	2323150.55	2833443.98	575.22
SD-99-07	2323111.63	2833505.82	575.31
SD-99-08	2323079.54	2833555.74	575.03
SD-99-09	2323047.71	2833606.29	576.44
SD-99-10	2323013.03	2833659.54	576.07
SD-99-11	2322956.54	2833737.88	576.64
SD-99-12	2322909.94	2833807.33	574.79

NOTES: ft-asl - feet above sea level

Surveying completed by Marbach, Brady & Weaver, Elkhart, IN.



**Table 2 Results of TCLP-benzene Analysis of River Sediment Samples**

SAMPLE NAME Tier II Criteria	TCLP-benzene [mg/L]
SD-99-01	0.42
SD-99-02	0.48
SD-99-03	0.76
SD-99-04	1
SD-99-05	1.3
SD-99-06	3.1
SD-99-07	2
SD-99-08	2.1
SD-99-09	1.3
SD-99-10	0.43
SD-99-11	1.3
SD-99-12	0.4

NOTES: All samples are composites from depths 0-6 feet below top of sediment.  
 Samples obtained on June 15-16th, 1999  
 mg/L - milligrams per liter, equivalent to parts per million (ppm)

Table 3 Results of BTEX and PAHs Analyses of River Sediment Samples

SAMPLE ID Sample depth [feet]	SD-99-01				DUP-99-01		SD-99-09		TIER II NON-RESIDENTIAL CRITERIA
	0-3	3-6	4-5	3-6	3-6	5-6	5-6		
BTEX [mg/kg]									
Benzene	4.6	2.3	6.9	5.5	4.1	4.77			
Ethylbenzene	19	6.9	17	13	6.1	1000			
Toluene	< 0.5	< 0.5	< 0.5	< 0.5	2.2	1000			
Xylenes, Total	11	5.5	14	10	4.9	1000			
POLYCYCLIC AROMATIC HYDROCARBONS [mg/kg]									
Acenaphthene	884	240	500	650	190	10000			
Acenaphthylene	35	10	20	25	13	NA			
Anthracene	220	58	130	180	54	10000			
Benzo(a)anthracene	170	40	89	130	40	103.88			
Benzo(a)pyrene	120	35	65	89	35	69.85			
Benzo(b)fluoranthene	100	28	56	73	25	354.98			
Benzo(k)fluoranthene	40	12	23	28	7.7	3759.12			
Benzo(ghi)perylene	44	< 6.6	26	32	10	NA			
Chrysene	150	41	76	130	46	10000			
Dibenzo(a,h)anthracene	< 33	< 6.6	7.2	8.2	2.8	69.86			
Fluoranthene	290	71	190	240	71	10000			
Fluorene	410	110	240	300	96	10000			
Indeno(1,2,3-cd)pyrene	38	8.7	20	27	8	629.17			
Naphthalene	1700	580	1300	1600	650	10000			
Phenanthrene	1200	330	690	900	280	NA			
Pyrene	380	140	290	400	130	10000			

NOTES: Samples obtained on June 15-16<sup>th</sup>, 1999

NA - Not Applicable or Not Available

mg/kg - milligrams per kilogram, equivalent to parts per million (ppm)

< denotes results below indicated detection limit

Sample DUP-99-01 is a duplicate sample of sample SD-99-06

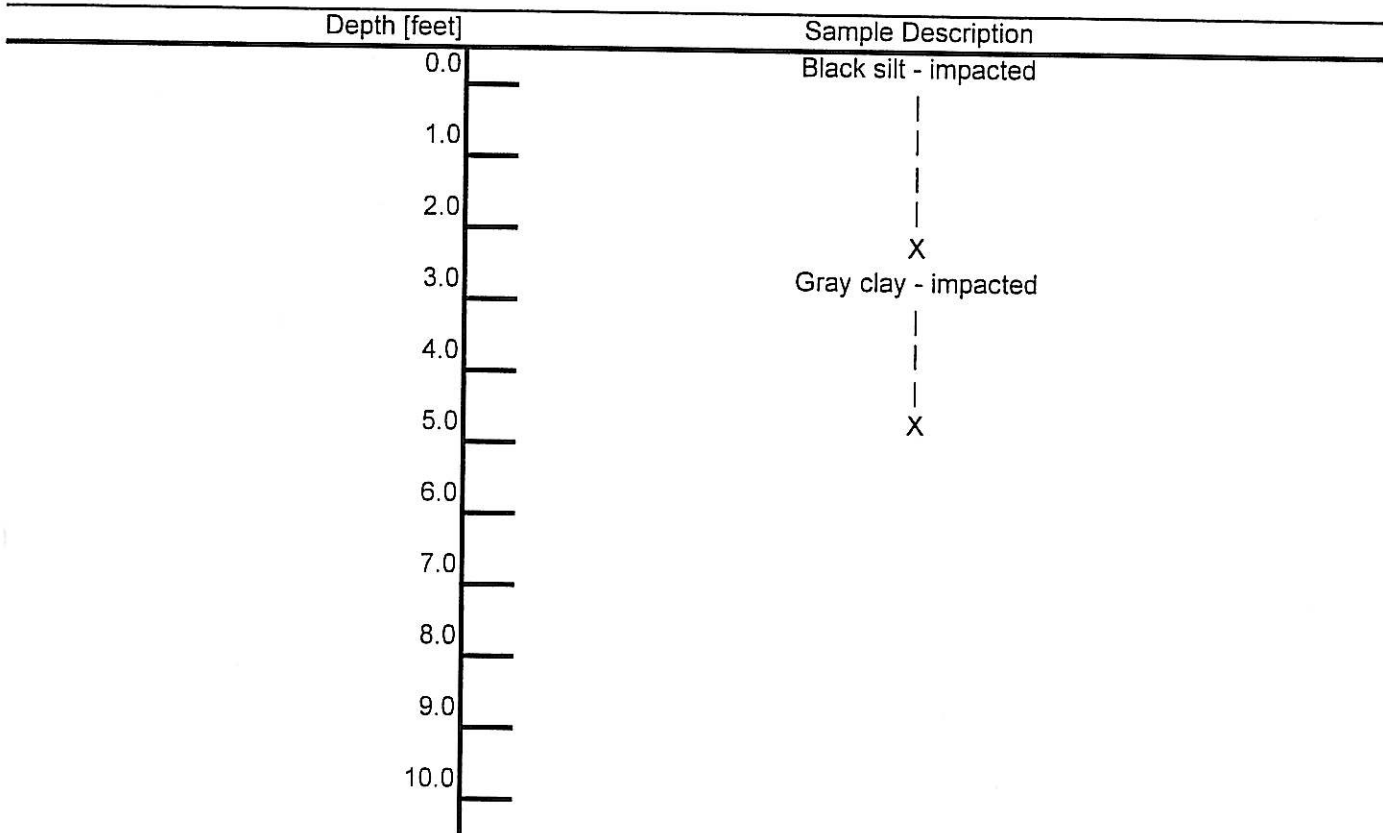
**ThermoRetec Consulting Corporation - Boring Log**

Client: NIPSCO  
Location: Hammond  
Project Number: NIPS2-03933-250  
Sampled By: WAR

Date: 16-Jun-99  
Drilling Company: Fox  
Method: Waterloo-type

Casing OD/ID: 2" PVC  
Auger OD/ID: NA  
Total Depth: 10'  
Depth Recovered: 5'

Sample Location: SD-99-01  
Reference: Top of Sediment



**Sample Summary:**

Type:	Depth Range:	Number of Samples:	Analysis:	Status:
Composite	0-6'	2	TCLP-Benzene	Completed
Grab	0-3'	2	BTEX & PAHs	Completed*
Grab	3-6'	2	BTEX & PAHs	Completed*

\* 1 sample Archived

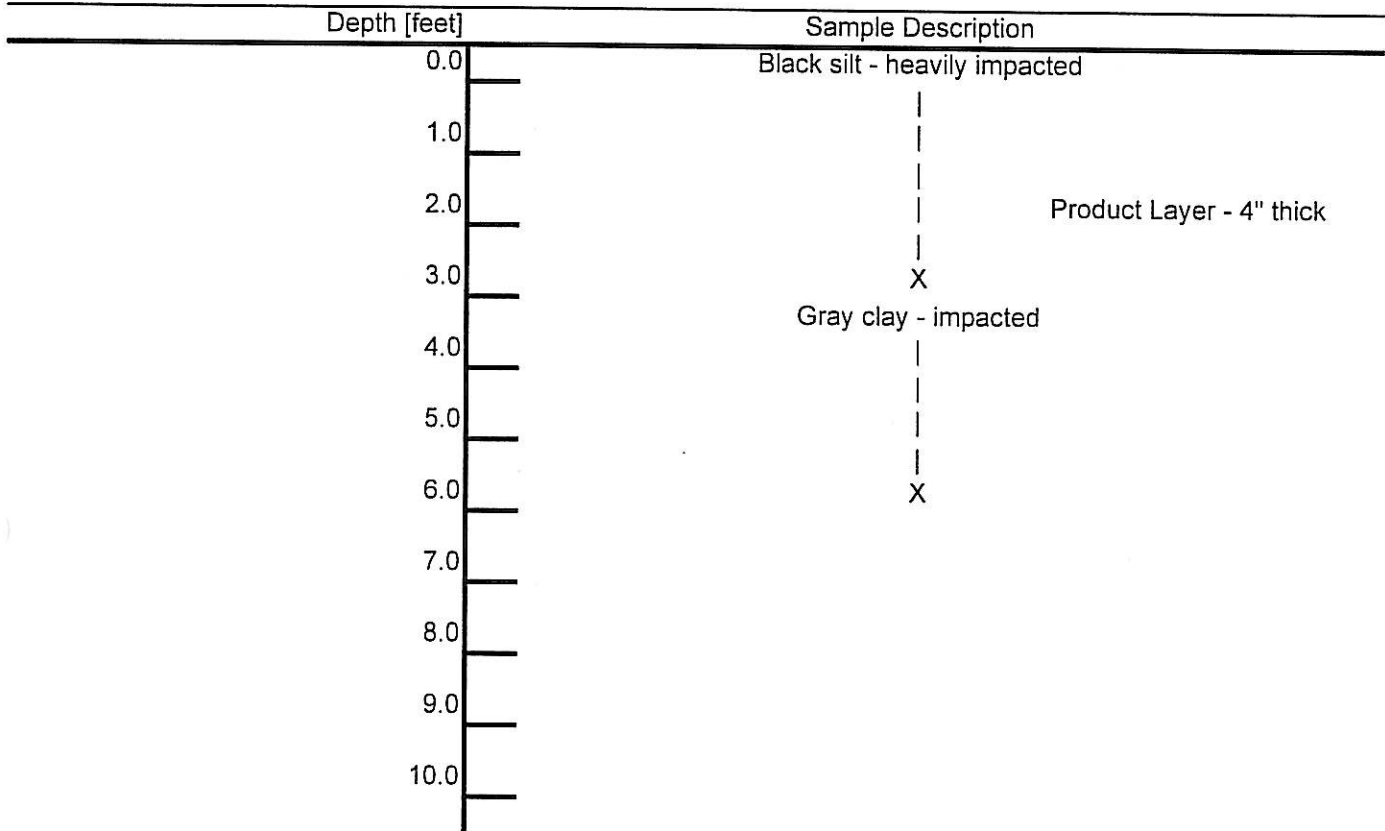
**ThermoRetec Consulting Corporation - Boring Log**

Client: NIPSCO  
Location: Hammond  
Project Number: NIPS2-03933-250  
Sampled By: WAR

Date: 16-Jun-99  
Drilling Company: Fox  
Method: Waterloo-type

Casing OD/ID: 2" PVC  
Auger OD/ID: NA  
Total Depth: 6'  
Depth Recovered: 6'

Sample Location: SD-99-02  
Reference: Top of Sediment



**Sample Summary:**

Type:	Depth Range:	Number of Samples:	Analysis:	Status:
Composite	0-6'	2	TCLP-Benzene	Completed
Grab	0-3'	1	BTEX & PAHs	Archived
Grab	3-6'	1	BTEX & PAHs	Archived

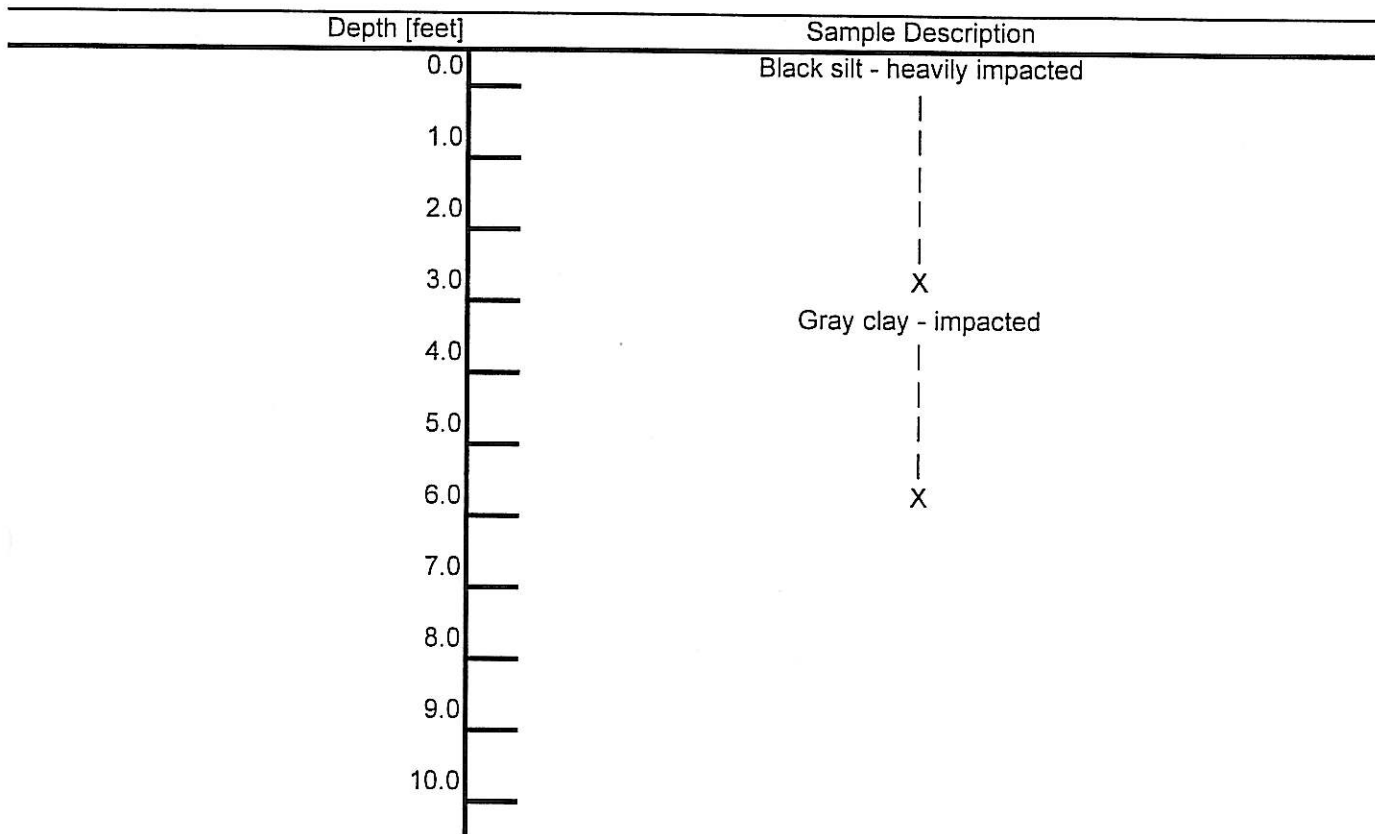
**ThermoRetec Consulting Corporation - Boring Log**

Client: NIPSCO  
Location: Hammond  
Project Number: NIPS2-03933-250  
Sampled By: WAR

Date: 16-Jun-99  
Drilling Company: Fox  
Method: Waterloo-type

Casing OD/ID: 2" PVC  
Auger OD/ID: NA  
Total Depth: 10'  
Depth Recovered: 6'

Sample Location: SD-99-03  
Reference: Top of Sediment



**Sample Summary:**

Type:	Depth Range:	Number of Samples:	Analysis:	Status:
Composite	0-6'	2	TCLP-Benzene	Completed
Grab	0-3'	2	BTEX & PAHs	Both Archived
Grab	3-6'	2	BTEX & PAHs	Both Archived
Grab	4-6'	1	Grain Size	Incomplete

**ThermoRetec Consulting Corporation - Boring Log**

Client: NIPSCO  
Location: Hammond  
Project Number: NIPS2-03933-250  
Sampled By: WAR

Date: 16-Jun-99  
Drilling Company: Fox  
Method: Waterloo-type

Casing OD/ID: 2" PVC  
Auger OD/ID: NA  
Total Depth: 6'  
Depth Recovered: 4.5'

Sample Location: SD-99-04  
Reference: Top of Sediment

Depth [feet]	Sample Description
0.0	Black silt - impacted
1.0	
2.0	
3.0	X
3.0	Gray clay/Black silt - impacted
4.0	
5.0	X
6.0	
7.0	
8.0	
9.0	
10.0	

Sample Summary:

Type:	Depth Range:	Number of Samples:	Analysis:	Status:
Composite	0-6'	2	TCLP-Benzene	Completed
Grab	0-3'	1	BTEX & PAHs	Archived
Grab	3-6'	1	BTEX & PAHs	Archived



**ThermoRetec Consulting Corporation - Boring Log**

Client: NIPSCO  
Location: Hammond  
Project Number: NIPS2-03933-250  
Sampled By: WAR

Date: 15-Jun-99  
Drilling Company: Fox  
Method: Waterloo-type

Casing OD/ID: 2" PVC  
Auger OD/ID: NA  
Total Depth: 6'  
Depth Recovered: 5'

Sample Location: SD-99-05  
Reference: Top of Sediment

Depth [feet]	Sample Description
0.0	Black silt - impacted
1.0	
2.0	
3.0	X
4.0	Gray clay      Product lens
5.0	Product Layer - 6" thick
6.0	X
7.0	
8.0	
9.0	
10.0	

**Sample Summary:**

Type:	Depth Range:	Number of Samples:	Analysis:	Status:
Composite	0-6'	2	TCLP-Benzene	Completed
Grab	0-3'	1	BTEX & PAHs	Archived
Grab	3-6'	1	BTEX & PAHs	Archived

**ThermoRetec Consulting Corporation - Boring Log**

Client: NIPSCO  
Location: Hammond  
Project Number: NIPS2-03933-250  
Sampled By: WAR

Date: 16-Jun-99  
Drilling Company: Fox  
Method: Waterloo-type

Casing OD/ID: 2" PVC  
Auger OD/ID: NA  
Total Depth: 10'  
Depth Recovered: 6'

Sample Location: SD-99-06  
Reference: Top of Sediment

Depth [feet]	Sample Description
0.0	Black silt - impacted
1.0	
2.0	
3.0	X
4.0	Gray clay - impacted
5.0	Heavily Impacted
6.0	X Possibly clean gray clay
7.0	
8.0	
9.0	
10.0	

Sample Summary:

Type:	Depth Range:	Number of Samples:	Analysis:	Status:
Composite	0-6'	2	TCLP-Benzene	Completed
Grab	0-3'	1	BTEX & PAHs	Archived
Grab	3-6'	1	BTEX & PAHs	Archived
Grab	5-6'	1	Grain Size	Incomplete
Grab (w/Duplicate)	4-5'	2	BTEX & PAHs	Completed

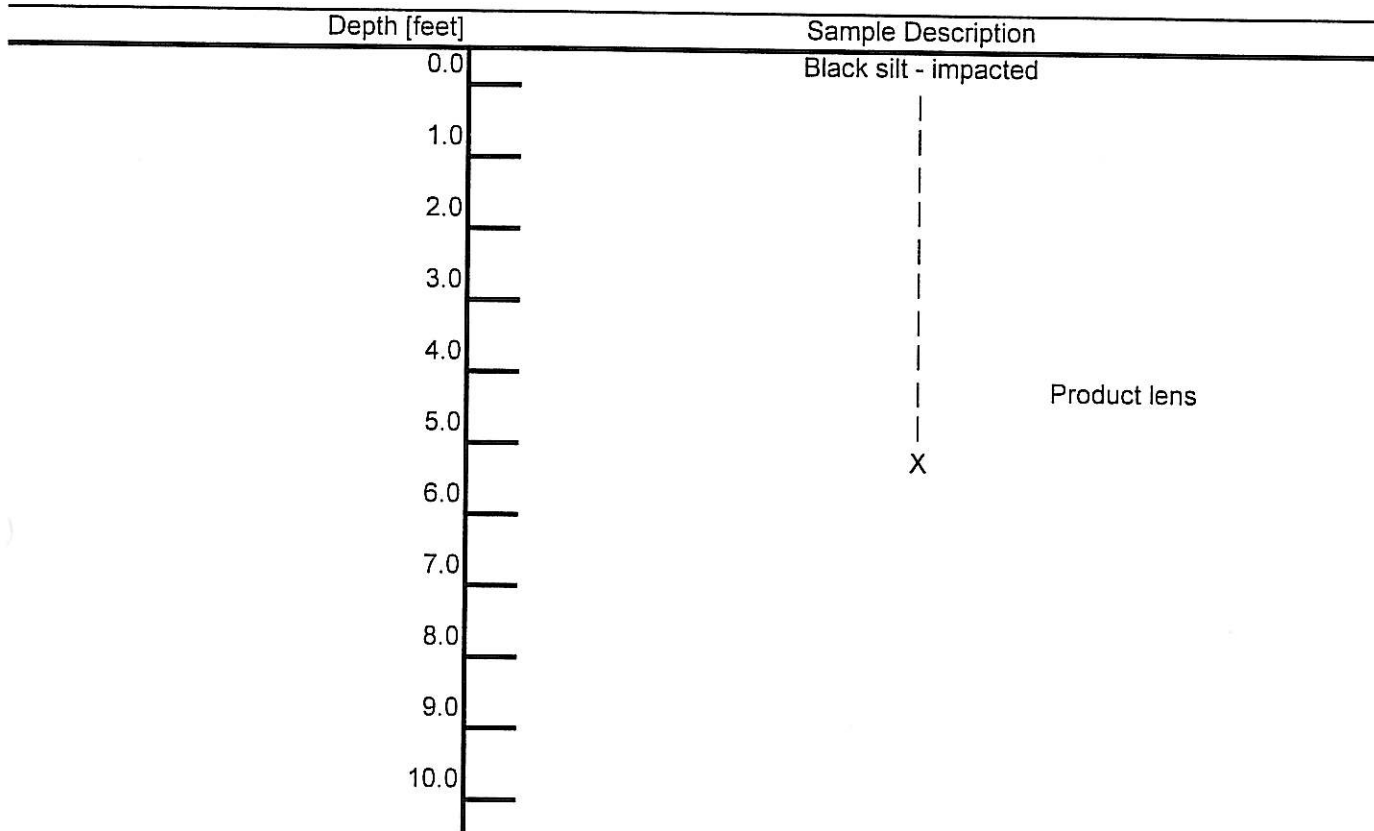
**ThermoRetec Consulting Corporation - Boring Log**

Client: NIPSCO  
Location: Hammond  
Project Number: NIPS2-03933-250  
Sampled By: WAR

Date: 15-Jun-99  
Drilling Company: Fox  
Method: Waterloo-type

Casing OD/ID: 2" PVC  
Auger OD/ID: NA  
Total Depth: 6'  
Depth Recovered: 5.5'

Sample Location: SD-99-07  
Reference: Top of Sediment



**Sample Summary:**

<u>Type:</u>	<u>Depth Range:</u>	<u>Number of Samples:</u>	<u>Analysis:</u>	<u>Status:</u>
Composite	0-6'	2	TCLP-Benzene	Completed
Grab	0-3'	1	BTEX & PAHs	Archived
Grab	3-6'	1	BTEX & PAHs	Archived

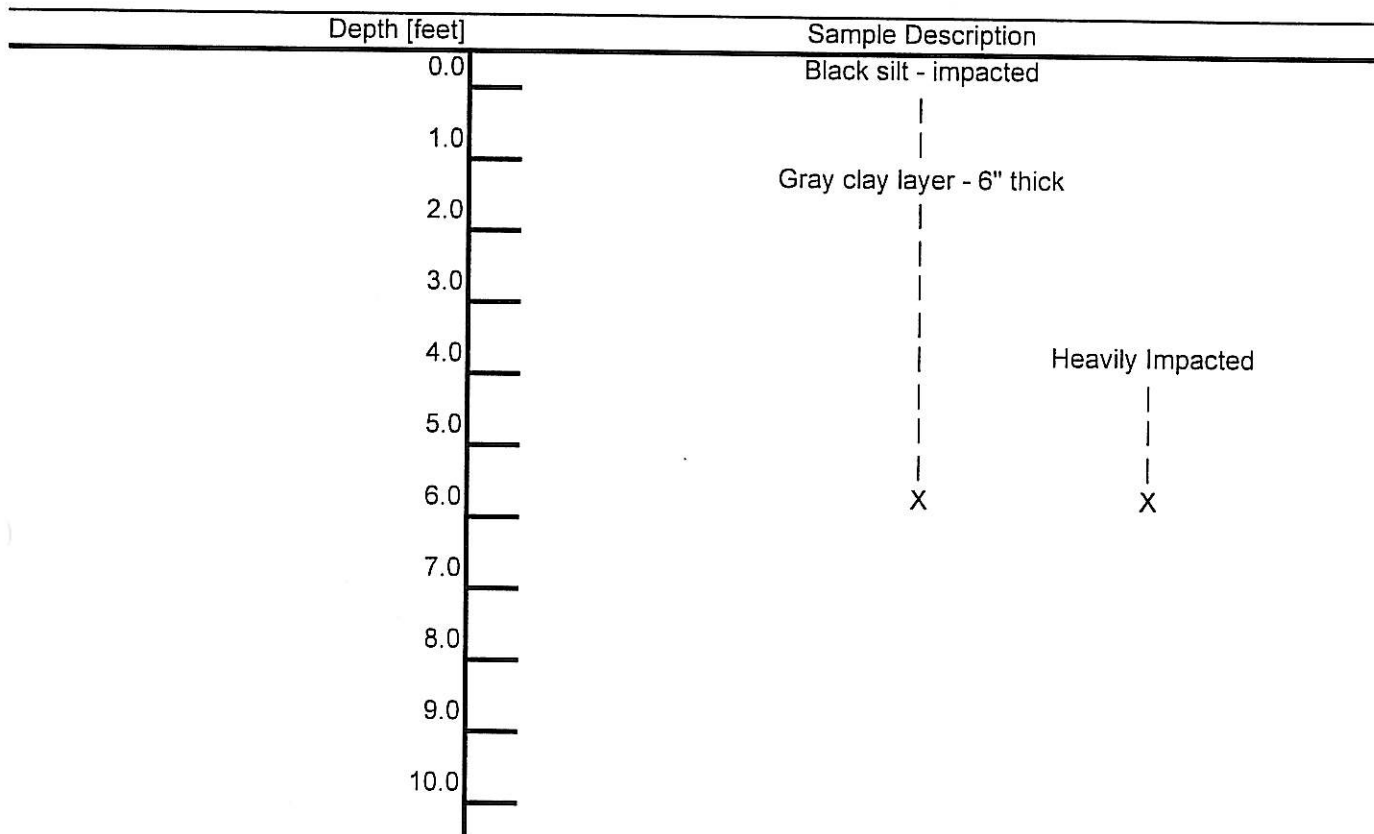
**ThermoRetec Consulting Corporation - Boring Log**

Client: NIPSCO  
Location: Hammond  
Project Number: NIPS2-03933-250  
Sampled By: WAR

Date: 15-Jun-99  
Drilling Company: Fox  
Method: Waterloo-type

Casing OD/ID: 2" PVC  
Auger OD/ID: NA  
Total Depth: 6'  
Depth Recovered: 6'

Sample Location: SD-99-08  
Reference: Top of Sediment



Sample Summary:

<u>Type:</u>	<u>Depth Range:</u>	<u>Number of Samples:</u>	<u>Analysis:</u>	<u>Status:</u>
Composite	0-6'	2	TCLP-Benzene	Completed
Grab	0-3'	1	BTEX & PAHs	Archived
Grab	3-6'	1	BTEX & PAHs	Archived

**ThermoRetec Consulting Corporation - Boring Log**

Client: NIPSCO  
Location: Hammond  
Project Number: NIPS2-03933-250  
Sampled By: WAR

Date: 16-Jun-99  
Drilling Company: Fox  
Method: Waterloo-type

Casing OD/ID: 2" PVC  
Auger OD/ID: NA  
Total Depth: 11.5'  
Depth Recovered: 7.5'

Sample Location: SD-99-09  
Reference: Top of Sediment

Depth [feet]	Sample Description
0.0	Black silt - heavily impacted
1.0	
2.0	
3.0	
4.0	
5.0	X Gray clay - impacted
6.0	
7.0	X Fine sand - impacted
8.0	X
9.0	
10.0	

**Sample Summary:**

Type:	Depth Range:	Number of Samples:	Analysis:	Status:
Composite	0-6'	2	TCLP-Benzene	Completed
Grab	0-3'	1	BTEX & PAHs	Archived
Grab	3-6'	1	BTEX & PAHs	Archived
Grab	6-7'	1	Grain Size	Incomplete
Grab (w/MS/MSD)	5-6'	3	BTEX & PAHs	Completed

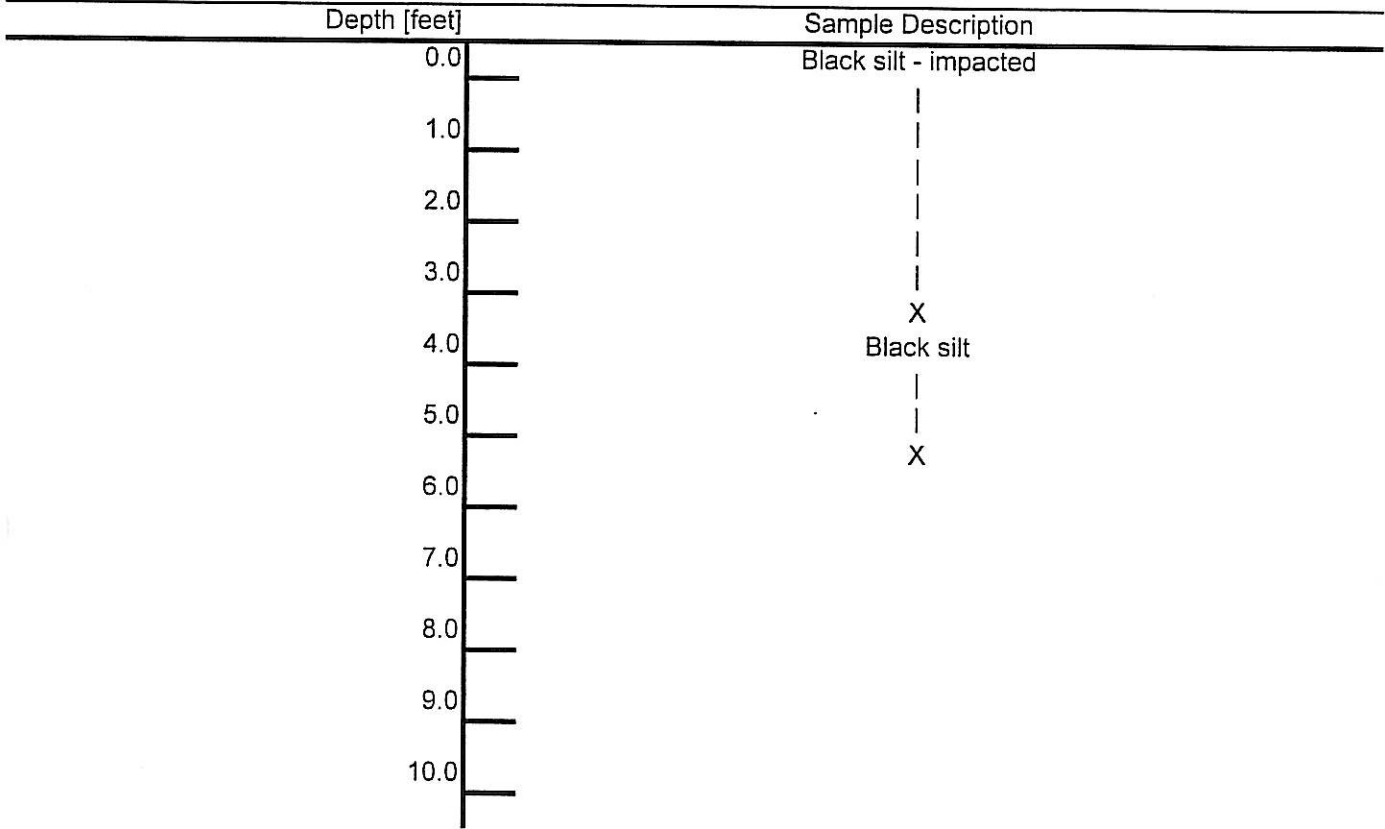
**ThermoRetec Consulting Corporation - Boring Log**

Client: NIPSCO  
Location: Hammond  
Project Number: NIPS2-03933-250  
Sampled By: WAR

Date: 15-Jun-99  
Drilling Company: Fox  
Method: Waterloo-type

Casing OD/ID: 2" PVC  
Auger OD/ID: NA  
Total Depth: 6'  
Depth Recovered: 5.5'

Sample Location: SD-99-10  
Reference: Top of Sediment



**Sample Summary:**

Type:	Depth Range:	Number of Samples:	Analysis:	Status:
Composite	0-6'	2	TCLP-Benzene	Completed
Grab	0-3'	1	BTEX & PAHs	Archived
Grab	3-6'	1	BTEX & PAHs	Archived



**ThermoRetec Consulting Corporation - Boring Log**

Client: NIPSCO  
Location: Hammond  
Project Number: NIPS2-03933-250  
Sampled By: WAR

Date: 15-Jun-99  
Drilling Company: Fox  
Method: Waterloo-type

Casing OD/ID: 2" PVC  
Auger OD/ID: NA  
Total Depth: 6'  
Depth Recovered: 6'

Sample Location: SD-99-11  
Reference: Top of Sediment

Depth [feet]	Sample Description
0.0	Black silt
1.0	
2.0	
3.0	Heavily Impacted
4.0	
5.0	X
6.0	X
7.0	
8.0	
9.0	
10.0	

Sample Summary:

<u>Type:</u>	<u>Depth Range:</u>	<u>Number of Samples:</u>	<u>Analysis:</u>	<u>Status:</u>
Composite	0-6'	2	TCLP-Benzene	Completed
Grab	0-3'	1	BTEX & PAHs	Archived
Grab	3-6'	1	BTEX & PAHs	Archived

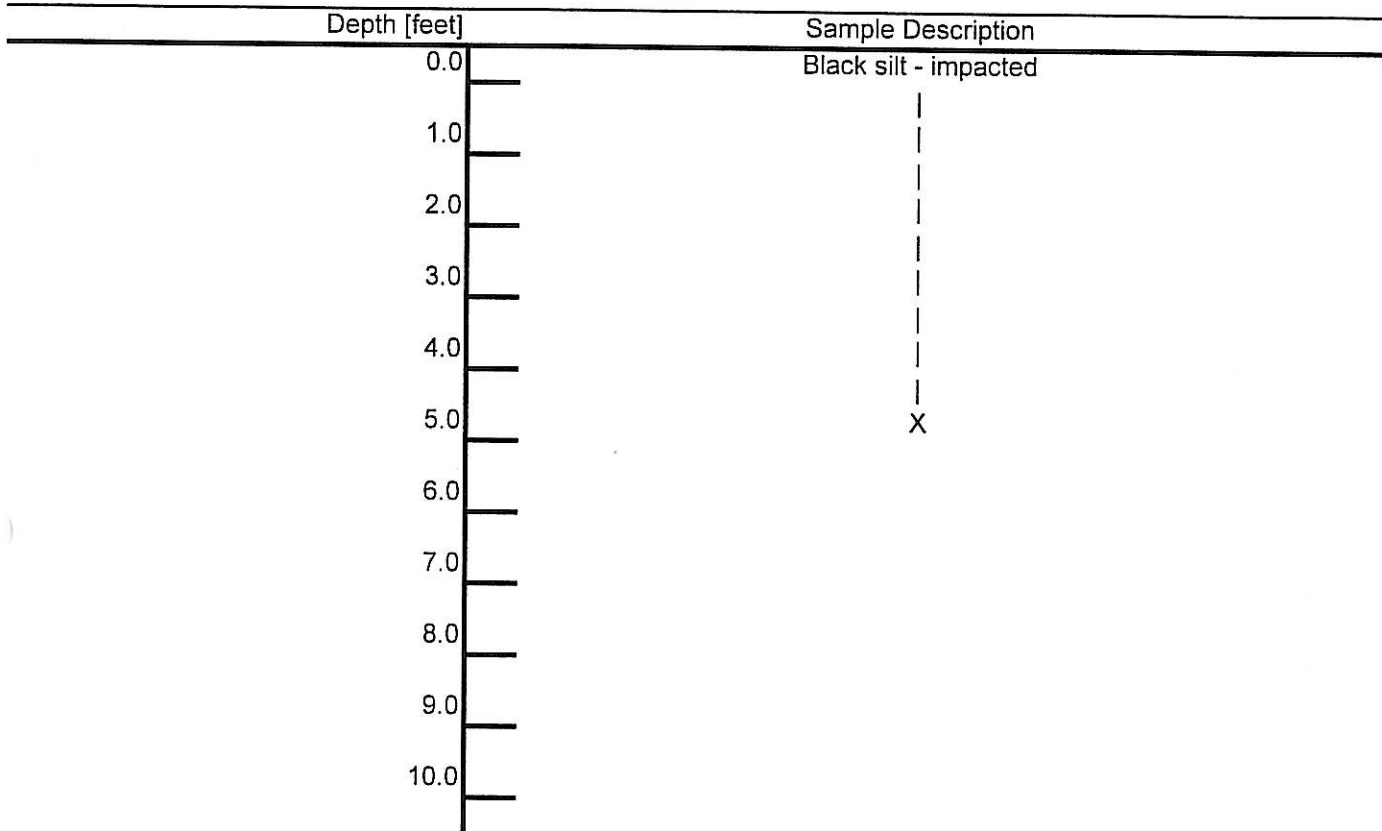
**ThermoRetec Consulting Corporation - Boring Log**

Client: NIPSCO  
Location: Hammond  
Project Number: NIPS2-03933-250  
Sampled By: WAR

Date: 15-Jun-99  
Drilling Company: Fox  
Method: Waterloo-type

Casing OD/ID: 2" PVC  
Auger OD/ID: NA  
Total Depth: 6'  
Depth Recovered: 5'

Sample Location: SD-99-12  
Reference: Top of Sediment



**Sample Summary:**

Type:	Depth Range:	Number of Samples:	Analysis:	Status:
Composite	0-6'	2	TCLP-Benzene	Completed
Grab	0-3'	1	BTEX & PAHs	Completed
Grab	3-6'	1	BTEX & PAHs	Completed

## ANALYTICAL AND QUALITY CONTROL REPORT

Mr. Will Raatz  
THERMORETEC/NIPSCO  
9245 North Meridian St.  
Suite 205  
Indianapolis, IN 46260

06/30/1999

Job Number: 99.03367

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Enclosed is the Analytical and Quality Control reports for the following samples submitted to the TestAmerica, Inc. Indianapolis division.

Project Description: 3-3933-250/HAMMOND MGP

<u>Sample Number</u>	<u>Sample Description</u>	<u>Date Taken</u>	<u>Date Received</u>
240994	SD-99-01-0-6' COMP	06/16/1999	06/17/1999
240995	SD-99-01-0-3'	06/16/1999	06/17/1999
240996	SD-99-01-3-6'	06/16/1999	06/17/1999
240997	SD-99-02-0-6' COMP	06/16/1999	06/17/1999
240998	SD-99-03-0-6' COMP	06/16/1999	06/17/1999
241000	SD-99-04-0-6' COMP	06/16/1999	06/17/1999
241001	SD-99-05-0-6' COMP	06/15/1999	06/17/1999
241002	SD-99-06-0-6' COMP	06/16/1999	06/17/1999
241003	SD-99-06-4-5'	06/16/1999	06/17/1999
241005	DUP-99-01	06/16/1999	06/17/1999
241006	SD-99-07-0-6' COMP	06/15/1999	06/17/1999
241007	SD-99-08-0-6' COMP	06/15/1999	06/17/1999
241008	SD-99-09-0-6' COMP	06/16/1999	06/17/1999
241009	SD-99-09-5-6'	06/16/1999	06/17/1999
241011	SD-99-10-0-6' COMP	06/15/1999	06/17/1999
241012	SD-99-11-0-6' COMP	06/15/1999	06/17/1999
241013	SD-99-12-0-6' COMP	06/15/1999	06/17/1999
241014	FBK-99-01	06/15/1999	06/17/1999
241015	ERB-99-01	06/15/1999	06/17/1999
241016	TBK-99-01		06/17/1999

The Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

TestAmerica, Inc. certifies that the analytical results contained herein apply only to the specific samples analyzed.

Reproduction of this analytical report is permitted only in its entirety.



Project Representative

## ANALYTICAL REPORT

Mr. Will Raatz  
 THERMORETEC/NIPSCO  
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 Indianapolis, IN 46260

06/30/1999

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Job Number: 99.03367

Client Project ID: 3-3933-250/HAMMOND MGP

Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Prep Batch No.	Run Batch No.	Method Reference
<b>SAMPLE NO.</b> 240994	<b>SAMPLE DESCRIPTION</b> SD-99-01-0-6' COMP						<b>DATE-TIME TAKEN</b> 06/16/1999 10:00		
ZHE/TCLP Extraction	Complete			Complete	06/21/1999	sat	236		SW 1311
LEVEL III - VOLATILES GC/MS	COMPLETE			COMPLETE	06/30/1999	jas		300	
VOLATILES - TCLP (8260)									
TCLP - Benzene	0.42		mg/L	<0.05	06/24/1999	jas	236	307	SW 8260B
SURR: Toluene-d8	100		75-132%		06/24/1999	jas	236	307	SW 8260B
SURR: Dibromofluoromethane	100.		91-114%		06/24/1999	jas	236	307	SW 8260B
SURR: 4-Bromofluorobenzene	99		87-132%		06/24/1999	jas	236	307	SW 8260B

<b>SAMPLE NO.</b> 240995	<b>SAMPLE DESCRIPTION</b> SD-99-01-0-3'						<b>DATE-TIME TAKEN</b> 06/16/1999 10:00		
LEVEL III - SEMIVOLATILE GC/MS	COMPLETE			COMPLETE	06/24/1999	xia		307	
LEVEL III - TPH/BETX	COMPLETE			COMPLETE	06/18/1999	tmq		184	

## ANALYTICAL REPORT

Mr. Will Raatz  
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Job Number: 99.03367

Client Project ID: 3-3933-250/HAMMOND MGP

Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Prep Batch No.	Run Batch No.	Method Reference
SAMPLE NO.			SAMPLE DESCRIPTION			DATE-TIME TAKEN			
240995			SD-99-01-0-3'			06/16/1999 10:00			
PNAs - 8270 (NONAQ)									
Benaphthene	884.	d1x500	mg/kg	<160.	06/23/1999	xia	399	756	SW 8270C
aphthylene	35.	d1x100	mg/kg	<33.	06/22/1999	xia	399	755	SW 8270C
Anthracene	220.	d1x100	mg/kg	<33.	06/22/1999	xia	399	755	SW 8270C
Benzo (a) anthracene	170.	d1x100	mg/kg	<33.	06/22/1999	xia	399	755	SW 8270C
Benzo (a) pyrene	120.	d1x100	mg/kg	<33.	06/22/1999	xia	399	755	SW 8270C
Benzo (b) fluoranthene	100.	d1x100	mg/kg	<33.	06/22/1999	xia	399	755	SW 8270C
Benzo (k) fluoranthene	40.	d1x100	mg/kg	<33.	06/22/1999	xia	399	755	SW 8270C
Benzo (ghi) perylene	44.	d1x100	mg/kg	<33.	06/22/1999	xia	399	755	SW 8270C
Chrysene	150.	d1x100	mg/kg	<33.	06/22/1999	xia	399	755	SW 8270C
Dibenzo (a, h) anthracene	<33.	d2x100	mg/kg	<33.	06/22/1999	xia	399	755	SW 8270C
Fluoranthene	290.	d1x100	mg/kg	<33.	06/22/1999	xia	399	755	SW 8270C
Fluorene	410.	d1x500	mg/kg	<160	06/23/1999	xia	399	756	SW 8270C
Indeno (1, 2, 3-cd) pyrene	38.	d1x100	mg/kg	<33.	06/22/1999	xia	399	755	SW 8270C
Naphthalene	1,700	d1x500	mg/kg	<160	06/23/1999	xia	399	756	SW 8270C
Phenanthrene	1,200	d1x500	mg/kg	<160	06/23/1999	xia	399	756	SW 8270C
Pyrene	380.	d1x100	mg/kg	<33.	06/22/1999	xia	399	755	SW 8270C
SURR: Nitrobenzene-d5	Diluted out	d2x100	23-120%		06/22/1999	xia	399	755	SW 8270C
SURR: 2-Fluorobiphenyl	Diluted out	d2x100	30-115%		06/22/1999	xia	399	755	SW 8270C
SURR: Terphenyl-d14	Diluted out	d2x100	18-137%		06/22/1999	xia	399	755	SW 8270C

## ANALYTICAL REPORT

Mr. Will Raatz  
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Job Number: 99.03367

Client Project ID: 3-3933-250/HAMMOND MGP

Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Prep Batch No.	Run Batch No.	Method Reference
<b>SAMPLE NO.</b> 240995	<b>SAMPLE DESCRIPTION</b> SD-99-01-0-3'						<b>DATE-TIME TAKEN</b> 06/16/1999 10:00		
PNA extraction, (nonaq)	Complete			Complete	06/22/1999	jrd	399		SW 3550
VOLATILE-BTEX (NONAQ) S-8021B									
Benzene	4.6		mg/kg	<0.5	06/18/1999	tmq		1121	SW 8021B
Ethylbenzene	19		mg/kg	<0.5	06/18/1999	tmq		1121	SW 8021B
Toluene	<0.5		mg/kg	<0.5	06/18/1999	tmq		1121	SW 8021B
Xylenes, Total	11		mg/kg	<0.5	06/18/1999	tmq		1121	SW 8021B
SURR: 4-Bromofluorobenzene	93.5		%		06/18/1999	tmq		1121	SW 8021B
SURR: 4-Bromochlorobenzene	127		%	100	06/18/1999	tmq		1121	SW 8021B

<b>SAMPLE NO.</b> 240996	<b>SAMPLE DESCRIPTION</b> SD-99-01-3-6'						<b>DATE-TIME TAKEN</b> 06/16/1999 10:00		
LEVEL III - SEMIVOLATILE GC/MS	COMPLETE			COMPLETE	06/24/1999	xia		307	
LEVEL III - TPH/BETX	COMPLETE			COMPLETE	06/18/1999	tmq		184	



## ANALYTICAL REPORT

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Job Number: 99.03367

Client Project ID: 3-3933-250/HAMMOND MGP

Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Prep Batch No.	Run Batch No.	Method Reference
<b>SAMPLE NO.</b>	<b>SAMPLE DESCRIPTION</b>						<b>DATE-TIME TAKEN</b>		
240996	SD-99-01-3-6'						06/16/1999 10:00		
PNAs - 8270 (NONAQ)									
Naphthene	240.	d1x200	mg/kg	<66.	06/23/1999	xia	399	756	SW 8270C
Naphthylene	10.	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Anthracene	58.	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Benzo (a) anthracene	40.	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Benzo (a) pyrene	35.	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Benzo (b) fluoranthene	28.	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Benzo (k) fluoranthene	12.	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Benzo (ghi) perylene	<6.6	d2x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Chrysene	41.	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Dibenzo (a,h) anthracene	<6.6	d2x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Fluoranthene	71.	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Fluorene	110.	d1x200	mg/kg	<66.	06/23/1999	xia	399	756	SW 8270C
Indeno (1,2,3-cd) pyrene	8.7	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Naphthalene	580.	d1x200	mg/kg	<66.	06/23/1999	xia	399	756	SW 8270C
Phenanthrene	330.	d1x200	mg/kg	<66.	06/23/1999	xia	399	756	SW 8270C
Pyrene	140.	d1x200	mg/kg	<66.	06/23/1999	xia	399	756	SW 8270C
SURR: Nitrobenzene-d5	Diluted out	d2x20	23-120%		06/22/1999	xia	399	755	SW 8270C
SURR: 2-Fluorobiphenyl	Diluted out	d2x20	30-115%		06/22/1999	xia	399	755	SW 8270C
SURR: Terphenyl-d14	Diluted out	d2x20	18-137%		06/22/1999	xia	399	755	SW 8270C

## ANALYTICAL REPORT

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Job Number: 99.03367

Client Project ID: 3-3933-250/HAMMOND MGP

Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Prep Batch No.	Run Batch No.	Method Reference
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SAMPLE NO.	SAMPLE DESCRIPTION	DATE-TIME TAKEN
240996	SD-99-01-3-6'	06/16/1999 10:00

PNA extraction, (nonaq)	Complete			Complete	06/22/1999	jrd	399		SW 3550
VOLATILE-BTEX (NONAQ) S-8021B									
zene	2.3		mg/kg	<0.5	06/18/1999	tmq		1121	SW 8021B
Ethylbenzene	6.9		mg/kg	<0.5	06/18/1999	tmq		1121	SW 8021B
Toluene	<0.5		mg/kg	<0.5	06/18/1999	tmq		1121	SW 8021B
Xylenes, Total	5.5		mg/kg	<0.5	06/18/1999	tmq		1121	SW 8021B
SURR: 4-Bromofluorobenzene	96.8		%		06/18/1999	tmq		1121	SW 8021B
SURR: 4-Bromochlorobenzene	109		%	100	06/18/1999	tmq		1121	SW 8021B

SAMPLE NO.	SAMPLE DESCRIPTION	DATE-TIME TAKEN
240997	SD-99-02-0-6' COMP	06/16/1999 09:30

ZHE/TCLP Extraction	Complete			Complete	06/21/1999	sat	236		SW 1311
LEVEL III - VOLATILES GC/MS									
VOLATILES - TCLP (8260)									
TCLP - Benzene	0.48		mg/L	<0.05	06/24/1999	jas	236	307	SW 8260B
SURR: Toluene-d8	100.		75-132%		06/24/1999	jas	236	307	SW 8260B
SURR: Dibromofluoromethane	99		91-114%		06/24/1999	jas	236	307	SW 8260B
SURR: 4-Bromofluorobenzene	97		87-132%		06/24/1999	jas	236	307	SW 8260B

## ANALYTICAL REPORT

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Job Number: 99.03367

Client Project ID: 3-3933-250/HAMMOND MGP

Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Prep Batch No.	Run Batch No.	Method Reference
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SAMPLE NO.	SAMPLE DESCRIPTION	DATE-TIME TAKEN
240998	SD-99-03-0-6' COMP	06/16/1999 08:30

ZHE/TCLP Extraction	Complete			Complete	06/21/1999	sat	236		SW 1311
LEVEL III - VOLATILES GC/MS	COMPLETE			COMPLETE	06/30/1999	jas		300	
VOLATILES - TCLP (8260)									
TCLP - Benzene	0.76		mg/L	<0.05	06/25/1999	jas	236	307	SW 8260B
SURR: Toluene-d8	101.		75-132%		06/25/1999	jas	236	307	SW 8260B
SURR: Dibromofluoromethane	98		91-114%		06/25/1999	jas	236	307	SW 8260B
SURR: 4-Bromofluorobenzene	96		87-132%		06/25/1999	jas	236	307	SW 8260B

SAMPLE NO.	SAMPLE DESCRIPTION	DATE-TIME TAKEN
241000	SD-99-04-0-6' COMP	06/16/1999 08:00

ZHE/TCLP Extraction	Complete			Complete	06/21/1999	sat	236		SW 1311
LEVEL III - VOLATILES GC/MS	COMPLETE			COMPLETE	06/30/1999	jas		300	
VOLATILES - TCLP (8260)									
TCLP - Benzene	1.0		mg/L	<0.05	06/25/1999	jas	236	307	SW 8260B
SURR: Toluene-d8	100		75-132%		06/25/1999	jas	236	307	SW 8260B
SURR: Dibromofluoromethane	99		91-114%		06/25/1999	jas	236	307	SW 8260B
SURR: 4-Bromofluorobenzene	95		87-132%		06/25/1999	jas	236	307	SW 8260B

## ANALYTICAL REPORT

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Client Project ID: 3-3933-250/HAMMOND MGP

Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Prep Batch No.	Run Batch No.	Method Reference
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SAMPLE NO.	SAMPLE DESCRIPTION	DATE-TIME TAKEN
241001	SD-99-05-0-6' COMP	06/15/1999 16:00

ZHE/TCLP Extraction	Complete			Complete	06/21/1999	sat	236		SW 1311
LEVEL III - VOLATILES GC/MS	COMPLETE			COMPLETE	06/30/1999	jas		300	
VOLATILES - TCLP (8260)									
TCLP - Benzene	1.3		mg/L	<0.05	06/25/1999	jas	236	307	SW 8260B
SURR: Toluene-d8	99			75-132%	06/25/1999	jas	236	307	SW 8260B
SURR: Dibromofluoromethane	101			91-114%	06/25/1999	jas	236	307	SW 8260B
SURR: 4-Bromofluorobenzene	96			87-132%	06/25/1999	jas	236	307	SW 8260B

SAMPLE NO.	SAMPLE DESCRIPTION	DATE-TIME TAKEN
241002	SD-99-06-0-6' COMP	06/16/1999 12:00

ZHE/TCLP Extraction	Complete			Complete	06/21/1999	sat	236		SW 1311
LEVEL III - VOLATILES GC/MS	COMPLETE			COMPLETE	06/30/1999	jas		300	
VOLATILES - TCLP (8260)									
TCLP - Benzene	3.1	d1x4	mg/L	<0.2	06/25/1999	jas	236	306	SW 8260B
SURR: Toluene-d8	93	d1x4		75-132%	06/25/1999	jas	236	306	SW 8260B
SURR: Dibromofluoromethane	103	d1x4		91-114%	06/25/1999	jas	236	306	SW 8260B
SURR: 4-Bromofluorobenzene	98	d1x4		87-132%	06/25/1999	jas	236	306	SW 8260B

## ANALYTICAL REPORT

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Job Number: 99.03367

Client Project ID: 3-3933-250/HAMMOND MGP

Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Prep	Run	Method Reference
							Batch No.	Batch No.	
SAMPLE NO. 241003	SAMPLE DESCRIPTION SD-99-06-4-5'								DATE-TIME TAKEN 06/16/1999 12:00
LEVEL III - SEMIVOLATILE GC/MS	COMPLETE			COMPLETE	06/24/1999	xia			307
LEVEL III - TPH/BETX	COMPLETE			COMPLETE	06/18/1999	tmq			184

## ANALYTICAL REPORT

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Job Number: 99.03367

Client Project ID: 3-3933-250/HAMMOND MGP

Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Prep Batch No.	Run Batch No.	Method Reference
<b>SAMPLE NO.</b> 241003	<b>SAMPLE DESCRIPTION</b> SD-99-06-4-5'				<b>DATE-TIME TAKEN</b> 06/16/1999 12:00				
PNAs - 8270 (NONAQ)									
Naphthene	500.	d1x500	mg/kg	<160	06/23/1999	xia	399	756	SW 8270C
Naphthylene	20.	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Anthracene	130.	d1x500 j	mg/kg	<160	06/23/1999	xia	399	756	SW 8270C
Benzo(a)anthracene	89.	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Benzo(a)pyrene	65.	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Benzo(b)fluoranthene	56.	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Benzo(k)fluoranthene	23.	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Benzo(ghi)perylene	26.	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Chrysene	76.	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Dibenzo(a,h)anthracene	7.2	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Fluoranthene	190.	d1x500	mg/kg	<160	06/23/1999	xia	399	756	SW 8270C
Fluorene	240.	d1x500	mg/kg	<160	06/23/1999	xia	399	756	SW 8270C
Indeno(1,2,3-cd)pyrene	20.	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Naphthalene	1,300	d1x500	mg/kg	<160	06/23/1999	xia	399	756	SW 8270C
Phenanthrene	690.	d1x500	mg/kg	<160	06/23/1999	xia	399	756	SW 8270C
Pyrene	290.	d1x500	mg/kg	<160	06/23/1999	xia	399	756	SW 8270C
SURR: Nitrobenzene-d5	Diluted out	d2x20	23-120%		06/22/1999	xia	399	755	SW 8270C
SURR: 2-Fluorobiphenyl	Diluted out	d2x20	30-115%		06/22/1999	xia	399	755	SW 8270C
SURR: Terphenyl-d14	Diluted out	d2x20	18-137%		06/22/1999	xia	399	755	SW 8270C

## ANALYTICAL REPORT

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Job Number: 99.03367

Client Project ID: 3-3933-250/HAMMOND MGP

Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Prep Batch No.	Run Batch No.	Method Reference
SAMPLE NO.			SAMPLE DESCRIPTION			DATE-TIME TAKEN			
241003			SD-99-06-4-5'			06/16/1999 12:00			
PNA extraction, (nonaq)	Complete			Complete	06/22/1999	jrd	399		SW 3550
VOLATILE-BTEX (NONAQ) S-8021B									
ene	6.9		mg/kg	<0.5	06/18/1999	tmq		1121	SW 8021B
Ethylbenzene	17		mg/kg	<0.5	06/18/1999	tmq		1121	SW 8021B
Toluene	<0.5		mg/kg	<0.5	06/18/1999	tmq		1121	SW 8021B
Xylenes, Total	14		mg/kg	<0.5	06/18/1999	tmq		1121	SW 8021B
SURR: 4-Bromofluorobenzene	92.5		%		06/18/1999	tmq		1121	SW 8021B
SURR: 4-Bromochlorobenzene	96.6		%	100	06/18/1999	tmq		1121	SW 8021B

SAMPLE NO.			SAMPLE DESCRIPTION			DATE-TIME TAKEN			
241005			DUP-99-01			06/16/1999 12:00			
LEVEL III - SEMIVOLATILE GC/MS	COMPLETE			COMPLETE	06/24/1999	xia		307	
LEVEL III - TPH/BETX	COMPLETE			COMPLETE	06/18/1999	tmq		184	

## ANALYTICAL REPORT

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Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Prep	Run	Method Reference
							Batch No.	Batch No.	
SAMPLE NO.			SAMPLE DESCRIPTION			DATE-TIME TAKEN			
241005			DUP-99-01			06/16/1999 12:00			
PNAs - 8270 (NONAQ)									
Benzenaphthene	650.	d1x500	mg/kg	<160	06/23/1999	xia	399	756	SW 8270C
Benzenaphthylene	25.	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Anthracene	180.	d1x500	mg/kg	<160	06/23/1999	xia	399	756	SW 8270C
Benzo (a) anthracene	130.	d1x500 j	mg/kg	<160	06/23/1999	xia	399	756	SW 8270C
Benzo (a) pyrene	89.	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Benzo (b) fluoranthene	73.	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Benzo (k) fluoranthene	28.	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Benzo (ghi) perylene	32.	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Chrysene	130.	d1x500 j	mg/kg	<160	06/23/1999	xia	399	756	SW 8270C
Dibenzo (a, h) anthracene	8.2	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Fluoranthene	240.	d1x500	mg/kg	<160	06/23/1999	xia	399	756	SW 8270C
Fluorene	300.	d1x500	mg/kg	<160	06/23/1999	xia	399	756	SW 8270C
Indeno (1, 2, 3-cd) pyrene	27.	d1x20	mg/kg	<6.6	06/22/1999	xia	399	755	SW 8270C
Naphthalene	1,600	d1x500	mg/kg	<160	06/23/1999	xia	399	756	SW 8270C
Phenanthrene	900.	d1x500	mg/kg	<160	06/23/1999	xia	399	756	SW 8270C
Pyrene	400.	d1x500	mg/kg	<160	06/23/1999	xia	399	756	SW 8270C
SURR: Nitrobenzene-d5	Diluted out	d2x20	23-120%		06/22/1999	xia	399	755	SW 8270C
SURR: 2-Fluorobiphenyl	Diluted out	d2x20	30-115%		06/22/1999	xia	399	755	SW 8270C
SURR: Terphenyl-d14	Diluted out	d2x20	18-137%		06/22/1999	xia	399	755	SW 8270C



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Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Prep Batch No.	Run Batch No.	Method Reference
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SAMPLE NO.	SAMPLE DESCRIPTION	DATE-TIME TAKEN
241005	DUP-99-01	06/16/1999 12:00

PNA extraction, (nonaq)	Complete		Complete	06/22/1999	jrd	399		SW 3550
VOLATILE-BTEX (NONAQ) S-8021B								
Benzene	5.5		mg/kg	<0.5	06/18/1999	tmq	1121	SW 8021B
Ethylbenzene	13		mg/kg	<0.5	06/18/1999	tmq	1121	SW 8021B
Toluene	<0.5		mg/kg	<0.5	06/18/1999	tmq	1121	SW 8021B
Xylenes, Total	10		mg/kg	<0.5	06/18/1999	tmq	1121	SW 8021B
SURR: 4-Bromofluorobenzene	90.0		%		06/18/1999	tmq	1121	SW 8021B
SURR: 4-Bromochlorobenzene	113		%	100	06/18/1999	tmq	1121	SW 8021B

SAMPLE NO.	SAMPLE DESCRIPTION	DATE-TIME TAKEN
241006	SD-99-07-0-6' COMP	06/15/1999 15:00

ZHE/TCLP Extraction	Complete		Complete	06/22/1999	sat	237		SW 1311	
LEVEL III - VOLATILES GC/MS	COMPLETE		COMPLETE	06/30/1999	jas		300		
VOLATILES - TCLP (8260)									
TCLP - Benzene	2.0		mg/L	<0.05	06/25/1999	jas	237	306	SW 8260B
SURR: Toluene-d8	92		75-132%		06/25/1999	jas	237	306	SW 8260B
SURR: Dibromofluoromethane	101.		91-114%		06/25/1999	jas	237	306	SW 8260B
SURR: 4-Bromofluorobenzene	97		87-132%		06/25/1999	jas	237	306	SW 8260B

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Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Prep Batch No.	Run Batch No.	Method Reference
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SAMPLE NO.	SAMPLE DESCRIPTION	DATE-TIME TAKEN
241007	SD-99-08-0-6' COMP	06/15/1999 14:30

ZHE/TCLP Extraction	Complete			Complete	06/22/1999	sat	237		SW 1311
LEVEL III - VOLATILES GC/MS	COMPLETE			COMPLETE	06/30/1999	jas		300	
VOLATILES - TCLP (8260)									
TCLP - Benzene	2.1	d1x4	mg/L	<0.20	06/29/1999	jas	237	308	SW 8260B
SURR: Toluene-d8	92	d1x4			06/29/1999	jas	237	308	SW 8260B
SURR: Dibromofluoromethane	103.	d1x4			06/29/1999	jas	237	308	SW 8260B
SURR: 4-Bromofluorobenzene	91	d1x4			06/29/1999	jas	237	308	SW 8260B

SAMPLE NO.	SAMPLE DESCRIPTION	DATE-TIME TAKEN
241008	SD-99-09-0-6' COMP	06/16/1999 13:00

ZHE/TCLP Extraction	Complete			Complete	06/22/1999	sat	237		SW 1311
LEVEL III - VOLATILES GC/MS	COMPLETE			COMPLETE	06/30/1999	jas		300	
VOLATILES - TCLP (8260)									
TCLP - Benzene	1.3		mg/L	<0.05	06/25/1999	jas	237	306	SW 8260B
SURR: Toluene-d8	94		75-132%		06/25/1999	jas	237	306	SW 8260B
SURR: Dibromofluoromethane	99		91-114%		06/25/1999	jas	237	306	SW 8260B
SURR: 4-Bromofluorobenzene	96		87-132%		06/25/1999	jas	237	306	SW 8260B

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Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Prep Batch No.	Run Batch No.	Method Reference
SAMPLE NO. 241009	SAMPLE DESCRIPTION SD-99-09-5-6'						DATE-TIME TAKEN 06/16/1999 13:00		
LEVEL III - SEMIVOLATILE GC/MS	COMPLETE			COMPLETE	06/24/1999	xia		307	
EL III - TPH/BETX	COMPLETE			COMPLETE	06/18/1999	tmq		184	

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Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Prep Batch No.	Run Batch No.	Method Reference
SAMPLE NO.			SAMPLE DESCRIPTION			DATE-TIME TAKEN			
241009			SD-99-09-5-6'			06/16/1999 13:00			
PNAs - 8270 (NONAQ)									
naphthene	190.	d1x100	mg/kg	<33.	06/23/1999	xia	399	756	SW 8270C
naphthylene	13.	d2x5	mg/kg	<1.6	06/22/1999	xia	399	755	SW 8270C
Anthracene	54.	d1x100	mg/kg	<33.	06/23/1999	xia	399	756	SW 8270C
Benzo (a) anthracene	40.	d1x100	mg/kg	<33.	06/23/1999	xia	399	756	SW 8270C
Benzo (a) pyrene	35.	d1x100	mg/kg	<33.	06/23/1999	xia	399	756	SW 8270C
Benzo (b) fluoranthene	25.	d1x100	mg/kg	<33.	06/23/1999	xia	399	756	SW 8270C
Benzo (k) fluoranthene	7.7	d2x5	mg/kg	<1.6	06/22/1999	xia	399	755	SW 8270C
Benzo (ghi) perylene	10.	d2x5	mg/kg	<1.6	06/22/1999	xia	399	755	SW 8270C
Chrysene	46.	d1x100	mg/kg	<33.	06/23/1999	xia	399	756	SW 8270C
Dibenzo (a, h) anthracene	2.8	d2x5	mg/kg	<1.6	06/22/1999	xia	399	755	SW 8270C
Fluoranthene	71.	d1x100	mg/kg	<33.	06/23/1999	xia	399	756	SW 8270C
Fluorene	96.	d1x100	mg/kg	<33.	06/23/1999	xia	399	756	SW 8270C
Indeno (1, 2, 3-cd) pyrene	8.0	d2x5	mg/kg	<1.6	06/22/1999	xia	399	755	SW 8270C
Naphthalene	650.	d1x500	mg/kg	<160.	06/23/1999	xia	399	756	SW 8270C
Phenanthrene	280.	d1x100	mg/kg	<33.	06/23/1999	xia	399	756	SW 8270C
Pyrene	130.	d1x100	mg/kg	<33.	06/23/1999	xia	399	756	SW 8270C
SURR: Nitrobenzene-d5	120	d2x5	23-120%		06/22/1999	xia	399	755	SW 8270C
SURR: 2-Fluorobiphenyl	93	d2x5	30-115%		06/22/1999	xia	399	755	SW 8270C
SURR: Terphenyl-d14	134	d2x5	18-137%		06/22/1999	xia	399	755	SW 8270C

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Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Prep Batch No.	Run Batch No.	Method Reference
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SAMPLE NO.	SAMPLE DESCRIPTION	DATE-TIME TAKEN
241009	SD-99-09-5-6'	06/16/1999 13:00

PNA extraction, (nonaq)	Complete			Complete	06/22/1999	jrd	399		SW 3550
VOLATILE-BTEX (NONAQ) S-8021B									
Benzene	4.1		mg/kg	<0.5	06/18/1999	tmq		1121	SW 8021B
Ethylbenzene	6.1		mg/kg	<0.5	06/18/1999	tmq		1121	SW 8021B
Toluene	2.2		mg/kg	<0.5	06/18/1999	tmq		1121	SW 8021B
Xylenes, Total	4.9		mg/kg	<0.5	06/18/1999	tmq		1121	SW 8021B
SURR: 4-Bromofluorobenzene	97.8		%		06/18/1999	tmq		1121	SW 8021B
SURR: 4-Bromochlorobenzene	113		%	100	06/18/1999	tmq		1121	SW 8021B

SAMPLE NO.	SAMPLE DESCRIPTION	DATE-TIME TAKEN
241011	SD-99-10-0-6' COMP	06/15/1999 14:00

ZHE/TCLP Extraction	Complete			Complete	06/22/1999	sat	237		SW 1311
LEVEL III - VOLATILES GC/MS	COMPLETE			COMPLETE	06/30/1999	jas		300	
VOLATILES - TCLP (8260)									
TCLP - Benzene	0.43		mg/L	<0.05	06/25/1999	jas	237	306	SW 8260B
SURR: Toluene-d8	99			75-132%	06/25/1999	jas	237	306	SW 8260B
SURR: Dibromofluoromethane	102.			91-114%	06/25/1999	jas	237	306	SW 8260B
SURR: 4-Bromofluorobenzene	95			87-132%	06/25/1999	jas	237	306	SW 8260B

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Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Prep Batch No.	Run Batch No.	Method Reference
SAMPLE NO.			SAMPLE DESCRIPTION			DATE-TIME TAKEN			
241012			SD-99-11-0-6' COMP			06/15/1999 13:00			
ZHE/TCLP Extraction	Complete			Complete	06/22/1999	sat	237		SW 1311
EL III - VOLATILES GC/MS	COMPLETE			COMPLETE	06/30/1999	jas		300	
ATILES - TCLP (8260)									
TCLP - Benzene	1.3		mg/L	<0.05	06/25/1999	jas	237	306	SW 8260B
SURR: Toluene-d8	101.		75-132%		06/25/1999	jas	237	306	SW 8260B
SURR: Dibromofluoromethane	101.		91-114%		06/25/1999	jas	237	306	SW 8260B
SURR: 4-Bromofluorobenzene	98		87-132%		06/25/1999	jas	237	306	SW 8260B

SAMPLE NO.			SAMPLE DESCRIPTION			DATE-TIME TAKEN			
241013			SD-99-12-0-6' COMP			06/15/1999 12:00			
ZHE/TCLP Extraction	Complete			Complete	06/22/1999	sat	237		SW 1311
LEVEL III - VOLATILES GC/MS	COMPLETE			COMPLETE	06/30/1999	jas		300	
VOLATILES - TCLP (8260)									
TCLP - Benzene	0.40		mg/L	<0.05	06/25/1999	jas	237	306	SW 8260B
SURR: Toluene-d8	94		75-132%		06/25/1999	jas	237	306	SW 8260B
SURR: Dibromofluoromethane	100.		91-114%		06/25/1999	jas	237	306	SW 8260B
SURR: 4-Bromofluorobenzene	96		87-132%		06/25/1999	jas	237	306	SW 8260B

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SAMPLE NO.	SAMPLE DESCRIPTION	DATE-TIME TAKEN
241014	FBK-99-01	06/15/1999 07:00

LEVEL III - TPH/BETX	COMPLETE	COMPLETE		06/18/1999	tmq		184		
LEVEL III - HPLC	Complete	Complete		06/23/1999	jcb		21		
TILE-BTEX (AQ) S-8021B									
Benzene	<5.0		ug/L	<5.0	06/18/1999	tmq		2043	SW 8021B
Ethylbenzene	<5.0		ug/L	<5.0	06/18/1999	tmq		2043	SW 8021B
Toluene	<5.0		ug/L	<5.0	06/18/1999	tmq		2043	SW 8021B
Xylenes, Total	<5.0		ug/L	<5.0	06/18/1999	tmq		2043	SW 8021B
SURR: 4-Bromofluorobenzene	74.7		%		06/18/1999	tmq		2043	SW 8021B
SURR: 4-Bromochlorobenzene	73.3		%	100	06/18/1999	tmq		2043	SW 8021B

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Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Prep Batch No.	Run Batch No.	Method Reference
SAMPLE NO.			SAMPLE DESCRIPTION			DATE-TIME TAKEN			
241014			FBK-99-01			06/15/1999 07:00			
PAHs - AQUEOUS S-8310									
1-methylnaphthalene	<18		ug/L	<18	06/21/1999	jcb	131	281	SW 8310
2-methylnaphthalene	<10		ug/L	<10	06/21/1999	jcb	131	281	SW 8310
Anthracene	<6.6		ug/L	<6.6	06/21/1999	jcb	131	281	SW 8310
Benzo (a) anthracene	<0.10		ug/L	<0.10	06/21/1999	jcb	131	281	SW 8310
Benzo (a) pyrene	<0.20		ug/L	<0.20	06/21/1999	jcb	131	281	SW 8310
Benzo (b) fluoranthene	<0.18		ug/L	<0.18	06/21/1999	jcb	131	281	SW 8310
Benzo (ghi) perylene	<0.76		ug/L	<0.76	06/21/1999	jcb	131	281	SW 8310
Benzo (k) fluoranthene	<0.17		ug/L	<0.17	06/21/1999	jcb	131	281	SW 8310
Chrysene	<0.20		ug/L	<0.20	06/21/1999	jcb	131	281	SW 8310
Dibenzo (a, h) anthracene	<0.30		ug/L	<0.30	06/21/1999	jcb	131	281	SW 8310
Fluoranthene	<2.1		ug/L	<2.1	06/21/1999	jcb	131	281	SW 8310
Fluorene	<2.1		ug/L	<2.1	06/21/1999	jcb	131	281	SW 8310
Indeno (1, 2, 3-cd) pyrene	<0.40		ug/L	<0.40	06/21/1999	jcb	131	281	SW 8310
Naphthalene	<18		ug/L	<18	06/21/1999	jcb	131	281	SW 8310
Phenanthrene	<6.4		ug/L	<6.4	06/21/1999	jcb	131	281	SW 8310
Pyrene	<2.7		ug/L	<2.7	06/21/1999	jcb	131	281	SW 8310
SURR:	95		‡		06/21/1999	jcb	131	281	SW 8310



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Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Prep Batch No.	Run Batch No.	Method Reference
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SAMPLE NO.	SAMPLE DESCRIPTION	DATE-TIME TAKEN
241014	FBK-99-01	06/15/1999 07:00

PAH extraction - HPLC	Complete	Complete	06/18/1999	jcb	131	SW 3520
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SAMPLE NO.	SAMPLE DESCRIPTION	DATE-TIME TAKEN
241015	ERB-99-01	06/15/1999 07:30

LEVEL III - TPH/BETX	COMPLETE	COMPLETE	06/18/1999	tmq	184	
LEVEL III - HPLC	Complete	Complete	06/23/1999	jcb	21	
VOLATILE-BTEX (AQ) S-8021B						
Benzene	<5.0	ug/L	<5.0	06/18/1999	tmq	2043 SW 8021B
Ethylbenzene	<5.0	ug/L	<5.0	06/18/1999	tmq	2043 SW 8021B
Toluene	<5.0	ug/L	<5.0	06/18/1999	tmq	2043 SW 8021B
Xylenes, Total	<5.0	ug/L	<5.0	06/18/1999	tmq	2043 SW 8021B
SURR: 4-Bromofluorobenzene	91.1	‡		06/18/1999	tmq	2043 SW 8021B
SURR: 4-Bromochlorobenzene	86.1	‡	100	06/18/1999	tmq	2043 SW 8021B

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Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Prep Batch No.	Run Batch No.	Method Reference
SAMPLE NO.			SAMPLE DESCRIPTION			DATE-TIME TAKEN			
241015			ERB-99-01			06/15/1999 07:30			
PAHs - AQUEOUS S-8310									
1-methylnaphthalene	<18		ug/L	<18	06/22/1999	jcb	131	282	SW 8310
2-methylnaphthalene	<10		ug/L	<10	06/22/1999	jcb	131	282	SW 8310
Anthracene	<6.6		ug/L	<6.6	06/22/1999	jcb	131	282	SW 8310
Benzo(a)anthracene	<0.10		ug/L	<0.10	06/22/1999	jcb	131	282	SW 8310
Benzo(a)pyrene	<0.20		ug/L	<0.20	06/22/1999	jcb	131	282	SW 8310
Benzo(b)fluoranthene	<0.18		ug/L	<0.18	06/22/1999	jcb	131	282	SW 8310
Benzo(ghi)perylene	<0.76		ug/L	<0.76	06/22/1999	jcb	131	282	SW 8310
Benzo(k)fluoranthene	<0.17		ug/L	<0.17	06/22/1999	jcb	131	282	SW 8310
Chrysene	<0.20		ug/L	<0.20	06/22/1999	jcb	131	282	SW 8310
Dibenzo(a,h)anthracene	<0.30		ug/L	<0.30	06/22/1999	jcb	131	282	SW 8310
Fluoranthene	<2.1		ug/L	<2.1	06/22/1999	jcb	131	282	SW 8310
Fluorene	<2.1		ug/L	<2.1	06/22/1999	jcb	131	282	SW 8310
Indeno(1,2,3-cd)pyrene	<0.40		ug/L	<0.40	06/22/1999	jcb	131	282	SW 8310
Naphthalene	<18		ug/L	<18	06/22/1999	jcb	131	282	SW 8310
Phenanthrene	<6.4		ug/L	<6.4	06/22/1999	jcb	131	282	SW 8310
Pyrene	<2.7		ug/L	<2.7	06/22/1999	jcb	131	282	SW 8310
SURR:	93		‡		06/22/1999	jcb	131	282	SW 8310

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Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Prep Batch No.	Run Batch No.	Method Reference
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SAMPLE NO.	SAMPLE DESCRIPTION	DATE-TIME TAKEN
241015	ERB-99-01	06/15/1999 07:30

PAH extraction - HPLC	Complete	Complete	06/18/1999	jcb	131	SW 3520
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SAMPLE NO.	SAMPLE DESCRIPTION	DATE-TIME TAKEN
241016	TBK-99-01	

LEVEL III - TPH/BETX	COMPLETE	COMPLETE	06/18/1999	tmq	184	
VOLATILE-BTEX (AQ) S-8021B						
Benzene	<5.0	ug/L	<5.0	06/18/1999	tmq	2043 SW 8021B
Ethylbenzene	<5.0	ug/L	<5.0	06/18/1999	tmq	2043 SW 8021B
Toluene	<5.0	ug/L	<5.0	06/18/1999	tmq	2043 SW 8021B
Xylenes, Total	<5.0	ug/L	<5.0	06/18/1999	tmq	2043 SW 8021B
SURR: 4-Bromofluorobenzene	98.4	‡		06/18/1999	tmq	2043 SW 8021B
SURR: 4-Bromochlorobenzene	79.0	‡	100	06/18/1999	tmq	2043 SW 8021B

## QUALITY CONTROL REPORT

Mr. Will Raatz  
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Indianapolis, IN 46260

06/30/1999

Job Number: 99.03367

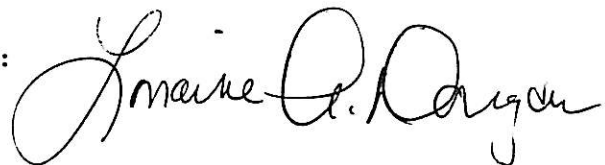
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The following samples were submitted to TestAmerica, Inc. Indianapolis Division for analysis:

Project Description: 3-3933-250/HAMMOND MGP

Sample Number	Sample Description	Date Taken	Date Received
240994	SD-99-01-0-6' COMP	06/16/1999	06/17/1999
240995	SD-99-01-0-3'	06/16/1999	06/17/1999
240996	SD-99-01-3-6'	06/16/1999	06/17/1999
240997	SD-99-02-0-6' COMP	06/16/1999	06/17/1999
240998	SD-99-03-0-6' COMP	06/16/1999	06/17/1999
241000	SD-99-04-0-6' COMP	06/16/1999	06/17/1999
241001	SD-99-05-0-6' COMP	06/15/1999	06/17/1999
241002	SD-99-06-0-6' COMP	06/16/1999	06/17/1999
241003	SD-99-06-4-5'	06/16/1999	06/17/1999
241005	DUP-99-01	06/16/1999	06/17/1999
241006	SD-99-07-0-6' COMP	06/15/1999	06/17/1999
241007	SD-99-08-0-6' COMP	06/15/1999	06/17/1999
241008	SD-99-09-0-6' COMP	06/16/1999	06/17/1999
241009	SD-99-09-5-6'	06/16/1999	06/17/1999
241011	SD-99-10-0-6' COMP	06/15/1999	06/17/1999
241012	SD-99-11-0-6' COMP	06/15/1999	06/17/1999
241013	SD-99-12-0-6' COMP	06/15/1999	06/17/1999
241014	FBK-99-01	06/15/1999	06/17/1999

Approved by:



## QUALITY CONTROL REPORT

Mr. Will Raatz  
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The following samples were submitted to TestAmerica, Inc. Indianapolis Division for analysis:

Project Description: 3-3933-250/HAMMOND MGP

Sample Number	Sample Description	Date Taken	Date Received
241015	ERB-99-01	06/15/1999	06/17/1999
241016	TBK-99-01		06/17/1999

Approved by:

## QUALITY CONTROL REPORT CONTINUING CALIBRATION VERIFICATION

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Analyte	Prep Batch No.	Run Batch No.	CCV True Value	CCV Conc Found	CCV % Rec	Flag	Date Analyzed
VOLATILES - TCLP (8260)							
TCLP - Benzene		306	0.0500	0.0509	102		06/25/1999
VOLATILES - TCLP (8260)							
VOLATILES - TCLP (8260)							
TCLP - Benzene		307	0.0500	0.0515	103		06/24/1999
VOLATILES - TCLP (8260)							
TCLP - Benzene		308	0.0500	0.0506	101		06/29/1999

## QUALITY CONTROL REPORT CONTINUING CALIBRATION VERIFICATION

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Job Number: 99.03367

Analyte	Prep Batch No.	Run Batch No.	CCV True Value	CCV Conc Found	CCV % Rec	Flag	Date Analyzed
PNAs - 8270 (NONAQ)							
Acenaphthylene		755	80.	77.4	97		06/22/1999
Anthracene		755	80.	80.0	100		06/22/1999
Benzo(a)anthracene		755	80.	87.3	109		06/22/1999
Benzo(a)pyrene		755	80.	79.9	100		06/22/1999
Benzo(b)fluoranthene		755	80.	83.8	105		06/22/1999
Benzo(k)fluoranthene		755	80.	71.9	90		06/22/1999
Benzo(ghi)perylene		755	80.	84.0	105		06/22/1999
Chrysene		755	80.	97.8	122		06/22/1999
Dibenzo(a,h)anthracene		755	80.	83.8	105		06/22/1999
Fluoranthene		755	80.	82.9	104		06/22/1999
Indeno(1,2,3-cd)pyrene		755	80.	80.2	100		06/22/1999
Pyrene		755	80.	73.1	91		06/22/1999

## QUALITY CONTROL REPORT CONTINUING CALIBRATION VERIFICATION

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Job Number: 99.03367

Analyte	Prep Batch No.	Run Batch No.	CCV True Value	CCV Conc Found	CCV % Rec	Flag	Date Analyzed
PNAs - 8270 (NONAQ)							
Acenaphthene		756	80.	90.0	113		06/23/1999
Anthracene		756	80.	83.0	104		06/23/1999
Benzo (a) anthracene		756	80.	80.7	101		06/23/1999
Benzo (a) pyrene		756	80.	78.9	99		06/23/1999
Benzo (b) fluoranthene		756	80.	79.7	100		06/23/1999
Chrysene		756	80.	92.2	115		06/23/1999
Fluoranthene		756	80.	66.2	83		06/23/1999
Fluorene		756	80.	101	126		06/23/1999
Naphthalene		756	80.	91.6	115		06/23/1999
Phenanthrene		756	80.	95.5	119		06/23/1999
Pyrene		756	80.	80.2	100		06/23/1999
VOLATILE-BTEX (AQ) S-8021B							
Benzene		2043	50.	49.8	100		06/18/1999
Ethylbenzene		2043	50.	51.2	102		06/18/1999
Toluene		2043	50.	51.4	103		06/18/1999
Xylenes, Total		2043	150	148	99		06/18/1999
VOLATILE-BTEX (NONAQ) S-8021B							
Benzene		1121	50	47.0	94		06/18/1999
Ethylbenzene		1121	50	51.2	102		06/18/1999
Toluene		1121	50	51.4	103		06/18/1999
Xylenes, Total		1121	150	148	99		06/18/1999



## QUALITY CONTROL REPORT CONTINUING CALIBRATION VERIFICATION

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Job Number: 99.03367

Analyte	Prep	Run	CCV	CCV	CCV	Date
	Batch	Batch	True	Conc	‡	
	No.	No.	Value	Found	Rec	Flag Analyzed
PAHs - AQUEOUS S-8310						
Acenaphthene		281	25	25.7	103	06/21/1999
Acenaphthylene		281	25	25.4	102	06/21/1999
Anthracene		281	25	25.7	103	06/21/1999
Benzo (a) anthracene		281	25	25.1	100	06/21/1999
Benzo (a) pyrene		281	25	23.5	94	06/21/1999
Benzo (b) fluoranthene		281	25	24.6	98	06/21/1999
Benzo (ghi) perylene		281	25	22.8	91	06/21/1999
Benzo (k) fluoranthene		281	25	24.1	96	06/21/1999
Chrysene		281	25	25.5	102	06/21/1999
Dibenzo (a, h) anthracene		281	25	23.8	95	06/21/1999
Fluoranthene		281	25	24.5	98	06/21/1999
Fluorene		281	25	25.5	102	06/21/1999
Indeno (1, 2, 3-cd) pyrene		281	25	23.9	96	06/21/1999
Naphthalene		281	25	27.1	108	06/21/1999
Phenanthrene		281	25	25.6	102	06/21/1999
Pyrene		281	25	25.8	103	06/21/1999

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Job Number: 99.03367

Analyte	Prep Batch No.	Run Batch No.	CCV True Value	CCV Conc Found	CCV % Rec	Flag	Date Analyzed
PAHs - AQUEOUS S-8310							
Acenaphthene		281	25	25.7	103		06/21/1999
Acenaphthylene		281	25	25.4	102		06/21/1999
Anthracene		281	25	25.6	102		06/21/1999
Benzo (a) anthracene		281	25	25.1	100		06/21/1999
Benzo (a) pyrene		281	25	22.6	90		06/21/1999
Benzo (b) fluoranthene		281	25	24.7	99		06/21/1999
Benzo (ghi) perylene		281	25	22.9	92		06/21/1999
Benzo (k) fluoranthene		281	25	24.2	97		06/21/1999
Chrysene		281	25	25.5	102		06/21/1999
Dibenzo (a, h) anthracene		281	25	23.4	94		06/21/1999
Fluoranthene		281	25	24.6	98		06/21/1999
Fluorene		281	25	25.4	102		06/21/1999
Indeno (1, 2, 3-cd) pyrene		281	25	24.2	97		06/21/1999
Naphthalene		281	25	26.9	108		06/21/1999
Phenanthrene		281	25	25.6	102		06/21/1999
Pyrene		281	25	25.9	104		06/21/1999

## QUALITY CONTROL REPORT CONTINUING CALIBRATION VERIFICATION

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Analyte	Prep Batch No.	Run Batch No.	CCV True Value	CCV Conc Found	CCV % Rec	Flag	Date Analyzed
PAHs - AQUEOUS S-8310							
Acenaphthene		282	25	25.7	103		06/21/1999
Acenaphthylene		282	25	25.4	102		06/21/1999
Anthracene		282	25	25.6	102		06/21/1999
Benzo (a) anthracene		282	25	25.1	100		06/21/1999
Benzo (a) pyrene		282	25	22.6	90		06/21/1999
Benzo (b) fluoranthene		282	25	24.7	99		06/21/1999
Benzo (ghi) perylene		282	25	22.9	92		06/21/1999
Benzo (k) fluoranthene		282	25	24.2	97		06/21/1999
Chrysene		282	25	25.5	102		06/21/1999
Dibenzo (a, h) anthracene		282	25	23.4	94		06/21/1999
Fluoranthene		282	25	24.6	98		06/21/1999
Fluorene		282	25	25.4	102		06/21/1999
Indeno (1, 2, 3-cd) pyrene		282	25	24.2	97		06/21/1999
Naphthalene		282	25	26.9	108		06/21/1999
Phenanthrene		282	25	25.6	102		06/21/1999
Pyrene		282	25	25.9	104		06/21/1999

## QUALITY CONTROL REPORT CONTINUING CALIBRATION VERIFICATION

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Job Number: 99.03367

Analyte	Prep Batch No.	Run Batch No.	CCV True Value	CCV Conc Found	CCV % Rec	Flag	Date Analyzed
PAHs - AQUEOUS S-8310							
Acenaphthene		282	25	25.8	103		06/22/1999
Acenaphthylene		282	25	25.1	100		06/22/1999
Anthracene		282	25	25.5	102		06/22/1999
Benzo (a) anthracene		282	25	24.9	100		06/22/1999
Benzo (a) pyrene		282	25	22.1	88		06/22/1999
Benzo (b) fluoranthene		282	25	24.6	98		06/22/1999
Benzo (ghi) perylene		282	25	22.8	91		06/22/1999
Benzo (k) fluoranthene		282	25	24.2	97		06/22/1999
Chrysene		282	25	25.3	101		06/22/1999
Dibenzo (a, h) anthracene		282	25	23.9	96		06/22/1999
Fluoranthene		282	25	24.5	98		06/22/1999
Fluorene		282	25	25.6	102		06/22/1999
Indeno (1, 2, 3-cd) pyrene		282	25	24.0	96		06/22/1999
Naphthalene		282	25	27.2	109		06/22/1999
Phenanthrene		282	25	25.6	102		06/22/1999
Pyrene		282	25	25.8	103		06/22/1999

## QUALITY CONTROL REPORT BLANKS

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Job Number: 99.03367

Analyte	Prep Batch No.	Run Batch No.	Blank Value	Flag	Units	Reporting Limit	Date Analyzed
VOLATILES - TCLP (8260)							
TCLP - Benzene		306	<0.05		mg/L	<0.05	06/25/1999
SURR: Toluene-d8		306	98		75-132%		06/25/1999
SURR: Dibromofluoromethane		306	102.		91-114%		06/25/1999
SURR: 4-Bromofluorobenzene		306	96		87-132%		06/25/1999
VOLATILES - TCLP (8260)							
TCLP - Benzene		307	<0.05		mg/L	<0.05	06/24/1999
SURR: Toluene-d8		307	103.		75-132%		06/24/1999
SURR: Dibromofluoromethane		307	99		91-114%		06/24/1999
SURR: 4-Bromofluorobenzene		307	97		87-132%		06/24/1999
VOLATILES - TCLP (8260)							
TCLP - Benzene		308	<0.05		mg/L	<0.05	06/29/1999
SURR: Toluene-d8		308	102.		75-132%		06/29/1999
SURR: Dibromofluoromethane		308	100		91-114%		06/29/1999
SURR: 4-Bromofluorobenzene		308	95		87-132%		06/29/1999

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Analyte	Prep Batch No.	Run Batch No.	Blank Value	Flag	Units	Reporting Limit	Date Analyzed
PNAs - 8270 (NONAQ)				06-22			
Acenaphthene	399	755	<0.33		mg/kg	<0.33	06/22/1999
Acenaphthylene	399	755	<0.33		mg/kg	<0.33	06/22/1999
Anthracene	399	755	<0.33		mg/kg	<0.33	06/22/1999
Benzo(a)anthracene	399	755	<0.33		mg/kg	<0.33	06/22/1999
Benzo(a)pyrene	399	755	<0.33		mg/kg	<0.33	06/22/1999
Benzo(b)fluoranthene	399	755	<0.33		mg/kg	<0.33	06/22/1999
Benzo(k)fluoranthene	399	755	<0.33		mg/kg	<0.33	06/22/1999
Benzo(ghi)perylene	399	755	<0.33		mg/kg	<0.33	06/22/1999
Chrysene	399	755	<0.33		mg/kg	<0.33	06/22/1999
Dibenzo(a,h)anthracene	399	755	<0.33		mg/kg	<0.33	06/22/1999
Fluoranthene	399	755	<0.33		mg/kg	<0.33	06/22/1999
Fluorene	399	755	<0.33		mg/kg	<0.33	06/22/1999
Indeno(1,2,3-cd)pyrene	399	755	<0.33		mg/kg	<0.33	06/22/1999
Naphthalene	399	755	<0.33		mg/kg	<0.33	06/22/1999
Phenanthrene	399	755	<0.33		mg/kg	<0.33	06/22/1999
Pyrene	399	755	<0.33		mg/kg	<0.33	06/22/1999
SURR: Nitrobenzene-d5	399	755	75		23-120%		06/22/1999
SURR: 2-Fluorobiphenyl	399	755	97		30-115%		06/22/1999
SURR: Terphenyl-d14	399	755	81		18-137%		06/22/1999

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Analyte	Prep Batch No.	Run Batch No.	Blank Value	Flag	Units	Reporting Limit	Date Analyzed
PNAs - 8270 (NONAQ)				06-24			
Acenaphthene	399	762	<0.33		mg/kg	<0.33	06/24/1999
Acenaphthylene	399	762	<0.33		mg/kg	<0.33	06/24/1999
Anthracene	399	762	<0.33		mg/kg	<0.33	06/24/1999
Benzo(a)anthracene	399	762	<0.33		mg/kg	<0.33	06/24/1999
Benzo(a)pyrene	399	762	<0.33		mg/kg	<0.33	06/24/1999
Benzo(b)fluoranthene	399	762	<0.33		mg/kg	<0.33	06/24/1999
Benzo(k)fluoranthene	399	762	<0.33		mg/kg	<0.33	06/24/1999
Benzo(ghi)perylene	399	762	<0.33		mg/kg	<0.33	06/24/1999
Chrysene	399	762	<0.33		mg/kg	<0.33	06/24/1999
Dibenzo(a,h)anthracene	399	762	<0.33		mg/kg	<0.33	06/24/1999
Fluoranthene	399	762	<0.33		mg/kg	<0.33	06/24/1999
Fluorene	399	762	<0.33		mg/kg	<0.33	06/24/1999
Indeno(1,2,3-cd)pyrene	399	762	<0.33		mg/kg	<0.33	06/24/1999
Naphthalene	399	762	<0.33		mg/kg	<0.33	06/24/1999
Phenanthrene	399	762	<0.33		mg/kg	<0.33	06/24/1999
Pyrene	399	762	<0.33		mg/kg	<0.33	06/24/1999
SURR: Nitrobenzene-d5	399	762	60		23-120%		06/24/1999
SURR: 2-Fluorobiphenyl	399	762	65		30-115%		06/24/1999
SURR: Terphenyl-d14	399	762	98		18-137%		06/24/1999
VOLATILE-BTEX (AQ) S-8021B							
Benzene		2043	<5.0		ug/L	<5.0	06/18/1999
Ethylbenzene		2043	<5.0		ug/L	<5.0	06/18/1999
Toluene		2043	<5.0		ug/L	<5.0	06/18/1999
Xylenes, Total		2043	<5.0		ug/L	<5.0	06/18/1999
SURR: 4-Bromofluorobenzene		2043	92.5		%		06/18/1999
SURR: 4-Bromochlorobenzene		2043	83.4		%	100	06/18/1999
VOLATILE-BTEX (NONAQ) S-8021B							
Benzene		1121	<0.5		mg/kg	<0.5	06/18/1999
Ethylbenzene		1121	<0.5		mg/kg	<0.5	06/18/1999
Toluene		1121	<0.5		mg/kg	<0.5	06/18/1999
Xylenes, Total		1121	<0.5		mg/kg	<0.5	06/18/1999
SURR: 4-Bromofluorobenzene		1121	92.5		%		06/18/1999
SURR: 4-Bromochlorobenzene		1121	83.4		%	100	06/18/1999

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Analyte	Prep Batch No.	Run Batch No.	Blank Value	Flag	Units	Reporting Limit	Date Analyzed
PAHs - AQUEOUS S-8310				6-18			
Acenaphthene	131	281	<18		ug/L	<18	06/21/1999
Acenaphthylene	131	281	<10		ug/L	<10	06/21/1999
Anthracene	131	281	<6.6		ug/L	<6.6	06/21/1999
Benzo(a)anthracene	131	281	<0.10		ug/L	<0.10	06/21/1999
Benzo(a)pyrene	131	281	<0.20		ug/L	<0.20	06/21/1999
Benzo(b)fluoranthene	131	281	<0.18		ug/L	<0.18	06/21/1999
Benzo(ghi)perylene	131	281	<0.76		ug/L	<0.76	06/21/1999
Benzo(k)fluoranthene	131	281	<0.17		ug/L	<0.17	06/21/1999
Chrysene	131	281	<0.20		ug/L	<0.20	06/21/1999
Dibenzo(a,h)anthracene	131	281	<0.30		ug/L	<0.30	06/21/1999
Fluoranthene	131	281	<2.1		ug/L	<2.1	06/21/1999
Fluorene	131	281	<2.1		ug/L	<2.1	06/21/1999
Indeno(1,2,3-cd)pyrene	131	281	<0.40		ug/L	<0.40	06/21/1999
Naphthalene	131	281	<18		ug/L	<18	06/21/1999
Phenanthrene	131	281	<6.4		ug/L	<6.4	06/21/1999
Pyrene	131	281	<2.7		ug/L	<2.7	06/21/1999
SURR:	131	281	97		%		06/21/1999



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Analyte	Prep Batch No.	Run Batch No.	Blank Value	Flag	Units	Reporting Limit	Date Analyzed
PAHs - AQUEOUS S-8310				6-23			
Acenaphthene	131	283	<18		ug/L	<18	06/24/1999
Acenaphthylene	131	283	<10		ug/L	<10	06/24/1999
Anthracene	131	283	<6.6		ug/L	<6.6	06/24/1999
Benzo(a)anthracene	131	283	<0.10		ug/L	<0.10	06/24/1999
Benzo(a)pyrene	131	283	<0.20		ug/L	<0.20	06/24/1999
Benzo(b)fluoranthene	131	283	<0.18		ug/L	<0.18	06/24/1999
Benzo(ghi)perylene	131	283	<0.76		ug/L	<0.76	06/24/1999
Benzo(k)fluoranthene	131	283	<0.17		ug/L	<0.17	06/24/1999
Chrysene	131	283	<0.20		ug/L	<0.20	06/24/1999
Dibenzo(a,h)anthracene	131	283	<0.30		ug/L	<0.30	06/24/1999
Fluoranthene	131	283	<2.1		ug/L	<2.1	06/24/1999
Fluorene	131	283	<2.1		ug/L	<2.1	06/24/1999
Indeno(1,2,3-cd)pyrene	131	283	<0.40		ug/L	<0.40	06/24/1999
Naphthalene	131	283	<18		ug/L	<18	06/24/1999
Phenanthrene	131	283	<6.4		ug/L	<6.4	06/24/1999
Pyrene	131	283	<2.7		ug/L	<2.7	06/24/1999
SURR:	131	283	105		‡		06/24/1999

## QUALITY CONTROL REPORT LABORATORY CONTROL STANDARD

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Analyte	Prep Batch No.	Run Batch No.	LCS True Conc	LCS Conc Found	LCS % Rec.	LCS Dup. Conc Found	LCS Dup. % Rec.	RPD	Flag	Date Analyzed
VOLATILES - TCLP (8260)										
TCLP - Benzene		306	0.0500	0.0537	107					06/25/1999
SURR: Toluene-d8		306	50.0	50.4	101					06/25/1999
SURR: Dibromofluoromethane		306	50.0	51.5	103					06/25/1999
SURR: 4-Bromofluorobenzene		306	50.0	47.2	94					06/25/1999
VOLATILES - TCLP (8260)										
TCLP - Benzene		307	0.0500	0.0508	102					06/24/1999
SURR: Toluene-d8		307	50.0	51.8	104					06/24/1999
SURR: Dibromofluoromethane		307	50.0	48.9	98					06/24/1999
SURR: 4-Bromofluorobenzene		307	50.0	47.9	96					06/24/1999
VOLATILES - TCLP (8260)										
TCLP - Benzene		308	0.0500	0.0545	109					06/29/1999
SURR: Toluene-d8		308	50.0	51.1	102					06/29/1999
SURR: Dibromofluoromethane		308	50.0	51.1	102					06/29/1999
SURR: 4-Bromofluorobenzene		308	50.0	47.4	95					06/29/1999

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Analyte	Prep Batch No.	Run Batch No.	LCS True Conc	LCS Conc Found	LCS % Rec.	LCS Dup. Conc Found	LCS Dup. % Rec.	RPD	Flag	Date Analyzed
PNAs - 8270 (NONAQ)									06-22	
Acenaphthene	399	754	3.33	2.65	80	2.80	84	5.5		06/23/1999
Acenaphthylene	399	754	3.33	2.64	79	2.78	84	5.2		06/23/1999
Anthracene	399	754	3.33	2.68	81	2.77	83	3.3		06/23/1999
Benzo (a) anthracene	399	754	3.33	2.95	89	3.05	92	3.3		06/23/1999
Benzo (a) pyrene	399	754	3.33	2.80	84	2.87	86	2.5		06/23/1999
Benzo (b) fluoranthene	399	754	3.33	2.84	85	2.95	89	3.8		06/23/1999
Benzo (k) Fluoranthene	399	754	3.33	2.71	81	2.88	87	6.1		06/23/1999
benzo (ghi) perylene	399	754	3.33	2.72	82	2.84	85	4.3		06/23/1999
Chrysene	399	754	3.33	2.65	80	2.76	83	4.1		06/23/1999
Dibenzo (a, h) anthracene	399	754	3.33	2.71	81	2.85	86	5		06/23/1999
Fluoranthene	399	754	3.33	2.78	84	2.78	84	0		06/23/1999
Fluorene	399	754	3.33	2.73	82	2.84	85	3.9		06/23/1999
Indeno (1, 2, 3-cd) pyrene	399	754	3.33	2.89	87	3.03	91	4.7		06/23/1999
Naphthalene	399	754	3.33	2.57	77	2.68	81	4.2		06/23/1999
Phenanthrene	399	754	3.33	2.78	84	2.86	86	2.8		06/23/1999
Pyrene	399	754	3.33	3.14	94	3.36	101	6.7		06/23/1999
SURR: Nitrobenzene-d5	399	754	100	80	80	82	82	2.5		06/23/1999
SURR: 2-Fluorobiphenyl	399	754	100	76	76	82	82	7.6		06/23/1999
SURR: Terphenyl-d14	399	754	100	86	86	93	93	7.8		06/23/1999

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Analyte	Prep Batch No.	Run Batch No.	LCS True Conc	LCS Conc Found	LCS % Rec.	LCS Dup. Conc Found	LCS Dup. % Rec.	RPD	Flag	Date Analyzed
PNAs - 8270 (NONAQ)										
Acenaphthene	399	760	3.33	2.77	83				6-24	06/27/1999
Acenaphthylene	399	760	3.33	2.78	84					06/27/1999
Anthracene	399	760	3.33	2.79	84					06/27/1999
Benzo(a)anthracene	399	760	3.33	3.21	96					06/27/1999
Benzo(a)pyrene	399	760	3.33	2.89	87					06/27/1999
Benzo(b)fluoranthene	399	760	3.33	2.85	86					06/27/1999
Benzo(k)fluoranthene	399	760	3.33	2.71	81					06/27/1999
Benzo(ghi)perylene	399	760	3.33	3.32	100					06/27/1999
Chrysene	399	760	3.33	2.86	86					06/27/1999
Dibenzo(a,h)anthracene	399	760	3.33	2.99	90					06/27/1999
Fluoranthene	399	760	3.33	3.15	95					06/27/1999
Fluorene	399	760	3.33	3.05	92					06/27/1999
Indeno(1,2,3-cd)pyrene	399	760	3.33	3.29	99					06/27/1999
Naphthalene	399	760	3.33	2.69	81					06/27/1999
Phenanthrene	399	760	3.33	2.76	83					06/27/1999
Pyrene	399	760	3.33	3.11	93					06/27/1999
SURR: Nitrobenzene-d5	399	760	100	84	84					06/27/1999
SURR: 2-Fluorobiphenyl	399	760	100	76	76					06/27/1999
SURR: Terphenyl-d14	399	760	100	87	87					06/27/1999
VOLATILE-BTEX (AQ) S-8021B										
Benzene		2043	50.	49.3	99	47.5	95	3.7		06/18/1999
Ethylbenzene		2043	50.	50.3	101	51.1	102	1.6		06/18/1999
Toluene		2043	50.	53.5	107	49.9	100	6.9		06/18/1999
Xylenes, Total		2043	150	146	97	148	99	1.4		06/18/1999
SURR: 4-Bromofluorobenzene		2043	15	11.7	78	12.2	81	4.1		06/18/1999
SURR: 4-Bromochlorobenzene		2043	15	14.6	97	13.0	87	12		06/18/1999
VOLATILE-BTEX (NONAQ) S-80										
Benzene		1121	50	49.3	99	47.5	95	3.7		06/18/1999
Ethylbenzene		1121	50	50.3	101	51.0	102	1.4		06/18/1999
Toluene		1121	50	53.4	107	49.9	100	6.7		06/18/1999
Xylenes, Total		1121	150	146	97	148	99	1.4		06/18/1999
SURR: 4-Bromofluorobenzene		1121	15	11.7	78	12.2	81	4.1		06/18/1999

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Analyte	Prep Batch No.	Run Batch No.	LCS True Conc	LCS Conc Found	LCS % Rec.	LCS Dup. Conc Found	LCS Dup. % Rec.	RPD	Flag	Date Analyzed
SURR: 4-Bromochlorobenzene		1121	15	14.6	97	13.0	87	12		06/18/1999

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Analyte	Prep Batch No.	Run Batch No.	LCS True Conc	LCS Conc Found	LCS % Rec.	LCS Dup. Conc Found	LCS Dup. % Rec.	RPD	Flag	Date Analyzed
PAHs - AQUEOUS S-8310									6-18	
Acenaphthene	131	281	10	7.18	72	7.52	75	4.6		06/21/1999
Acenaphthylene	131	281	20	14.5	73	15.1	76	4.1		06/21/1999
Anthracene	131	281	1.0	0.900	90	0.913	91	1.4		06/21/1999
Benzo (a) anthracene	131	281	1.0	0.942	94	0.943	94	0.1		06/21/1999
Benzo (a) pyrene	131	281	1.0	0.863	86	0.858	86	0.6		06/21/1999
Benzo (b) fluoranthene	131	281	2.0	1.87	94	1.87	94	0		06/21/1999
Benzo (ghi) perylene	131	281	2.0	1.85	93	1.84	92	0.5		06/21/1999
Benzo (k) fluoranthene	131	281	1.0	0.916	92	0.932	93	1.7		06/21/1999
Chrysene	131	281	1.0	0.945	95	0.951	95	0.6		06/21/1999
Dibenzo (a, h) anthracene	131	281	2.0	1.80	90	1.82	91	1.1		06/21/1999
Fluoranthene	131	281	2.0	1.86	93	1.89	95	1.6		06/21/1999
Fluorene	131	281	2.0	1.54	77	1.66	83	7.5		06/21/1999
Indeno (1, 2, 3-cd) pyrene	131	281	1.0	0.872	87	0.852	85	2.3		06/21/1999
Naphthalene	131	281	10	6.94	69	7.13	71	2.7		06/21/1999
Phenanthrene	131	281	1.0	0.975	98	0.920	92	5.8		06/21/1999
Pyrene	131	281	1.0	1.00	100	1.01	101	1		06/21/1999
SURR:	131	281	10	9.72	97	9.66	97	0.6		06/21/1999

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Analyte	Prep Batch No.	Run Batch No.	LCS True Conc	LCS Conc Found	LCS % Rec.	LCS Dup. Conc Found	LCS Dup. % Rec.	RPD	Flag	Date Analyzed
PAHs - AQUEOUS S-8310									6-23	
Acenaphthene	131	283	10	11.1	111					06/24/1999
Acenaphthylene	131	283	20	21.8	109					06/24/1999
Anthracene	131	283	1.0	1.28	128				text	06/24/1999
Benzo (a) anthracene	131	283	1.0	1.25	125				text	06/24/1999
Benzo (a) pyrene	131	283	1.0	1.21	121				text	06/24/1999
Benzo (b) fluoranthene	131	283	2.0	2.48	124				text	06/24/1999
Benzo (ghi) perylene	131	283	2.0	2.44	122				text	06/24/1999
Benzo (k) fluoranthene	131	283	1.0	1.21	121				text	06/24/1999
Chrysene	131	283	1.0	1.24	124				text	06/24/1999
Dibenzo (a,h) anthracene	131	283	2.0	2.36	118				text	06/24/1999
Fluoranthene	131	283	2.0	2.41	121				text	06/24/1999
Fluorene	131	283	2.0	2.35	118					06/24/1999
Indeno (1,2,3-cd) pyrene	131	283	1.0	1.16	116				text	06/24/1999
Naphthalene	131	283	10	10.6	106					06/24/1999
Phenanthrene	131	283	1.0	1.21	121				text	06/24/1999
Pyrene	131	283	1.0	1.31	131					06/24/1999
SURR:	131	283	10	10.6	106					06/24/1999

## QUALITY CONTROL REPORT MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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Job Number: 99.03367

Analyte	Prep Batch No.	Run Batch No.	Conc. Spike Added	Sample Result	Conc. MS Result	MS % Rec.	Conc. MSD Result	MSD % Rec.	RPD	Flag	Date Analyzed	Sample Spiked
VOLATILES - TCLP (8260)												
PNAs - 8270 (NONAQ)												
Acenaphthene	399	756	3.33	190.	90.	0	79.	0	0	d1x100	06/23/1999	241009
Acenaphthylene	399	755	3.33	13.	17.	120	15.	60	67	d2x5	06/22/1999	241009
Anthracene	399	756	3.33	54.	41.	0	43.	0	0	d1x100	06/23/1999	241009
Benzo(a)anthracene	399	756	3.33	40.	39.	0	37.	0	0	d1x100	06/23/1999	241009
Benzo(a)pyrene	399	756	3.33	35.	30.	0	30.	0	0	d1x100	06/23/1999	241009
Benzo(b)fluoranthene	399	756	3.33	25.	25.	0	27.	60	200	d1x100	06/23/1999	241009
Benzo(k)fluoranthene	399	755	3.33	7.7	12.	129	10.	69	60	d2x5	06/22/1999	241009
Benzo(ghi)perylene	399	755	3.33	10.	11.	30	12.	60	67	d2x5	06/22/1999	241009
Chrysene	399	756	3.33	46.	35.	0	38.	0	0	d1x100	06/23/1999	241009
Dibenzo(a,h)anthracene	399	755	3.33	2.8	5.8	90	5.9	93	3.3	d2x5	06/22/1999	241009
Fluoranthene	399	756	3.33	71.	54.	0	57.	0	0	d1x100	06/23/1999	241009
Fluorene	399	756	3.33	96.	66.	0	66.	0	0	d1x100	06/23/1999	241009
Indeno(1,2,3-cd)pyrene	399	755	3.33	8.0	11.	90	11.	90	0	d2x5	06/22/1999	241009
Naphthalene	399	756	3.33	650.	180.	0	190.	0	0	d1x500	06/23/1999	241009
Phenanthrene	399	756	3.33	280.	130.	0	140.	0	0	d1x100	06/23/1999	241009
Pyrene	399	756	3.33	130.	92.	0	110.	0	0	d1x100	06/23/1999	241009
VOLATILE-BTEX (NONAQ) S-												
Benzene		1121	5.0	4.1	7.91	76	7.47	67	12		06/18/1999	241009
Ethylbenzene		1121	5.0	6.1	10.8	94	9.95	77	20		06/18/1999	241009
Toluene		1121	5.0	2.2	5.38	64	5.22	60	5.2		06/18/1999	241009
Xylenes, Total		1121	15.	4.9	16.1	75	14.5	64	15		06/18/1999	241009
VOLATILE-BTEX (NONAQ) S-												
Benzene		1121	10.0	<1.0	4.35	44	5.02	50	14	d2x2	06/18/1999	241171
Ethylbenzene		1121	10.0	<1.0	4.75	48	5.33	53	12	d2x2	06/18/1999	241171
Toluene		1121	10.0	<1.0	5.35	54	5.99	60	11	d2x2	06/18/1999	241171
Xylenes, Total		1121	30.0	<1.0	13.1	44	13.9	46	5.8	d2x2	06/18/1999	241171



**PROJECT NARRATIVE**

JOB NUMBER: 99.03367

SAMPLE: ms241009, msd241009

ANALYSIS: 8270-PNA

Some spike compounds in matrix spike and spike duplicate were out of control limits due to matrix interferences.  
xia

SAMPLE: SD-99-03-4-6', SD-99-06-5-6', SD-99-09-6-7'

ANALYSIS: GRAINSIZE AND ATTERBERG LIMITS

The above tests could not be performed due to the petroleum content which caused the samples to not disperse in water and to repel water.