



Pfizer Inc
Pfizer Global Manufacturing
Specialty/Biotechnology Operating Unit
401 North Middletown Road
Pearl River, New York, 10965-1299
(845) 602-5000

F-6 Y352

August 19, 2011

CERTIFIED MAIL - RETURN RECEIPT

Mr. Keith H. Gronwald
Senior Engineering Geologist
Remedial Bureau C
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway,
Albany, NY12233-7014

**RE: Wyeth Pharmaceuticals, Muddy Creek Surface Water & Sediment Sampling
ID No. NYD-054065909, DEC Site #344003
Town of Orangetown, Rockland County**

Dear Mr. Gronwald:

Enclosed are a brief report by HDR/HydroQual, our consultant for this project, and a cd containing the complete analytical report. This project was undertaken in response to a request by the New York State Department of Environmental Conservation (NYSDEC) to address a data gap on Muddy Creek.

The sample collection and analyses were executed according to a work plan that was reviewed and approved by the NYSDEC. Review of the data indicates that at the NYSDEC's requested location where Muddy Creek exits the facility, the values of the analyzed parameters are below the NYSDEC criteria applicable to the classification of Muddy Creek as Class C fresh surface waters.

We believe that this report fulfills the NYSDEC information request and no further action is anticipated. However, should you have any questions, please contact me at (845) 602-2500.

Sincerely,

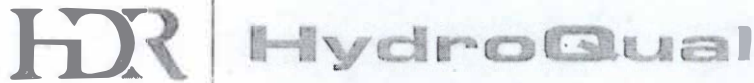
Michael T. Kontaxis, P.E.
Manager, Environmental Technology

Enclosures

bc: C. Clark
 R. Schott (w/o cd)
 P. Sidoti (w/o cd)
 J. Purtill (w/o cd)
 P. Kehrberger, HDR (Letter to NYSDEC only)
 D. Scannell, HDR (Letter to NYSDEC only)
 File 4352

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1. Article Addressed to: Mr. Ralph G. Schott Remedial Bureau 2 Division of Environmental Remediation NYSDEC 625 Broadway Albany, NY 12233-7014	B. Received by (Printed Name) C. Date of Delivery D. Is delivery address different from item 1? ☐ Yes ☐ No If YES, enter delivery address below:
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August 16, 2011

Michael T. Kontaxis, P.E.
Manager, Environmental Technology
Wyeth Pharmaceuticals
401 N. Middletown Road
Pearl River, New York 10965

WYET - 165048

Dear Michael:

HDR | HydroQual is pleased to submit the attached report, "Pfizer Inc., Wyeth Pharmaceuticals Pearl River Site, Muddy Creek Water and Sediment Sampling Results." The report summarizes the June 30, 2011, sampling program conducted at the request of New York State Department of Environmental Conservation (NYSDEC) according to the Muddy Creek Sampling Work Plan reviewed and approved by NYSDEC.

The report includes tables of field measurements taken by HDR | HydroQual and laboratory analytical results provided by TestAmerica for water and sediment samples taken by HDR | HydroQual. A CD of the entire laboratory report including quality assurance/quality control (QA/QC) information has also been included with the report.

If you have any questions on the report or need additional information, please feel free to call. We appreciate the opportunity to continue to provide technical assistance to Pfizer Inc.

Very truly yours,

HDR | HYDROQUAL

Patricia M. Kehrberger, P.E.
Senior Water Quality Engineer

Very truly yours,

HDR | HYDROQUAL

Dennis E. Scannell, P.E.
Wastewater Engineering
Project Manager

PMK/amm

Wordprocessing Jobs\WYET\165048\Sentinel6.Veg.HDR

Attachments



PFIZER INC., WYETH PHARMACEUTICALS PEARL RIVER SITE MUDDY CREEK WATER AND SEDIMENT SAMPLING RESULTS

BACKGROUND

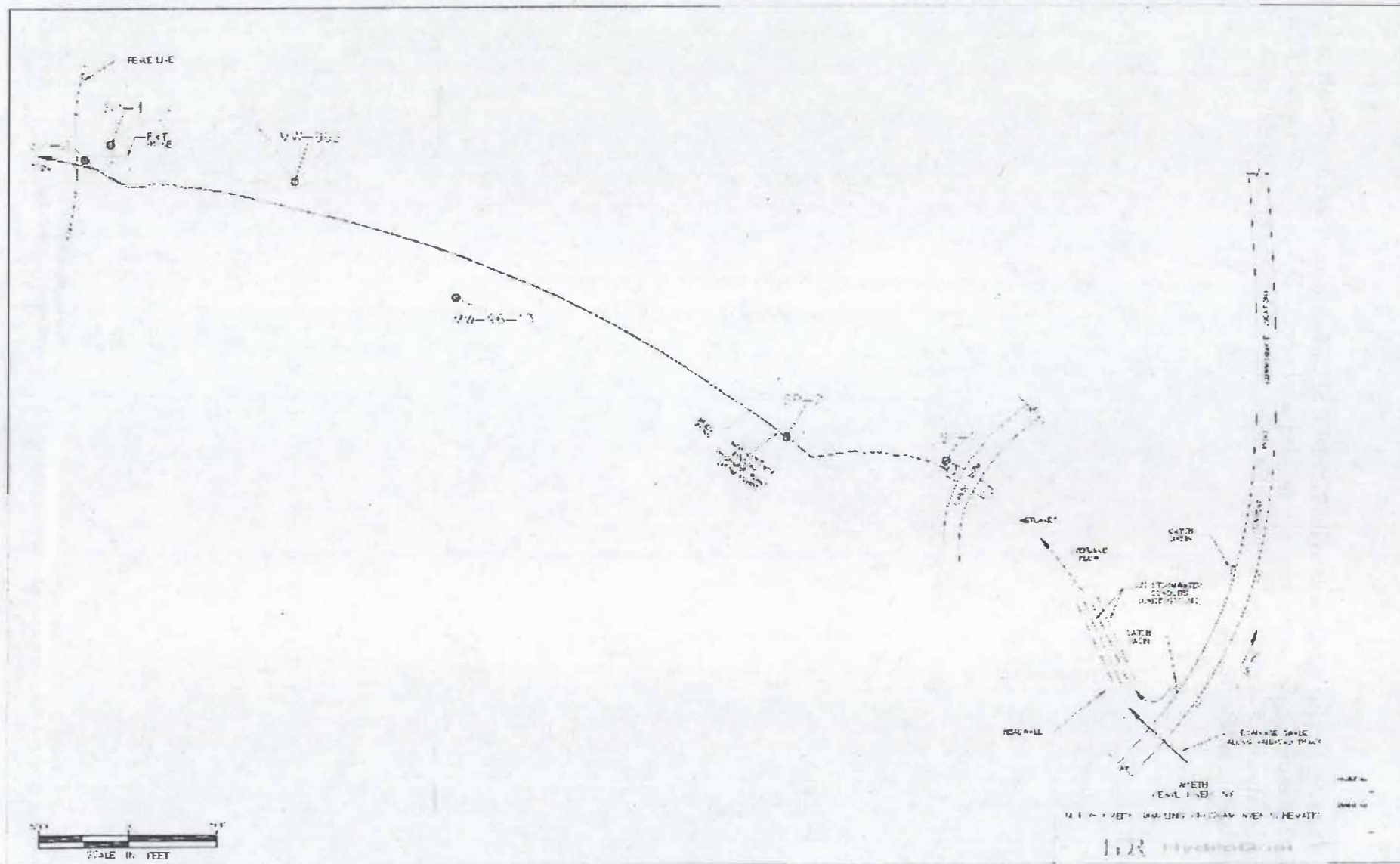
Via correspondence dated May 25, 2011, the New York State Department of Environmental Conservation (NYSDEC) requested that the Pfizer Inc.¹ Pearl River facility (the Facility) undertake surface water and sediment sampling of Muddy Creek at the Facility. NYSDEC requested that the samples be analyzed for Volatile Organic Compounds (VOCs), Semivolatile Organic Compounds (SVOCs) and Target Analytical List (TAL) Metals. The NYSDEC initially requested that the sampling be limited to a location immediately downstream of the Facility property. A Sampling Work Plan was prepared by the Facility and provided to NYSDEC. In addition to the single sampling location requested by NYSDEC, additional locations, particularly to assess inputs from upstream of the Facility site and from Muddy Creek's tributary areas outside of the Facility site were included in the sampling program which was reviewed and approved by NYSDEC. On June 30, 2011, the sampling, as described in the Work Plan, was performed.

SAMPLING LOCATIONS

Figure 1 is a greyscale location map of the Facility site with a schematic location map of the four (4) sampling locations. Station SP-1 is located on the downstream side of an earth berm upstream of the Facility site. This area receives drainage from the Convent Road area catch basins that is directed to this area via underground stormwater conduits. Additional runoff flow is contributed via a swale that runs parallel to the railroad tracks. This flow runs overland to the area behind the earth berm where it can be impounded. The flow then passes through the berm via a pipe that is in the vicinity of the headwaters for Muddy Creek. The creek in its headwaters location can be considered as intermittent with the presence of flowing and/or standing water as a function of recent rainfall. The intermittent nature of Muddy Creek between SP-1 and SP-2 is indicated on the schematic as a dotted line. Station SP-2 is located on Muddy Creek immediately upstream of the discharge from Reed Pond to Muddy Creek. Downstream of SP-2, the discharge from Reed Pond contributes to Muddy Creek flow. Reed Pond contains non-contact cooling water and stormwater from the Facility site. Station SP-3 is located on Muddy Creek immediately upstream of the Facility fence

¹ Although we note Pfizer Inc., we understand that operating entity at the Pearl River facility is Wyeth Pharmaceuticals, a subsidiary of Pfizer Inc.

line. The SP-3 location corresponds to the NYSDEC SPDES monitoring location 001-1B for the Facility and is the specific location requested for sampling by NYSDEC. Station SP-4 is located at a footbridge crossing a Muddy Creek tributary that drains areas at the west of the Facility site where several landfills are located.



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Allowance was made (by bringing extra sample bottle sets) for additional samples, were the sampling team to observe appreciable flow entering Muddy Creek from pipes/ditches, for example, that were observed to be dry during the site reconnaissance. No such additional locations were observed.

FIELD MEASURED PARAMETERS

HDR HydroQual personnel conducted the sampling, moving from downstream to upstream locations, and prepared the water and sediment samples for transport to the TestAmerica Laboratories, Edison, NJ, NYSDOH cert # 11452. Each sampling location was located using a Trimble Hand Held GPS unit. Field measurements of water temperature, conductivity, dissolved oxygen, and pH were taken at each location and are summarized on Table 1. No flow measurement was possible at SP-1 or SP-2 where water was present but not flowing. Flowing water was observed only at SP-3 and SP-4 where a flow measurement was made using a Marsh-McBimey velocity meter.

SAMPLING PROCEDURES FOR LABORATORY ANALYSES

Water and sediment samples were collected at SP-1, SP-2, SP-3, and SP-4 directly into the sample containers. In addition, one (1) duplicate each for water and sediment, and one (1) field blank for water were provided to the lab for quality control/quality assurance (QA/QC) purposes. The duplicate samples were taken from SP-3. One (1) trip blank was provided. The total number of analyses was 12.

The laboratory analyzed each water and sediment sample for Target Compound List (TCL) for volatile organic compounds (VOCs) by Method 8260B, TCL for semi-volatile organic compounds (SVOCs) by Method 8270C, Target Analyte List (TAL) Metals (including Hg) by Method 6010B, and Mercury by Cold Vapor Atomic Absorption (CVAA) Method 7470A in water and Method 7471A in soil. The enclosed cd contains the complete laboratory report.

DATA SUMMARY

Data for the water and sediment samples are summarized on Tables 2 through 7. Sampling data for water sample VOCs, SVOCs and TAL Metals, respectively, are presented in Tables 2 through 4 and sampling data for sediment samples are presented in Tables 5 through 7. On these tables, the data qualifier "U" indicates that the analyte was analyzed for but not detected down to the Method Detection Level (MDL). However, due to laboratory Quality Assurance (QA) requirements on reporting analytical results, values for those parameters are presented as the laboratory Reporting Limit (RL) for the parameter. A data qualifier "J" indicates the result is less than the RL but greater than or equal to the MDL and the concentration is an estimated value. On Tables 5 through 7, each

sample has a unique MDL that is based on the percent solids for the sample summarized on Table 8. Data without any qualifiers are the reported values.

CONCLUSIONS

This data from this sampling provides a characterization of the water column and sediments of the Muddy Creek upstream of the Pfizer Pearl River site and as it flows through to downstream of the Pfizer property. Muddy Creek is classified by NYSDEC as Class C fresh surface waters, defined in 6NYCRR Part 701.8 as:

Class C fresh surface waters. The best usage of Class C waters is fishing. These waters shall be suitable for fish, shellfish, and wildlife propagation and survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.

The data were reviewed for comparison purposes to applicable NYSDEC criteria for Class C Surface waters and we find that at SP-3, the NYSDEC's requested location where Muddy Creek exits the Facility, all the data are below the applicable criteria. This effort fulfills the NYSDEC request to provide information and no further action is anticipated.

Table 1. Muddy Creek
Pearl River, NY
June 30, 2011

Parameter	Location			
	SP-1	SP-2	SP-3	SP-4
Trimble GPS Location	41 04.920200 N	41 04.722405 N	41 04.215798 N	41 04.239982 N
	74 01.378379 W	74 01.426167 W	74 01.569284 W	74 01.573301 W
Time	1315	1415	930	1100
Temperature, C	19.88	28.16	20.64	17.32
Conductivity, mS/cm 2	0.537	0.659	0.659	1.035
Dissolved Oxygen, mg/L	3.29	6.94	6.45	5.04
Dissolved Oxygen Saturation, %	36.2	89.1	72.2	52.6
pH, SU	6.77	7.21	7.48	7.13
Flow, cfs	NM	NM	1.32	0.14

Table 2. Volatile Compounds - Water

Sample ID			SP-1-WATER		SP-2-WATER		SP-3-WATER		SP-3-DUPE-WATER		SP-4-WATER	
Lab Sample No.			460-28327-4		460-28327-3		460-28327-2		460-28327-5		460-28327-1	
Sampling Date			6/30/2011 1:15:00 PM		6/30/2011 2:15:00 PM		6/30/2011 9:30:00 AM		6/30/2011 12:00:00 AM		6/30/2011 11:00:00 AM	
Matrix			Water		Water		Water		Water		Water	
Dilution Factor			1		1		1		1		1	
Units	Analytical		ug/L		ug/L		ug/L		ug/L		ug/L	
VOLATILE COMPOUNDS (GC/MS)	Method	MOL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
1,1,1-Trichloroethane	8260B	0.25	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2,2-Tetrachloroethane	8260B	0.090	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2-Trichloroethane	8260B	0.10	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethane	8260B	0.10	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethene	8260B	0.14	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethane	8260B	0.24	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloropropane	8260B	0.090	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
2-Butanone	8260B	0.82	10	U	10	U	10	U	10	U	10	U
2-Hexanone	8260B	0.57	10	U	10	U	10	U	10	U	10	U
4-Methyl-2-pentanone	8260B	0.66	10	U	10	U	10	U	10	U	10	U
Acetone	8260B	2.5	10	U	10	U	10	U	10	U	10	U
Benzene	8260B	0.11	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromochloromethane	8260B	0.095	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromoforn	8260B	0.10	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromomethane	8260B	0.31	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Carbon disulfide	8260B	0.15	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Carbon tetrachloride	8260B	0.15	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chlorobenzene	8260B	0.10	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloroethane	8260B	0.45	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloroform	8260B	0.15	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloromethane	8260B	0.21	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
cis-1,2-Dichloroethylene	8260B	0.20	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
cis-1,2-Dichloropropene	8260B	0.11	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Dibromochloromethane	8260B	0.11	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Ethylbenzene	8260B	0.25	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Methylene Chloride	8260B	0.15	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Styrene	8260B	0.12	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Tetrachloroethene	8260B	0.20	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Toluene	8260B	0.090	0.50	J	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,2-Dichloroethene	8260B	0.14	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,3-Dichloropropene	8260B	0.12	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Trichloroethene	8260B	0.18	1.0	U	1.0	U	0.20	J	1.0	U	0.37	J
Vinyl chloride	8260B	0.11	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Xylenes, Total	8260B	0.41	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Total Confident Conc.			0.50		0		0.2		0		0.37	

Notes

J: Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value

U: Indicates the analyte was analyzed for but not detected.

U*: Indicates recovery or RPD exceeds control limits.

HDR | HydroQual

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in association with HDR Engineering, Inc.

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Table 3. Semivolatile Compounds - Water

Sample ID			SP-1-WATER		SP-2-WATER		SP-3-WATER		SP-3-DUP1-WATER		SP-4-WATER	
Lab Sample No.			460-28327-4		460-28327-3		460-28327-2		460-28327-5		460-28327-1	
Sampling Date			6/30/2011 1:15:00 PM		6/30/2011 2:15:00 PM		6/30/2011 9:30:00 AM		6/30/2011 12:00:00 AM		6/30/2011 11:00:00 AM	
Matrix			Water		Water		Water		Water		Water	
Dilution Factor			1		1		1		1		1	
Units	Analytical		ug/L		ug/L		ug/L		ug/L		ug/L	
SEMIVOLATILE COMPOUNDS (GC/MS)	Method	MDL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
1,2,4-Trichlorobenzene	8270C	0.52	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichlorobenzene	8270C	3.7	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene	8270C	3.8	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene	8270C	4.6	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol	8270C	2.5	10	U	10	U	10	U	10	U	10	U
2,4,6-Trichlorophenol	8270C	3.2	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol	8270C	2.8	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol	8270C	2.5	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol	8270C	4.8	30	U	30	U	30	U	30	U	30	U
2,5-Dinitrotoluene	8270C	0.42	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
2,6-Dinitrotoluene	8270C	0.55	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
2-Chloronaphthalene	8270C	3.8	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol	8270C	2.6	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene	8270C	3.1	10	U	10	U	10	U	10	U	10	U
2-Methylphenol	8270C	1.7	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline	8270C	5.7	20	U	20	U	20	U	20	U	20	U
2-Nitrophenol	8270C	3.4	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine	8270C	7.0	20	U	20	U	20	U	20	U	20	U
3-Nitroaniline	8270C	4.3	20	U	20	U	20	U	20	U	20	U
4,6-Dinitro-2-methylphenol	8270C	5.2	30	U	30	U	30	U	30	U	30	U
4-Bromophenyl phenyl ether	8270C	3.5	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol	8270C	2.0	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline	8270C	2.1	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl phenyl ether	8270C	3.5	10	U	10	U	10	U	10	U	10	U
4-Methylphenol	8270C	1.6	10	U	10	U	10	U	10	U	10	U
4-Nitroaniline	8270C	4.0	20	U	20	U	20	U	20	U	20	U
4-Nitrophenol	8270C	2.3	30	U	30	U	30	U	30	U	30	U
Acenaphthylene	8270C	3.8	10	U	10	U	10	U	10	U	10	U
Acenaphthylene	8270C	4.0	10	U	10	U	10	U	10	U	10	U
Anthracene	8270C	3.0	10	U	10	U	10	U	10	U	10	U
Benzo[a]anthracene	8270C	0.27	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Benzo[a]pyrene	8270C	0.12	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Benzo[b]fluoranthene	8270C	0.23	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Benzo[g,h,i]perylene	8270C	2.7	10	U	10	U	10	U	10	U	10	U
Benzo[k]fluoranthene	8270C	0.30	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bis (2-chloroisopropyl) ether	8270C	3.2	10	U	10	U	10	U	10	U	10	U
Bis (2-chloroethoxy) methane	8270C	3.1	10	U	10	U	10	U	10	U	10	U
Bis (2-chloroethyl) ether	8270C	0.41	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bis (2-ethylhexyl) phthalate	8270C	2.4	10	U	10	U	10	U	10	U	10	U
Butyl benzyl phthalate	8270C	2.8	10	U	10	U	10	U	10	U	10	U
Carbazole	8270C	3.1	10	U	10	U	10	U	10	U	10	U
Chrysene	8270C	3.8	10	U	10	U	10	U	10	U	10	U

Table 3. Semivolatile Compounds - Water

Sample ID			SP-1-WATER		SP-2-WATER		SP-3-WATER		SP-3-DUP-WATER		SP-4-WATER	
Lab Sample No.			460-28327-4		460-28327-3		460-28327-2		460-28327-5		460-28327-1	
Sampling Date			6/30/2011 1:15:00 PM		6/30/2011 2:15:00 PM		6/30/2011 9:30:00 AM		6/30/2011 12:00:00 AM		6/30/2011 11:00:00 AM	
Matrix			Water		Water		Water		Water		Water	
Dilution Factor			1		1		1		1		1	
Units	Analytical		ug/L		ug/L		ug/L		ug/L		ug/L	
SEMIVOLATILE COMPOUNDS (GC/MS)	Method	MDL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Dibenz(a,h)anthracene	8270C	0.10	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Dibenzofuran	8270C	3.6	10	U	10	U	10	U	10	U	10	U
Diethyl phthalate	8270C	3.8	10	U	10	U	10	U	10	U	10	U
Dimethyl phthalate	8270C	3.3	10	U	10	U	10	U	10	U	10	U
Di-n-butyl phthalate	8270C	2.8	10	U	10	U	10	U	10	U	10	U
Di-n-octyl phthalate	8270C	1.9	10	U	10	U	10	U	10	U	10	U
Fluoranthene	8270C	2.6	10	U	10	U	10	U	10	U	10	U
Fluorene	8270C	3.3	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene	8270C	0.27	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Hexachlorobutadiene	8270C	0.94	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Hexachlorocyclopentadiene	8270C	4.6	10	U	10	U	10	U	10	U	10	U
Hexachloroethane	8270C	0.50	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Indeno[1,2,3-cd]pyrene	8270C	0.12	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Isophorone	8270C	3.6	10	U	10	U	10	U	10	U	10	U
Naphthalene	8270C	3.7	10	U	10	U	10	U	10	U	10	U
Nitrobenzene	8270C	0.41	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
N-Nitrosodimethylamine	8270C	0.32	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
N-Nitrosodiphenylamine	8270C	3.9	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol	8270C	5.1	30	U	30	U	30	U	30	U	30	U
Phenanthrene	8270C	3.6	10	U	10	U	10	U	10	U	10	U
Phenol	8270C	0.89	10	U	10	U	10	U	10	U	10	U
Pyrene	8270C	4.3	10	U	10	U	10	U	10	U	10	U
Total Confident Conc.			0		0		0		0		0	

Notes:

J: Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

U: Indicates the analyte was analyzed for but not detected.

U*: Indicates recovery or RPD exceeds control limits.

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Table 4. TAL Metals - Water

Sample ID			SP-1-WATER		SP-2-WATER		SP-3 WATER		SP-3 DUPE-WATER		SP-4 WATER
Lab Sample No.			460-28327-4		460-28327-3		460-28327-2		460-28327-5		460-28327-1
Sampling Date			6/30/2011 1:15:00 PM		6/30/2011 2:15:00 PM		6/30/2011 9:30:00 AM		6/30/2011 12:00:00 AM		6/30/2011 11:00:00 AM
Matrix			Water		Water		Water		Water		Water
Dilution Factor											
Units	Analytical		ug/L		ug/L		ug/L		ug/L		ug/L
METALS	Method	MDI	Result	Q	Result	Q	Result	Q	Result	Q	Result
Aluminum	6010B	87.0	455		194	J	127	J	122	J	200
Antimony	6010H	4.6	10.0	U	10.0	U	10.0	U	10.0	U	10.0
Arsenic	6010E	3.8	5.0	U	5.0	U	3.9	J	5.0	U	5.0
Boron	6010B	3.7	38.0	J	52.7	J	134	J	131	J	115
Beryllium	6010B	0.94	2.0	U	2.0	U	2.0	U	2.0	U	2.0
Cadmium	6010E	0.92	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Calcium	6010B	72.2	31000		56900		79300		77100		70000
Chromium	6010B	3.2	10.0	U	10.0	U	10.0	U	10.0	U	10.0
Cobalt	6010B	7.8	50.0	U	50.0	U	50.0	U	50.0	U	50.0
Copper	6010E	3.6	25.0	U	25.0	U	7.1	J	7.0	J	25.0
Iron	6010B	40.2	1770		2230		656		634		779
Lead	6010E	2.8	3.5	J	5.0	U	5.0	U	5.0	U	5.0
Magnesium	6010B	56.4	6450		9040		16600		16300		14100
Manganese	6010E	2.5	75.2		1210		544		524		2770
Mercury	7470A	0.19	0.20	U	0.20	U	0.20	U	0.20	U	0.20
Nickel	6010E	3.5	40.0	U	40.0	U	40.0	U	40.0	U	47
Potassium	6010B	209	2660	J	2340	J	3100	J	3010	J	3310
Selenium	6010B	4.8	10.0	U	10.0	U	10.0	U	10.0	U	10.0
Silver	6010B	0.97	10.0	U	10.0	U	10.0	U	10.0	U	10.0
Sodium	6010B	341	62700		57300		103000		101000		103000
Thallium	6010B	4.6	10.0	U	10.0	U	10.0	U	10.0	U	10.0
Vanadium	6010B	2.0	2.5	J	2.2	J	50.0	U	50.0	U	50.0
Zinc	6010B	5.8	8.0	J	30.0	U	6.7	J	6.1	J	7.5

Notes:

J: Result is less than the Reporting Limit (RL) but greater than or equal to the MDL, and the concentration is an approximate value

U: Indicates the analyte was analyzed for but not detected

U*: Indicates recovery or RPD exceeds control limits

[illegible]

¹ Recall is less than the Forgetting Limit (FL) but greater than or equal to the MDI and the contribution is an approximate value

U indicates the analyte was analyzed for but not detected.

U* indicates recovery or RPD exceeded control limits.

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Table 6. Semivolatile Compounds - Soil/Sediment

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Table 6. Semivolatile Compounds - Soil/Sediment

Sample ID	Site Sample No.	Geological Data	Material	Instrument	Analysis	Method	Result	Unit	Notes
SP-21-01	401-2002-01	SP-21-01	SP-21-01	SP-21-01	SP-21-01	SP-21-01	SP-21-01	SP-21-01	SP-21-01
SP-21-02	401-2002-02	SP-21-02	SP-21-02	SP-21-02	SP-21-02	SP-21-02	SP-21-02	SP-21-02	SP-21-02
SP-21-03	401-2002-03	SP-21-03	SP-21-03	SP-21-03	SP-21-03	SP-21-03	SP-21-03	SP-21-03	SP-21-03
SP-21-04	401-2002-04	SP-21-04	SP-21-04	SP-21-04	SP-21-04	SP-21-04	SP-21-04	SP-21-04	SP-21-04
SP-21-05	401-2002-05	SP-21-05	SP-21-05	SP-21-05	SP-21-05	SP-21-05	SP-21-05	SP-21-05	SP-21-05
SP-21-06	401-2002-06	SP-21-06	SP-21-06	SP-21-06	SP-21-06	SP-21-06	SP-21-06	SP-21-06	SP-21-06
SP-21-07	401-2002-07	SP-21-07	SP-21-07	SP-21-07	SP-21-07	SP-21-07	SP-21-07	SP-21-07	SP-21-07
SP-21-08	401-2002-08	SP-21-08	SP-21-08	SP-21-08	SP-21-08	SP-21-08	SP-21-08	SP-21-08	SP-21-08
SP-21-09	401-2002-09	SP-21-09	SP-21-09	SP-21-09	SP-21-09	SP-21-09	SP-21-09	SP-21-09	SP-21-09
SP-21-10	401-2002-10	SP-21-10	SP-21-10	SP-21-10	SP-21-10	SP-21-10	SP-21-10	SP-21-10	SP-21-10
SP-21-11	401-2002-11	SP-21-11	SP-21-11	SP-21-11	SP-21-11	SP-21-11	SP-21-11	SP-21-11	SP-21-11
SP-21-12	401-2002-12	SP-21-12	SP-21-12	SP-21-12	SP-21-12	SP-21-12	SP-21-12	SP-21-12	SP-21-12
SP-21-13	401-2002-13	SP-21-13	SP-21-13	SP-21-13	SP-21-13	SP-21-13	SP-21-13	SP-21-13	SP-21-13
SP-21-14	401-2002-14	SP-21-14	SP-21-14	SP-21-14	SP-21-14	SP-21-14	SP-21-14	SP-21-14	SP-21-14
SP-21-15	401-2002-15	SP-21-15	SP-21-15	SP-21-15	SP-21-15	SP-21-15	SP-21-15	SP-21-15	SP-21-15
SP-21-16	401-2002-16	SP-21-16	SP-21-16	SP-21-16	SP-21-16	SP-21-16	SP-21-16	SP-21-16	SP-21-16
SP-21-17	401-2002-17	SP-21-17	SP-21-17	SP-21-17	SP-21-17	SP-21-17	SP-21-17	SP-21-17	SP-21-17
SP-21-18	401-2002-18	SP-21-18	SP-21-18	SP-21-18	SP-21-18	SP-21-18	SP-21-18	SP-21-18	SP-21-18
SP-21-19	401-2002-19	SP-21-19	SP-						

Keywords: Health care professionals, and engineering. E-learning, health care professionals, and engineering. E-learning, health care professionals, and engineering.

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Table 7. TAL Metals - Soil/Sediment

Sample ID			SP-1-SOL ID			SP-2-SOL ID			SP-3-SOL ID			SP-4-SOL ID			SP-5-SOL ID		
Lab Sample No.			460-28327-9			460-28327-8			460-28327-7			460-28327-10			460-28327-6		
Sampling Date			6/30/2011 11:15:00 PM			6/30/2011 2:15:00 PM			6/30/2011 9:30:00 AM			6/30/2011 12:00:00 AM			6/30/2011 11:00:00 AM		
Matrix			Solid			Solid			Solid			Solid			Solid		
Dilution Factor																	
Units	Analytical		mg/Kg			mg/Kg			mg/Kg			mg/Kg			mg/Kg		
METALS	Method	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	
Aluminum	6010B	18.6	4000		19.0	4430		17.7	2090		15.7	4170		28.2	6730		
Antimony	6010B	1.1	2.5	U	1.1	2.6	U	1.1	2.4	U	0.95	2.1	U	1.7	3.9	U	
Arsenic	6010B	0.85	1.9		0.90	2.6		0.84	1.4		0.75	2.9		1.3	6.2		
Barium	6010B	1.5	30.1	J	1.6	49.8	J	1.5	19.2	J	1.3	36.5	J	2.3	10.1		
Beryllium	6010B	0.22	0.51	U	0.23	0.52	U	0.21	0.48	U	0.19	0.20	J	0.24	0.77	U	
Cadmium	6010B	0.20	1.3	U	0.20	1.3	U	0.19	1.2	U	0.17	1.1	U	0.30	0.65	J	
Calcium	6010B	33.3	1190	J	34.1	1330		31.7	550	J	28.3	736	J	50.6	3350		
Chromium	6010B	1.5	9.2		1.5	7.1		1.4	4.8		1.3	7.2		2.3	12.3		
Cobalt	6010B	1.6	3.5	J	1.6	6.3	J	1.5	3.0	J	1.3	4.4	J	2.4	7.4	J	
Copper	6010B	1.0	9.8		1.1	6.1	J	0.99	9.6		0.88	15.9		1.6	64.7		
Iron	6010B	13.4	7410		13.8	12700		12.8	7720		11.4	12400		20.4	23400		
Lead	6010B	0.63	44.0		0.65	8.8		0.60	4.3		0.54	6.4		0.56	47.7		
Magnesium	6010B	13.4	1120	J	13.7	1890		12.8	1240		11.4	1910		20.4	2300		
Manganese	6010B	1.4	194		1.5	993		1.4	170		1.2	279		2.2	1680		
Mercury	7471A	0.031	0.046	U	0.028	0.042	U	0.025	0.039		0.024	0.046		0.039	0.60		
Nickel	6010B	0.68	6.2	J	0.69	8.3	J	0.65	6.7	J	0.58	9.3		1.0	14.8	J	
Potassium	6010B	57.1	355	J	58.5	263	J	54.5	247	J	48.5	388	J	86.9	645	J	
Selenium	6010B	1.2	2.5	U	1.2	2.6	U	1.1	2.4	U	1.0	2.1	U	1.8	3.9	U	
Silver	6010B	0.19	2.5	U	0.20	2.6	U	0.18	2.4	U	0.16	2.1	U	0.29	3.9	U	
Sodium	6010B	77.7	1270	U	79.6	1300	U	74.1	1210	U	66.0	1070	U	118	209	J	
Thallium	6010B	1.2	2.5	U	1.3	2.6	U	1.2	2.4	U	1.0	2.1	U	1.9	3.9	U	
Vanadium	6010B	0.66	12.1	J	0.67	13.5		0.63	9.0	J	0.56	13.8		1.0	24.0		
Zinc	6010B	1.2	48.5		1.3	50.4		1.2	37.1		1.1	51.0		1.9	176		

Table 8. Percent Moisture

Sample ID	SP-1-SQA-U	SP-2-SQA-U	SP-3-SQA-U	SP-3A-SQA-U	SP-4-SQA-U
Lab Sample No.	460-28527-4	460-28527-4	460-28527-4	460-28527-4	460-28527-4
Sampling Date	6/30/2011 1:15:00 PM	6/30/2011 2:15:00 PM	6/30/2011 3:00:00 AM	6/30/2011 12:00:00 AM	6/30/2011 11:00:00 AM
Matrix	Solid	Solid	Solid	Solid	Solid
Dilution Factor					
Units	Moisture	Moisture	Moisture	Moisture	Moisture
WT CHEMISTRY	Moisture	Moisture	Moisture	Moisture	Moisture
Percent Moisture (%)	1.6	29.3	21.1	13.6	48.6
Percent Moisture (%)	1.6	29.3	21.1	13.6	48.6

