



TTI Environmental Incorporated
1253 North Church Street
Moorestown, New Jersey 08057
Tel: 856-840-8800
Fax: 856-840-8815

*A Service Disabled Veteran
Owned Small Business*

April 6, 2010

Ms. Kathleen Rogacki
New Jersey Department of Environmental Protection
Bureau of Case Assignment and Initial Notice
401 East State Street
P.O. Box 434
Trenton, New Jersey 08625-0434

RE: IEC Response
Wilson Avenue School
19 Wilson Avenue
Block 2030, Lot 39
Newark, New Jersey 07105
NJDEP Case Nos. 10-04-01-1213-06 and 10-04-05-1248-14
TTI project No. 10-205

Dear Ms. Rogacki;

On March 10, 2010, TTI Environmental, Inc. (TTI) conducted an inspection of a sump located within the basement of the Wilson Avenue School, 19 Wilson Avenue, Newark, NJ. Upon inspection an obvious petroleum odor was apparent in the hallway and in the closet where the sump was located. This sump pump has to be on 24 hours a day in order to prevent the basement from flooding. TTI did not observe any free product within the sump; however a strong odor was identified. TTI was told that students were sent home sick because of the odor. Initial recommendation included performing a vapor intrusion survey and collection of water samples for analysis and to begin action to determine the cause of the impact and to identify the source.

TTI Environmental, Inc. (TTI) collected a water sample from the sump located within the stairwell next to the gym and submitted for Volatile Organics and Semi Volatile Organics analysis. The results were received on March 30, 2010 and the results indicated concentrations of petroleum in excess of New Jersey Department of Environmental Protection (NJDEP) ground water quality standards. In addition, the results of the water sample revealed concentrations above the Vapor Intrusion Guidance Criteria for Benzene. TTI notified the NJDEP of the discharge and received case # 10-04-01-1213-06. Therefore, TTI recommended that a Vapor Intrusion Survey be conducted immediately.

On April 1, 2010 TTI arrived on site and placed a total of four (4) sample canisters for a 24 hour air sample collection. TTI picked up the canisters on April 2, 2010 and submitted them to a NJDEP Certified Laboratory for TO-15 analysis. The four (4) sample canisters were placed in positively biased locations; Gym, Stairwell, Library and Room 122. TTI received the analytical results of the vapor intrusion survey on April 5, 2010 which indicates the indoor air quality is above the action level for Benzene, PCE and 1-4 Dichlorobenzene. TTI recommends that the school be closed until further mitigation and or corrective action has been conducted. Upon the receipt of the Vapor Intrusion results TTI notified the NJDEP of the Immediate Environmental Concern (IEC) condition and received NJDEP IEC case # 10-04-05-1248-14. Attached are two (2) analytical reports, one (1) from the groundwater sample analysis and the other for the Vapor Intrusion Survey results. The results are summarized in the Table 1.0 & 2.0 below and only those compounds detected above the corrective action criteria are presented.



Table 1.0: Sump Water Analytical Results Summary		
Parameter	NJDEP GWQS/Vapor Screening Level (ug/l)	SW-1
<i>Volatile Organics</i>		
Benzene	1/15	260
Toluene	600/310,000	63
Ethylbenzene	700/61,000	110
Total Xylenes	1,000/7,000	263
Acetone	6,000/1,900,000	32

Table 2.0: Indoor Air Quality Data: April 2010										
Location Sampling Data Lab Sample ID	NJDEP Indoor Air Screening		IA-1 Gym 4/2/2010 L1004707-01		IA-2 Stairwell 4/2/2010 L1004707-02		IA-3 Library 4/2/2010 L1004707-03		IA-4 Rm. 122 4/2/2010 L1004707-04	
	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³
	1,4-Dichlorobenzene	0.5	3	0.564	3.39	0.327	1.96	2.29	13.5	ND
Benzene	0.5	2	12.6	40.3	6.73	21.5	0.61	1.95	0.603	1.92
Tetrachloroethene	0.5	3	0.981	6.65	0.692	4.69	ND	ND	0.23	1.56

TTI has informed the Newark Public Schools of these results and as of April 6, 2010 the school has been closed down.

On April 6, 2010, Mr. Ed Putnam of the NJDEP spoke with myself and Mr. Tim Popp, TTI's Director of Consulting Services and the first responder to this situation, and indicated that this case would now be handled as a state funded action. At the suggestion of Mr. Putnam I have partially completed an IEC Response Action Form to document my response to knowledge of an IEC situation. I have not been retained as the LSRP of record for this site. Enclosed also are copies of the laboratory reports for the sump and air samples collected at the site.

Please feel free to contact TTI should you require any additional information. Thank you.

Sincerely;

Perry J. Refolo, CDG
 Senior Environmental Project Manager
 LSRP #509877

Encl: IEC Response Action Form
 Laboratory Reports



New Jersey Department of Environmental Protection
 Site Remediation Program

**IMMEDIATE ENVIRONMENTAL CONCERN (IEC) –
 RESPONSE ACTION FORM**

Date Stamp
 (For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Wilson Avenue School

List all AKAs: _____

Street Address: 19 Wilson Avenue

Municipality: Newark (Township, Borough or City)

County: Essex Zip Code: 07105

Mailing Address if different than street address: _____

Program Interest (PI) Number(s): _____ Case Tracking Number(s): _____

Incident Number(s)/Com. Center Number(s): 10-04-01-1213-06, 10-04-05-1248-14

SECTION B. IDENTIFY THE TYPE(S) OF IEC BEING REPORTED (Check All That Apply)

- Potable Water
- Vapor Intrusion (If checked, complete Section E below.)
- Direct Contact
- Essential Utility Disruption

SECTION C. TYPE OF SUBMITTAL

- Immediate Notification
 1. Date of initial IEC Identification: 04/05/2010
 2. Date(s) of Department Hotline Notification (Required) : 04/05/2010
 3. Date(s) of Other Department Notification: _____ Name/Position _____
- 5-Day Notification/Interim Response Action
 1. Date of Interim Response Action: 04/02/2010
 2. Date of Health Department Notification: _____ Contact Name/Agency _____
 3. Date of Spreadsheet/Map Submittal to Department: 04/06/2010

NOTE: Complete Section D below.
- 120-Day Reporting – IEC Engineered System Response Action Report

Has contaminant source (Section D) information changed from prior submittal? Yes No

If "Yes," complete Section D below.

Note: Attach the IEC Engineered System Response Action Report
- 270-Day Reporting – IEC Source Control Report
 1. Is the focused RI for control of the source of contamination that caused the IEC condition complete? Yes No
 2. If "No," explain _____
 3. Has source control been initiated at this site? Yes No
 4. If "No," explain _____
 5. Date of IEC source control initiation following completion of focused RI: _____
 6. Has contaminant source (Section D) information changed from prior submittal? Yes No

If "Yes," complete Section D below.

Note: Attach IEC Source Control Report.

SECTION D. CONTAMINANT SOURCE (Check all that apply and attach applicable justification.)

- The source of the contamination known
- Contamination causing the IEC Condition is found onsite
- The contamination is a contaminant of concern onsite
- The contamination causing the IEC impact is fully documented to be from an upgradient/offsite source based on completion of a PA/SI and installation of upgradient monitoring well(s) showing higher levels of contamination migrating onto the site

SECTION E. VAPOR INTRUSION PATHWAY EVALUATION

What condition triggered the VI Investigation? (check all that apply)

- Odors in the structure
- Structure within 100' of free product (any type) or dissolved ground water contamination (for non-petroleum compounds) above ground water-to-indoor air screening Levels. List contaminant(s): _____
- Structure within 30' of petroleum related dissolved ground water contamination above ground water-to-indoor air screening levels. List contaminant(s): Benzene at 260 ppb in water collected from sump in basement.
- Other: Explain: _____
- Free Product Type: _____

1. Subslab soil gas samples are required to evaluate the VI pathway unless prevented from being collected based on high water table or access problems. If not collected, explain: No subslab collected. High water table floods basement.
2. Has a complete ground water-to-indoor air pathway been established? Yes No
Explain either answer: Pet odor ID in sump area.
3. Have any contaminants above residential screening levels been linked conclusively to indoor sources based on weight of evidence approach (see VIG)? Yes No
Explain either answer: No indoor on-site sources found.

Attach indoor air survey and site sampling location maps.

SECTION F. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATION

Full Legal Name of the Person Responsible for Conducting the Remediation: Newark Public Schools

Representative First Name: _____ Representative Last Name: _____

Title: _____

Phone Number: _____ Ext: _____ Fax: _____

Mailing Address: 2 Cedar Street

City/Town: Newark State: NJ Zip Code: 07102

Email Address: _____

Developer Certification Included or Filed _____ Date of Filing _____

This certification shall be signed by the person responsible for conducting the remediation who is submitting this notification in accordance with SRRA Section 16 d. and Section 30 b.2.

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Signature: _____ Date: _____
Name/Title: _____

SECTION G. LICENSED SITE REMEDIATION PROFESSIONAL INFORMATION AND STATEMENT

LSRP ID Number: 509877

First Name: Perry

Last Name: Refolo

Phone Number: (856) 840-8800

Ext: 32

Fax: (856) 840-8815

Mailing Address: 1253 N. Church Street

City/Town: Moorestown

State: NJ

ZIP Code: 08057

Email Address: perryr@ttienv.com

This statement shall be signed by the LSRP who is submitting this notification in accordance with SRRA Section 16 d. and Section 30 b.2.

I certify that I am a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C to conduct business in New Jersey. As the Licensed Site Remediation Professional of record for this remediation, I:

[SELECT ONE OR BOTH OF THE FOLLOWING AS APPLICABLE]:

directly oversaw and supervised all of the referenced remediation, and/or

personally reviewed and accepted all of the referenced remediation presented herein.

I believe that the information contained herein, and including all attached documents, is true, accurate and complete.

It is my independent professional judgment and opinion that the remediation conducted at this site, as reflected in this submission to the Department, conforms to, and is consistent with, the remediation requirements in N.J.S.A. 58:10C-14.

My conduct and decisions in this matter were made upon the exercise of reasonable care and diligence, and by applying the knowledge and skill ordinarily exercised by licensed site remediation professionals practicing in good standing, in accordance with N.J.S.A. 58:10C-16, in the State of New Jersey at the time I performed these professional services.

I am aware pursuant to N.J.S.A. 58:10C-17 that for purposely, knowingly or recklessly submitting false statement, representation or certification in any document or information submitted to the board or Department, etc., that there are significant civil, administrative and criminal penalties, including license revocation or suspension, fines and being punished by imprisonment for conviction of a crime of the third degree.

LSRP Signature: _____

Date: 4/7/10

LSRP Name/Title: Perry J. Refolo, Sr Env Proj Mgr

Company Name: TTI Environmental Inc.



ANALYTICAL REPORT

Lab Number:	L1004172
Client:	TTI Environmental, Inc. 1253 North Church Street Moorestown, NJ 08057
ATTN:	Tim Popp
Project Name:	NEWARK PUBLIC SCHOOLS
Project Number:	10-205
Report Date:	03/30/10

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: NEWARK PUBLIC SCHOOLS
Project Number: 10-205

Lab Number: L1004172
Report Date: 03/30/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1004172-01	SW-1	NEWARK, NJ	03/22/10 14:25

Project Name: NEWARK PUBLIC SCHOOLS
Project Number: 10-205

Lab Number: L1004172
Report Date: 03/30/10

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

Volatile Organics

L1004172-01 has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

Semivolatile Organics by SIM

UJ = The data was evaluated down to the method detection limit for the specified analytes.

L1004172-01 has elevated detection limits due to the dilution required by the sample matrix.

Semivolatile Organics

UJ = The data was evaluated down to the method detection limit for the specified analytes.

The WG405304-3 LCSD recovery, associated with L1004172-01, was above the acceptance criteria for 2,4-Dinitrotoluene (100%); however, the associated sample was non-detect for this target compound. The results of the original analysis are reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Title: Technical Director/Representative

Date: 03/30/10

ORGANICS

VOLATILES

Project Name: NEWARK PUBLIC SCHOOLS**Lab Number:** L1004172**Project Number:** 10-205**Report Date:** 03/30/10**SAMPLE RESULTS**

Lab ID: L1004172-01
Client ID: SW-1
Sample Location: NEWARK, NJ
Matrix: Water
Analytical Method: 1,8260B
Analytical Date: 03/29/10 10:06
Analyst: MM

Date Collected: 03/22/10 14:25
Date Received: 03/23/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab					
Methylene chloride	ND		ug/l	15	5
1,1-Dichloroethane	ND		ug/l	3.8	5
Chloroform	ND		ug/l	3.8	5
Carbon tetrachloride	ND		ug/l	2.5	5
1,2-Dichloropropane	ND		ug/l	5.0	5
Dibromochloromethane	ND		ug/l	2.5	5
1,1,2-Trichloroethane	ND		ug/l	3.8	5
Tetrachloroethene	ND		ug/l	2.5	5
Chlorobenzene	ND		ug/l	2.5	5
1,2-Dichloroethane	ND		ug/l	2.5	5
1,1,1-Trichloroethane	ND		ug/l	2.5	5
Bromodichloromethane	ND		ug/l	2.5	5
trans-1,3-Dichloropropene	ND		ug/l	2.5	5
cis-1,3-Dichloropropene	ND		ug/l	2.5	5
Bromoform	ND		ug/l	10	5
1,1,2,2-Tetrachloroethane	ND		ug/l	2.5	5
Benzene	260		ug/l	2.5	5
Toluene	63		ug/l	3.8	5
Ethylbenzene	110		ug/l	2.5	5
Chloromethane	ND		ug/l	12	5
Bromomethane	ND		ug/l	5.0	5
Vinyl chloride	ND		ug/l	5.0	5
Chloroethane	ND		ug/l	5.0	5
1,1-Dichloroethene	ND		ug/l	2.5	5
trans-1,2-Dichloroethene	ND		ug/l	3.8	5
Trichloroethene	ND		ug/l	2.5	5
p/m-Xylene	180		ug/l	5.0	5
o-Xylene	83		ug/l	5.0	5
cis-1,2-Dichloroethene	ND		ug/l	2.5	5
Styrene	ND		ug/l	5.0	5

Project Name: NEWARK PUBLIC SCHOOLS**Lab Number:** L1004172**Project Number:** 10-205**Report Date:** 03/30/10**SAMPLE RESULTS**

Lab ID: L1004172-01
 Client ID: SW-1
 Sample Location: NEWARK, NJ

Date Collected: 03/22/10 14:25
 Date Received: 03/23/10
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab					
Acetone	32		ug/l	25	5
Carbon disulfide	ND		ug/l	25	5
2-Butanone	ND		ug/l	25	5
4-Methyl-2-pentanone	ND		ug/l	25	5
2-Hexanone	ND		ug/l	25	5

Tentatively Identified Compounds

Isobutane	130	J	ug/l		5
Unknown Alkane	500	J	ug/l		5
Pentane	160	J	ug/l		5
Unknown Hydrocarbon	98	J	ug/l		5
2-Pentene	83	J	ug/l		5
Unknown Hydrocarbon	170	J	ug/l		5
Unknown Hydrocarbon	290	J	ug/l		5
Unknown Hydrocarbon	78	J	ug/l		5
Unknown Substituted Benzene	180	J	ug/l		5
Unknown Hydrocarbon	92	J	ug/l		5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	98		70-130

Project Name: NEWARK PUBLIC SCHOOLS
Project Number: 10-205

Lab Number: L1004172
Report Date: 03/30/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 03/29/10 08:59
Analyst: MM

Parameter	Result	Qualifier	Units	RDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG406000-3				
Methylene chloride	ND		ug/l	3.0
1,1-Dichloroethane	ND		ug/l	0.75
Chloroform	ND		ug/l	0.75
Carbon tetrachloride	ND		ug/l	0.50
1,2-Dichloropropane	ND		ug/l	1.0
Dibromochloromethane	ND		ug/l	0.50
1,1,2-Trichloroethane	ND		ug/l	0.75
Tetrachloroethene	ND		ug/l	0.50
Chlorobenzene	ND		ug/l	0.50
1,2-Dichloroethane	ND		ug/l	0.50
1,1,1-Trichloroethane	ND		ug/l	0.50
Bromodichloromethane	ND		ug/l	0.50
trans-1,3-Dichloropropene	ND		ug/l	0.50
cis-1,3-Dichloropropene	ND		ug/l	0.50
Bromoform	ND		ug/l	2.0
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50
Benzene	ND		ug/l	0.50
Toluene	ND		ug/l	0.75
Ethylbenzene	ND		ug/l	0.50
Chloromethane	ND		ug/l	2.5
Bromomethane	ND		ug/l	1.0
Vinyl chloride	ND		ug/l	1.0
Chloroethane	ND		ug/l	1.0
1,1-Dichloroethene	ND		ug/l	0.50
trans-1,2-Dichloroethene	ND		ug/l	0.75
Trichloroethene	ND		ug/l	0.50
p/m-Xylene	ND		ug/l	1.0
o-Xylene	ND		ug/l	1.0
cis-1,2-Dichloroethene	ND		ug/l	0.50
Styrene	ND		ug/l	1.0
Acetone	ND		ug/l	5.0

Project Name: NEWARK PUBLIC SCHOOLS
Project Number: 10-205

Lab Number: L1004172
Report Date: 03/30/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 03/29/10 08:59
Analyst: MM

Parameter	Result	Qualifier	Units	RDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG406000-3				
Carbon disulfide	ND		ug/l	5.0
2-Butanone	ND		ug/l	5.0
4-Methyl-2-pentanone	ND		ug/l	5.0
2-Hexanone	ND		ug/l	5.0

Tentatively Identified Compounds

Unknown	14	J	ug/l
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Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	93		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	98		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEWARK PUBLIC SCHOOLS

Lab Number: L1004172

Project Number: 10-205

Report Date: 03/30/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG406000-1 WG406000-2								
Chlorobenzene	87		82		75-130	6		20
Benzene	91		84		76-127	8		20
Toluene	87		80		76-125	8		20
1,1-Dichloroethene	96		86		61-145	11		20
Trichloroethene	86		80		71-120	7		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	95		95		70-130
Toluene-d8	99		100		70-130
4-Bromofluorobenzene	102		99		70-130
Dibromofluoromethane	101		98		70-130

SEMIVOLATILES

Project Name: NEWARK PUBLIC SCHOOLS**Lab Number:** L1004172**Project Number:** 10-205**Report Date:** 03/30/10**SAMPLE RESULTS**

Lab ID: L1004172-01
Client ID: SW-1
Sample Location: NEWARK, NJ
Matrix: Water
Analytical Method: 1,8270C
Analytical Date: 03/26/10 13:22
Analyst: HL

Date Collected: 03/22/10 14:25
Date Received: 03/23/10
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 03/24/10 22:34

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab					
Acenaphthene	ND		ug/l	1.0	5
2-Chloronaphthalene	ND		ug/l	1.0	5
Fluoranthene	ND		ug/l	1.0	5
Hexachlorobutadiene	ND		ug/l	2.5	5
Naphthalene	29		ug/l	1.0	5
2-Methylnaphthalene	4.9		ug/l	1.0	5
Benzo(a)anthracene	ND		ug/l	0.50	5
Benzo(a)pyrene	ND		ug/l	0.50	5
Benzo(b)fluoranthene	ND		ug/l	1.0	5
Benzo(k)fluoranthene	ND		ug/l	1.0	5
Chrysene	ND		ug/l	1.0	5
Acenaphthylene	ND		ug/l	1.0	5
Anthracene	ND		ug/l	1.0	5
Benzo(ghi)perylene	ND		ug/l	1.0	5
Fluorene	ND		ug/l	1.0	5
Phenanthrene	ND		ug/l	1.0	5
Dibenzo(a,h)anthracene	ND		ug/l	1.0	5
Indeno(1,2,3-cd)Pyrene	ND		ug/l	1.0	5
Pyrene	ND		ug/l	1.0	5
Hexachlorobenzene	ND		ug/l	4.0	5
Hexachloroethane	ND		ug/l	4.0	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	87		23-120
2-Fluorobiphenyl	80		15-120
4-Terphenyl-d14	91		33-120

Project Name: NEWARK PUBLIC SCHOOLS**Lab Number:** L1004172**Project Number:** 10-205**Report Date:** 03/30/10**SAMPLE RESULTS**

Lab ID: L1004172-01
Client ID: SW-1
Sample Location: NEWARK, NJ
Matrix: Water
Analytical Method: 1,8270C
Analytical Date: 03/26/10 17:03
Analyst: PS

Date Collected: 03/22/10 14:25
Date Received: 03/23/10
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 03/24/10 22:30

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab					
1,2,4-Trichlorobenzene	ND		ug/l	5.0	1
Bis(2-chloroethyl)ether	ND		ug/l	5.0	1
1,2-Dichlorobenzene	ND		ug/l	5.0	1
1,3-Dichlorobenzene	ND		ug/l	5.0	1
1,4-Dichlorobenzene	ND		ug/l	5.0	1
2,4-Dinitrotoluene	ND		ug/l	6.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	1
4-Chlorophenyl phenyl ether	ND		ug/l	5.0	1
Bis(2-chloroisopropyl)ether	ND		ug/l	5.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	1
Hexachlorocyclopentadiene	ND		ug/l	30	1
Isophorone	ND		ug/l	5.0	1
Nitrobenzene	ND		ug/l	5.0	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	10	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	1
Bis(2-Ethylhexyl)phthalate	ND	UJ	ug/l	3.0	1
Butyl benzyl phthalate	ND		ug/l	5.0	1
Di-n-butylphthalate	ND		ug/l	5.0	1
Di-n-octylphthalate	ND		ug/l	5.0	1
Diethyl phthalate	ND		ug/l	5.0	1
Dimethyl phthalate	ND		ug/l	5.0	1
4-Chloroaniline	ND		ug/l	5.0	1
2-Nitroaniline	ND		ug/l	5.0	1
Dibenzofuran	ND		ug/l	5.0	1
Carbazole	ND		ug/l	5.0	1
4-Bromophenyl phenyl ether	ND		ug/l	5.0	1
3,3'-Dichlorobenzidine	ND	UJ	ug/l	30	1

Project Name: NEWARK PUBLIC SCHOOLS

Lab Number: L1004172

Project Number: 10-205

Report Date: 03/30/10

SAMPLE RESULTS

Lab ID: L1004172-01
 Client ID: SW-1
 Sample Location: NEWARK, NJ

Date Collected: 03/22/10 14:25
 Date Received: 03/23/10
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Semivolatile Organics by GC/MS - Westborough Lab

Tentatively Identified Compounds

Unknown C7H8 Isomer	22	J	ug/l		1
Unknown C8H10 Isomer	50	J	ug/l		1
Unknown C8H10 Isomer	43	J	ug/l		1
Unknown C9H12 Isomer	9.2	J	ug/l		1
Unknown Substituted Benzene	10	J	ug/l		1
Unknown Substituted Benzene	6.9	J	ug/l		1
Unknown Substituted Benzene	20	J	ug/l		1
Unknown Substituted Benzene	53	J	ug/l		1
Unknown Substituted Benzene	22	J	ug/l		1
Unknown C9H10 Isomer	27	J	ug/l		1
Unknown C10H14 Isomer	7.7	J	ug/l		1
Unknown C10H14 Isomer	6.7	J	ug/l		1
Unknown Substituted Benzene	18	J	ug/l		1
Unknown C10H12 Isomer	13	J	ug/l		1
Naphthalene, 1-methyl-	7.0	J	ug/l		1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	64		23-120
2-Fluorobiphenyl	77		15-120
4-Terphenyl-d14	98		33-120

Project Name: NEWARK PUBLIC SCHOOLS
Project Number: 10-205

Lab Number: L1004172
Report Date: 03/30/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C
Analytical Date: 03/26/10 10:19
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 03/24/10 22:30

Parameter	Result	Qualifier	Units	RDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG405304-1				
1,2,4-Trichlorobenzene	ND		ug/l	5.0
Bis(2-chloroethyl)ether	ND		ug/l	5.0
1,2-Dichlorobenzene	ND		ug/l	5.0
1,3-Dichlorobenzene	ND		ug/l	5.0
1,4-Dichlorobenzene	ND		ug/l	5.0
2,4-Dinitrotoluene	ND		ug/l	6.0
2,6-Dinitrotoluene	ND		ug/l	5.0
4-Chlorophenyl phenyl ether	ND		ug/l	5.0
Bis(2-chloroisopropyl)ether	ND		ug/l	5.0
Bis(2-chloroethoxy)methane	ND		ug/l	5.0
Hexachlorocyclopentadiene	ND		ug/l	30
Isophorone	ND		ug/l	5.0
Nitrobenzene	ND		ug/l	5.0
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	10
n-Nitrosodi-n-propylamine	ND		ug/l	5.0
Bis(2-Ethylhexyl)phthalate	ND	UJ	ug/l	3.0
Butyl benzyl phthalate	ND		ug/l	5.0
Di-n-butylphthalate	ND		ug/l	5.0
Di-n-octylphthalate	ND		ug/l	5.0
Diethyl phthalate	ND		ug/l	5.0
Dimethyl phthalate	ND		ug/l	5.0
4-Chloroaniline	ND		ug/l	5.0
2-Nitroaniline	ND		ug/l	5.0
Dibenzofuran	ND		ug/l	5.0
Carbazole	ND		ug/l	5.0
4-Bromophenyl phenyl ether	ND		ug/l	5.0
3,3'-Dichlorobenzidine	ND	UJ	ug/l	30

Project Name: NEWARK PUBLIC SCHOOLS
Project Number: 10-205

Lab Number: L1004172
Report Date: 03/30/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C
 Analytical Date: 03/26/10 10:19
 Analyst: PS

Extraction Method: EPA 3510C
 Extraction Date: 03/24/10 22:30

Parameter	Result	Qualifier	Units	RDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG405304-1				

Tentatively Identified Compounds

No Tentatively Identified Compounds ND ug/l

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	61		23-120
2-Fluorobiphenyl	72		15-120
4-Terphenyl-d14	107		33-120

Project Name: NEWARK PUBLIC SCHOOLS
Project Number: 10-205

Lab Number: L1004172
Report Date: 03/30/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C
Analytical Date: 03/26/10 08:42
Analyst: HL

Extraction Method: EPA 3510C
Extraction Date: 03/24/10 22:34

Parameter	Result	Qualifier	Units	RDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG405305-1				
Acenaphthene	ND		ug/l	0.20
2-Chloronaphthalene	ND		ug/l	0.20
Fluoranthene	ND		ug/l	0.20
Hexachlorobutadiene	ND		ug/l	0.50
Naphthalene	ND		ug/l	0.20
2-Methylnaphthalene	ND		ug/l	0.20
Benzo(a)anthracene	ND		ug/l	0.10
Benzo(a)pyrene	ND		ug/l	0.10
Benzo(b)fluoranthene	ND		ug/l	0.20
Benzo(k)fluoranthene	ND		ug/l	0.20
Chrysene	ND		ug/l	0.20
Acenaphthylene	ND		ug/l	0.20
Anthracene	ND		ug/l	0.20
Benzo(ghi)perylene	ND		ug/l	0.20
Fluorene	ND		ug/l	0.20
Phenanthrene	ND		ug/l	0.20
Dibenzo(a,h)anthracene	ND		ug/l	0.20
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.20
Pyrene	ND		ug/l	0.20
Pentachlorophenol	ND	UJ	ug/l	0.30
Hexachlorobenzene	ND	UJ	ug/l	0.02
Hexachloroethane	ND		ug/l	0.80

Project Name: NEWARK PUBLIC SCHOOLS

Lab Number: L1004172

Project Number: 10-205

Report Date: 03/30/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C
 Analytical Date: 03/26/10 08:42
 Analyst: HL

Extraction Method: EPA 3510C
 Extraction Date: 03/24/10 22:34

Parameter	Result	Qualifier	Units	RDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG405305-1				

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		21-120
Phenol-d6	29		10-120
Nitrobenzene-d5	69		23-120
2-Fluorobiphenyl	69		15-120
2,4,6-Tribromophenol	80		10-120
4-Terphenyl-d14	84		33-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEWARK PUBLIC SCHOOLS

Lab Number: L1004172

Project Number: 10-205

Report Date: 03/30/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG405304-2 WG405304-3								
Acenaphthene	69		75		46-118	8		30
1,2,4-Trichlorobenzene	55		61		39-98	10		30
2-Chloronaphthalene	80		87		40-140	8		30
1,2-Dichlorobenzene	54		62		40-140	14		30
1,4-Dichlorobenzene	53		57		36-97	7		30
2,4-Dinitrotoluene	96		100	Q	24-96	4		30
2,6-Dinitrotoluene	85		90		40-140	6		30
Fluoranthene	93		100		40-140	7		30
4-Chlorophenyl phenyl ether	73		78		40-140	7		30
n-Nitrosodi-n-propylamine	65		70		41-116	7		30
Butyl benzyl phthalate	91		96		40-140	5		30
Anthracene	85		91		40-140	7		30
Pyrene	86		92		26-127	7		30

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Nitrobenzene-d5	71		73		23-120
2-Fluorobiphenyl	84		86		15-120
4-Terphenyl-d14	100		104		33-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEWARK PUBLIC SCHOOLS

Lab Number: L1004172

Project Number: 10-205

Report Date: 03/30/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG405305-2 WG405305-3								
Acenaphthene	67		66		37-111	2		40
2-Chloronaphthalene	83		82		40-140	1		40
Fluoranthene	88		92		40-140	4		40
Anthracene	73		81		40-140	10		40
Pyrene	86		90		26-127	5		40
Pentachlorophenol	47		50		9-103	6		40

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
2-Fluorophenol	43		41		21-120
Phenol-d6	31		29		10-120
Nitrobenzene-d5	76		73		23-120
2-Fluorobiphenyl	70		67		15-120
2,4,6-Tribromophenol	83		85		10-120
4-Terphenyl-d14	85		83		33-120

Project Name: NEWARK PUBLIC SCHOOLS**Lab Number:** L1004172**Project Number:** 10-205**Report Date:** 03/30/10**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis
L1004172-01A	Vial HCl preserved	A	N/A	2.7	Y	Absent	NJ-8260(14)
L1004172-01B	Vial HCl preserved	A	N/A	2.7	Y	Absent	NJ-8260(14)
L1004172-01C	Vial HCl preserved	A	N/A	2.7	Y	Absent	NJ-8260(14)
L1004172-01D	Amber 1000ml unpreserved	A	7	2.7	Y	Absent	NJ-8270(7),NJ-8270SIM(7)
L1004172-01E	Amber 1000ml unpreserved	A	7	2.7	Y	Absent	NJ-8270(7),NJ-8270SIM(7)

*Hold days indicated by values in parentheses

Project Name: NEWARK PUBLIC SCHOOLS
Project Number: 10-205

Lab Number: L1004172
Report Date: 03/30/10

GLOSSARY

Acronyms

- EPA** - Environmental Protection Agency.
- LCS** - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
- LCS D** - Laboratory Control Sample Duplicate: Refer to LCS.
- MS** - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
- MS D** - Matrix Spike Sample Duplicate: Refer to MS.
- NA** - Not Applicable.
- NC** - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
- NI** - Not Ignitable.
- RDL** - Reported Detection Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
- RPD** - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RDL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reported detection limit (RDL) for the sample.

Report Format: Data Usability Report



Project Name: NEWARK PUBLIC SCHOOLS
Project Number: 10-205

Lab Number: L1004172
Report Date: 03/30/10

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Woods Hole Labs shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Woods Hole Labs.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certificate/Approval Program Summary

Last revised March 16, 2010 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. **NELAP Accredited Solid Waste/Soil.**

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Haloacetic Acids, Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB).)

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Calcium Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP (Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH.)

Solid Waste/Soil (Inorganic Parameters: Lead in Paint, pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), Reactivity. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP (Silvex), Volatile Organics, Acid Extractables (Phenols), 3,3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9221E, 9222B, 9222D, 9223B, EPA 180.1, 300.0, 353.2, SM2130B, 2320B, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1. Organic Parameters: 504.1, 524.2, SM 6251B.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500CI-D, 4500CI-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B.5, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water

Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl)

(EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, SM4500H-B.

Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics)

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), 314.0, 332.

Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; MF-SM9222D

Non-Potable Water

Inorganic Parameters: (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn)

(EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Ti,Tl, V,Zn,Ca,Mg,Na,K)

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables, 600/4-81-045-PCB-Oil

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 120.1, 300.0, 314.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic Parameters: 504.1, 524.2, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH3-H, 4500NH3-E, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-04-1-C, LACHAT 10-107-04-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. Organic Parameters: SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, SM2120B, 2510B, 5310C, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500CI-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 1312, 3540C, 3545, 3550B, 3580A, 5035L, 5035H, NJ OQA-QAM-025 Rev.7.)

New York Department of Health Certificate/Lab ID: 11148. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, EPA 120.1, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, LACHAT 10-117-07-1A or B, SM4500CI-E, 4500F-C, SM15 426C, EPA 350.1, LACHAT 10-107-06-1-B, SM4500NH3-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, SM4500-CN-E LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. *Organic Parameters: MA-EPH, MA-VPH.***Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. *NELAP Accredited.***

Non-Potable Water (Organic Parameters: EPA 3510C, 5030B, 625, 624. 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, 1311, 3050B, 3051, 6010B, EPA 7.3.3.2, EPA 7.3.4.2, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065. Organic Parameters: 3540C, 3545, 3580A, 5035, 8021B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. *NELAP Accredited via NY-DOH.*

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NY-DOH Certificate for Potable and Non-Potable Water.

Texas Commission on Environmental Quality Certificate/Lab ID: T104704476-09-1. NELAP Accredited.

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S²⁻ D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Utah Department of Health Certificate/Lab ID: AAMA. NELAP Accredited.

Non-Potable Water (Inorganic Parameters: Chloride EPA 300.0)

Department of Defense Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 9251, 9038, 350.1, 353.2, 351.1, 314, 120.1, 9050A, 410.4, 9060, 1664, 420.1, LACHAT 10-107-06-1-B, SM 4500CN-E, 4500H-B, 4500CL-E, 4500F-BC, 4500SO4-E, 426C, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S2-AD, 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8330, 625, 8082, 8151A, 8081A, 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9040B, 9045C, 9065, 420.1, 9012A, 6860, 1311, 1312, 3050B, 9030B, 3051, 9010B, 3540C, SM 510ABC, 4500CN-CE, 2540G, SW-846 7.3, Organic Parameters: EPA 8260B, 8270C, 8330, 8082, 8081A, 8151A, 3545, 3546, 3580, 5035.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **EPA 8260B**: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A**: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C**: Methyl naphthalene, Dimethyl naphthalene, Total Methyl naphthalenes, Total Dimethyl naphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625**: 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.



WESTBORO, MA
TEL: 508-898-9220
FAX: 508-898-9193

MANSFIELD, MA
TEL: 508-822-9300
FAX: 508-822-3288

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd In Lab: 3/23/10

ALPHA Job #: L1004172

Project Information

Project Name: Newark Public Schools

Project Location: Newark, NJ

Project #: 10-205

Project Manager: Tim Popp

ALPHA Quote #:

Report Information - Data Deliverables

FAX EMAIL
 ADEX Add'l Deliverables

Billing Information

Same as Client info PO #: 5983

Client Information

Client: TTI
Address: 1253 N. Church St.
Maddestown, NJ

Phone: 856-840-8800 x 24

Fax: 856-840-8815

Email: TimP@TTIENV.COM

These samples have been previously analyzed by Alpha

Turn-Around Time

Standard RUSH (only confirmed if pre-approved!)

Date Due: 3/30/10 Time:

Regulatory Requirements/Report Limits

State / Fed Program: Criteria: GWQC

Other Project Specific Requirements/Comments/Detection Limits:

ANALYSIS	TOTAL # BOTTLES	SAMPLE HANDLING	
		Filtration	
VOC+10		<input type="checkbox"/> Done	
BLN+15		<input type="checkbox"/> Not needed	
SIM		<input type="checkbox"/> Lab to do	
		<input type="checkbox"/> Lab to do	
		(Please specify below)	
		Sample Specific Comments	

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials
		Date	Time		
04172.1	SW-1	3/22/10	2:25 pm	Aqueous	KMK

Container Type	
Preservative	

Relinquished By:	Date/Time	Received By:	Date/Time
<i>Justin L. Keenan</i>	3/23/10	<i>Keenan</i>	3-23-10/13108
<i>Swadlow</i>	3-23-10/1502	<i>Swadlow</i>	3/23/10 1502
<i>Thurndell</i>	3/23/10 1910	<i>Thurndell</i>	3/23/10 1910
	3/23/10 2200		3/23/10 2200

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.



ANALYTICAL REPORT

Lab Number:	L1004707
Client:	TTI Environmental, Inc. 1253 North Church Street Moorestown, NJ 08057
ATTN:	Tim Popp
Project Name:	NPS
Project Number:	5983
Report Date:	04/05/10

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1004707-01	IA-1	WILSON AVE.	04/01/10 11:24
L1004707-02	IA-2	WILSON AVE.	04/01/10 11:28
L1004707-03	IA-3	WILSON AVE.	04/01/10 11:31
L1004707-04	IA-4	WILSON AVE.	04/01/10 11:33

Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEX data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

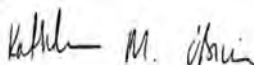
Volatile Organics in Air (Low Level)

L1004707-01, -02 and the associated duplicate WG406687-5: The presence of Acetone could not be determined in this sample due to non-target compounds interfering with the identification and quantification of this compound.

L1004707-03 and -04: results for Acetone should be considered estimated due to co-elution with a non-target peak.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Title: Technical Director/Representative

Date: 04/05/10

AIR

Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

SAMPLE RESULTS

Lab ID: L1004707-01
 Client ID: IA-1
 Sample Location: WILSON AVE.
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 04/03/10 17:01
 Analyst: RY

Date Collected: 04/01/10 11:24
 Date Received: 04/02/10
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab						
1,1,1-Trichloroethane	ND	0.200	ND	1.09		1
1,1,2,2-Tetrachloroethane	ND	0.200	ND	1.37		1
1,1,2-Trichloroethane	ND	0.200	ND	1.09		1
1,1-Dichloroethane	ND	0.200	ND	0.809		1
1,1-Dichloroethene	ND	0.200	ND	0.792		1
1,2,4-Trichlorobenzene	ND	0.200	ND	1.48		1
1,2,4-Trimethylbenzene	0.602	0.200	2.96	0.982		1
1,2-Dibromoethane	ND	0.200	ND	1.54		1
1,2-Dichlorobenzene	ND	0.200	ND	1.20		1
1,2-Dichloroethane	ND	0.200	ND	0.809		1
1,2-Dichloropropane	ND	0.200	ND	0.924		1
1,3,5-Trimethylbenzene	ND	0.200	ND	0.982		1
1,3-Butadiene	ND	0.200	ND	0.442		1
1,3-Dichlorobenzene	ND	0.200	ND	1.20		1
1,4-Dichlorobenzene	0.564	0.200	3.39	1.20		1
2,2,4-Trimethylpentane	0.216	0.200	1.01	0.934		1
2-Butanone	0.665	0.200	1.96	0.589		1
3-Chloropropene	ND	0.200	ND	0.626		1
4-Ethyltoluene	ND	0.200	ND	0.982		1
Acetone	ND	1.00	ND	2.37		1
Benzene	12.6	0.200	40.3	0.638		1
Bromodichloromethane	ND	0.200	ND	1.34		1
Bromoform	ND	0.200	ND	2.06		1
Bromomethane	ND	0.200	ND	0.776		1
Carbon disulfide	ND	0.200	ND	0.622		1



Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

SAMPLE RESULTS

Lab ID: L1004707-01
 Client ID: IA-1
 Sample Location: WILSON AVE.

Date Collected: 04/01/10 11:24
 Date Received: 04/02/10
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab						
Carbon tetrachloride	ND	0.200	ND	1.26		1
Chlorobenzene	ND	0.200	ND	0.920		1
Chloroethane	ND	0.200	ND	0.527		1
Chloroform	ND	0.200	ND	0.976		1
Chloromethane	0.684	0.200	1.41	0.413		1
cis-1,2-Dichloroethene	ND	0.200	ND	0.792		1
cis-1,3-Dichloropropene	ND	0.200	ND	0.907		1
Cyclohexane	0.881	0.200	3.03	0.688		1
Dibromochloromethane	ND	0.200	ND	1.70		1
Dichlorodifluoromethane	0.620	0.200	3.06	0.988		1
Ethylbenzene	0.739	0.200	3.21	0.868		1
Freon-113	ND	0.200	ND	1.53		1
Freon-114	ND	0.200	ND	1.40		1
Hexachlorobutadiene	ND	0.200	ND	2.13		1
Methylene chloride	ND	0.500	ND	1.74		1
4-Methyl-2-pentanone	ND	0.200	ND	0.819		1
Methyl tert butyl ether	0.239	0.200	0.861	0.720		1
p/m-Xylene	1.64	0.400	7.09	1.74		1
o-Xylene	0.396	0.200	1.72	0.868		1
Heptane	0.402	0.200	1.65	0.819		1
n-Hexane	0.892	0.200	3.14	0.704		1
Styrene	ND	0.200	ND	0.851		1
Tetrachloroethene	0.981	0.200	6.65	1.36		1
Toluene	1.83	0.200	6.90	0.753		1
trans-1,2-Dichloroethene	ND	0.200	ND	0.792		1
trans-1,3-Dichloropropene	ND	0.200	ND	0.907		1
Trichloroethene	ND	0.200	ND	1.07		1
Trichlorofluoromethane	0.384	0.200	2.16	1.12		1



Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

SAMPLE RESULTS

Lab ID: L1004707-01
 Client ID: IA-1
 Sample Location: WILSON AVE.

Date Collected: 04/01/10 11:24
 Date Received: 04/02/10
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab						
Vinyl bromide	ND	0.200	ND	0.874		1
Vinyl chloride	ND	0.200	ND	0.511		1
2-Chlorotoluene	ND	0.200	ND	1.03		1
Tertiary butyl Alcohol	ND	0.500	ND	1.52		1



Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

SAMPLE RESULTS

Lab ID: L1004707-02
 Client ID: IA-2
 Sample Location: WILSON AVE.
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 04/03/10 17:39
 Analyst: RY

Date Collected: 04/01/10 11:28
 Date Received: 04/02/10
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab						
1,1,1-Trichloroethane	ND	0.200	ND	1.09		1
1,1,2,2-Tetrachloroethane	ND	0.200	ND	1.37		1
1,1,2-Trichloroethane	ND	0.200	ND	1.09		1
1,1-Dichloroethane	ND	0.200	ND	0.809		1
1,1-Dichloroethene	ND	0.200	ND	0.792		1
1,2,4-Trichlorobenzene	ND	0.200	ND	1.48		1
1,2,4-Trimethylbenzene	0.395	0.200	1.94	0.982		1
1,2-Dibromoethane	ND	0.200	ND	1.54		1
1,2-Dichlorobenzene	ND	0.200	ND	1.20		1
1,2-Dichloroethane	ND	0.200	ND	0.809		1
1,2-Dichloropropane	ND	0.200	ND	0.924		1
1,3,5-Trimethylbenzene	ND	0.200	ND	0.982		1
1,3-Butadiene	ND	0.200	ND	0.442		1
1,3-Dichlorobenzene	ND	0.200	ND	1.20		1
1,4-Dichlorobenzene	0.327	0.200	1.96	1.20		1
2,2,4-Trimethylpentane	0.218	0.200	1.02	0.934		1
2-Butanone	0.544	0.200	1.60	0.589		1
3-Chloropropene	ND	0.200	ND	0.626		1
4-Ethyltoluene	ND	0.200	ND	0.982		1
Acetone	ND	1.00	ND	2.37		1
Benzene	6.73	0.200	21.5	0.638		1
Bromodichloromethane	ND	0.200	ND	1.34		1
Bromoform	ND	0.200	ND	2.06		1
Bromomethane	ND	0.200	ND	0.776		1
Carbon disulfide	ND	0.200	ND	0.622		1



Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

SAMPLE RESULTS

Lab ID: L1004707-02
 Client ID: IA-2
 Sample Location: WILSON AVE.

Date Collected: 04/01/10 11:28
 Date Received: 04/02/10
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab						
Carbon tetrachloride	ND	0.200	ND	1.26		1
Chlorobenzene	ND	0.200	ND	0.920		1
Chloroethane	ND	0.200	ND	0.527		1
Chloroform	ND	0.200	ND	0.976		1
Chloromethane	0.686	0.200	1.42	0.413		1
cis-1,2-Dichloroethene	ND	0.200	ND	0.792		1
cis-1,3-Dichloropropene	ND	0.200	ND	0.907		1
Cyclohexane	0.513	0.200	1.76	0.688		1
Dibromochloromethane	ND	0.200	ND	1.70		1
Dichlorodifluoromethane	0.655	0.200	3.24	0.988		1
Ethylbenzene	0.518	0.200	2.25	0.868		1
Freon-113	ND	0.200	ND	1.53		1
Freon-114	ND	0.200	ND	1.40		1
Hexachlorobutadiene	ND	0.200	ND	2.13		1
Methylene chloride	ND	0.500	ND	1.74		1
4-Methyl-2-pentanone	ND	0.200	ND	0.819		1
Methyl tert butyl ether	ND	0.200	ND	0.720		1
p/m-Xylene	1.15	0.400	4.97	1.74		1
o-Xylene	0.309	0.200	1.34	0.868		1
Heptane	0.397	0.200	1.62	0.819		1
n-Hexane	0.619	0.200	2.18	0.704		1
Styrene	ND	0.200	ND	0.851		1
Tetrachloroethene	0.692	0.200	4.69	1.36		1
Toluene	1.58	0.200	5.93	0.753		1
trans-1,2-Dichloroethene	ND	0.200	ND	0.792		1
trans-1,3-Dichloropropene	ND	0.200	ND	0.907		1
Trichloroethene	ND	0.200	ND	1.07		1
Trichlorofluoromethane	0.356	0.200	2.00	1.12		1



Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

SAMPLE RESULTS

Lab ID: L1004707-02
 Client ID: IA-2
 Sample Location: WILSON AVE.

Date Collected: 04/01/10 11:28
 Date Received: 04/02/10
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab						
Vinyl bromide	ND	0.200	ND	0.874		1
Vinyl chloride	ND	0.200	ND	0.511		1
2-Chlorotoluene	ND	0.200	ND	1.03		1
Tertiary butyl Alcohol	ND	0.500	ND	1.52		1



Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

SAMPLE RESULTS

Lab ID: L1004707-03
 Client ID: IA-3
 Sample Location: WILSON AVE.
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 04/03/10 18:17
 Analyst: RY

Date Collected: 04/01/10 11:31
 Date Received: 04/02/10
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab						
1,1,1-Trichloroethane	ND	0.200	ND	1.09		1
1,1,2,2-Tetrachloroethane	ND	0.200	ND	1.37		1
1,1,2-Trichloroethane	ND	0.200	ND	1.09		1
1,1-Dichloroethane	ND	0.200	ND	0.809		1
1,1-Dichloroethene	ND	0.200	ND	0.792		1
1,2,4-Trichlorobenzene	ND	0.200	ND	1.48		1
1,2,4-Trimethylbenzene	ND	0.200	ND	0.982		1
1,2-Dibromoethane	ND	0.200	ND	1.54		1
1,2-Dichlorobenzene	ND	0.200	ND	1.20		1
1,2-Dichloroethane	ND	0.200	ND	0.809		1
1,2-Dichloropropane	ND	0.200	ND	0.924		1
1,3,5-Trimethylbenzene	ND	0.200	ND	0.982		1
1,3-Butadiene	ND	0.200	ND	0.442		1
1,3-Dichlorobenzene	ND	0.200	ND	1.20		1
1,4-Dichlorobenzene	2.29	0.200	13.7	1.20		1
2,2,4-Trimethylpentane	ND	0.200	ND	0.934		1
2-Butanone	0.546	0.200	1.61	0.589		1
3-Chloropropene	ND	0.200	ND	0.626		1
4-Ethyltoluene	ND	0.200	ND	0.982		1
Acetone	1.26	1.00	3.00	2.37		1
Benzene	0.610	0.200	1.95	0.638		1
Bromodichloromethane	ND	0.200	ND	1.34		1
Bromoform	ND	0.200	ND	2.06		1
Bromomethane	ND	0.200	ND	0.776		1
Carbon disulfide	ND	0.200	ND	0.622		1



Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

SAMPLE RESULTS

Lab ID: L1004707-03
 Client ID: IA-3
 Sample Location: WILSON AVE.

Date Collected: 04/01/10 11:31
 Date Received: 04/02/10
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab						
Carbon tetrachloride	ND	0.200	ND	1.26		1
Chlorobenzene	ND	0.200	ND	0.920		1
Chloroethane	ND	0.200	ND	0.527		1
Chloroform	ND	0.200	ND	0.976		1
Chloromethane	0.717	0.200	1.48	0.413		1
cis-1,2-Dichloroethene	ND	0.200	ND	0.792		1
cis-1,3-Dichloropropene	ND	0.200	ND	0.907		1
Cyclohexane	0.310	0.200	1.07	0.688		1
Dibromochloromethane	ND	0.200	ND	1.70		1
Dichlorodifluoromethane	0.602	0.200	2.97	0.988		1
Ethylbenzene	ND	0.200	ND	0.868		1
Freon-113	ND	0.200	ND	1.53		1
Freon-114	ND	0.200	ND	1.40		1
Hexachlorobutadiene	ND	0.200	ND	2.13		1
Methylene chloride	ND	0.500	ND	1.74		1
4-Methyl-2-pentanone	ND	0.200	ND	0.819		1
Methyl tert butyl ether	ND	0.200	ND	0.720		1
p/m-Xylene	0.416	0.400	1.80	1.74		1
o-Xylene	ND	0.200	ND	0.868		1
Heptane	1.20	0.200	4.93	0.819		1
n-Hexane	0.394	0.200	1.39	0.704		1
Styrene	ND	0.200	ND	0.851		1
Tetrachloroethene	ND	0.200	ND	1.36		1
Toluene	1.08	0.200	4.07	0.753		1
trans-1,2-Dichloroethene	ND	0.200	ND	0.792		1
trans-1,3-Dichloropropene	ND	0.200	ND	0.907		1
Trichloroethene	ND	0.200	ND	1.07		1
Trichlorofluoromethane	0.337	0.200	1.89	1.12		1



Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

SAMPLE RESULTS

Lab ID: L1004707-03
 Client ID: IA-3
 Sample Location: WILSON AVE.

Date Collected: 04/01/10 11:31
 Date Received: 04/02/10
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab						
Vinyl bromide	ND	0.200	ND	0.874		1
Vinyl chloride	ND	0.200	ND	0.511		1
2-Chlorotoluene	ND	0.200	ND	1.03		1
Tertiary butyl Alcohol	ND	0.500	ND	1.52		1



Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

SAMPLE RESULTS

Lab ID: L1004707-04
 Client ID: IA-4
 Sample Location: WILSON AVE.
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 04/03/10 18:55
 Analyst: RY

Date Collected: 04/01/10 11:33
 Date Received: 04/02/10
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab						
1,1,1-Trichloroethane	ND	0.200	ND	1.09		1
1,1,2,2-Tetrachloroethane	ND	0.200	ND	1.37		1
1,1,2-Trichloroethane	ND	0.200	ND	1.09		1
1,1-Dichloroethane	ND	0.200	ND	0.809		1
1,1-Dichloroethene	ND	0.200	ND	0.792		1
1,2,4-Trichlorobenzene	ND	0.200	ND	1.48		1
1,2,4-Trimethylbenzene	ND	0.200	ND	0.982		1
1,2-Dibromoethane	ND	0.200	ND	1.54		1
1,2-Dichlorobenzene	ND	0.200	ND	1.20		1
1,2-Dichloroethane	ND	0.200	ND	0.809		1
1,2-Dichloropropane	ND	0.200	ND	0.924		1
1,3,5-Trimethylbenzene	ND	0.200	ND	0.982		1
1,3-Butadiene	ND	0.200	ND	0.442		1
1,3-Dichlorobenzene	ND	0.200	ND	1.20		1
1,4-Dichlorobenzene	ND	0.200	ND	1.20		1
2,2,4-Trimethylpentane	ND	0.200	ND	0.934		1
2-Butanone	0.590	0.200	1.74	0.589		1
3-Chloropropene	ND	0.200	ND	0.626		1
4-Ethyltoluene	ND	0.200	ND	0.982		1
Acetone	5.58	1.00	13.2	2.37		1
Benzene	0.603	0.200	1.92	0.638		1
Bromodichloromethane	ND	0.200	ND	1.34		1
Bromoform	ND	0.200	ND	2.06		1
Bromomethane	ND	0.200	ND	0.776		1
Carbon disulfide	ND	0.200	ND	0.622		1



Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

SAMPLE RESULTS

Lab ID: L1004707-04
 Client ID: IA-4
 Sample Location: WILSON AVE.

Date Collected: 04/01/10 11:33
 Date Received: 04/02/10
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab						
Carbon tetrachloride	ND	0.200	ND	1.26		1
Chlorobenzene	ND	0.200	ND	0.920		1
Chloroethane	ND	0.200	ND	0.527		1
Chloroform	ND	0.200	ND	0.976		1
Chloromethane	0.667	0.200	1.38	0.413		1
cis-1,2-Dichloroethene	ND	0.200	ND	0.792		1
cis-1,3-Dichloropropene	ND	0.200	ND	0.907		1
Cyclohexane	ND	0.200	ND	0.688		1
Dibromochloromethane	ND	0.200	ND	1.70		1
Dichlorodifluoromethane	0.633	0.200	3.13	0.988		1
Ethylbenzene	0.211	0.200	0.915	0.868		1
Freon-113	ND	0.200	ND	1.53		1
Freon-114	ND	0.200	ND	1.40		1
Hexachlorobutadiene	ND	0.200	ND	2.13		1
Methylene chloride	ND	0.500	ND	1.74		1
4-Methyl-2-pentanone	0.307	0.200	1.26	0.819		1
Methyl tert butyl ether	ND	0.200	ND	0.720		1
p/m-Xylene	0.546	0.400	2.37	1.74		1
o-Xylene	ND	0.200	ND	0.868		1
Heptane	0.410	0.200	1.68	0.819		1
n-Hexane	0.308	0.200	1.08	0.704		1
Styrene	ND	0.200	ND	0.851		1
Tetrachloroethene	0.230	0.200	1.56	1.36		1
Toluene	1.18	0.200	4.43	0.753		1
trans-1,2-Dichloroethene	ND	0.200	ND	0.792		1
trans-1,3-Dichloropropene	ND	0.200	ND	0.907		1
Trichloroethene	ND	0.200	ND	1.07		1
Trichlorofluoromethane	0.350	0.200	1.96	1.12		1



Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

SAMPLE RESULTS

Lab ID: L1004707-04
 Client ID: IA-4
 Sample Location: WILSON AVE.

Date Collected: 04/01/10 11:33
 Date Received: 04/02/10
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab						
Vinyl bromide	ND	0.200	ND	0.874		1
Vinyl chloride	ND	0.200	ND	0.511		1
2-Chlorotoluene	ND	0.200	ND	1.03		1
Tertiary butyl Alcohol	ND	0.500	ND	1.52		1



Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 04/03/10 15:07

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab for sample(s): 01-04 Batch: WG406687-4						
1,1,1-Trichloroethane	ND	0.200	ND	1.09		1
1,1,2,2-Tetrachloroethane	ND	0.200	ND	1.37		1
1,1,2-Trichloroethane	ND	0.200	ND	1.09		1
1,1-Dichloroethane	ND	0.200	ND	0.809		1
1,1-Dichloroethene	ND	0.200	ND	0.792		1
1,2,4-Trichlorobenzene	ND	0.200	ND	1.48		1
1,2,4-Trimethylbenzene	ND	0.200	ND	0.982		1
1,2-Dibromoethane	ND	0.200	ND	1.54		1
1,2-Dichlorobenzene	ND	0.200	ND	1.20		1
1,2-Dichloroethane	ND	0.200	ND	0.809		1
1,2-Dichloropropane	ND	0.200	ND	0.924		1
1,3,5-Trimethylbenzene	ND	0.200	ND	0.982		1
1,3-Butadiene	ND	0.200	ND	0.442		1
1,3-Dichlorobenzene	ND	0.200	ND	1.20		1
1,4-Dichlorobenzene	ND	0.200	ND	1.20		1
2,2,4-Trimethylpentane	ND	0.200	ND	0.934		1
2-Butanone	ND	0.200	ND	0.589		1
3-Chloropropene	ND	0.200	ND	0.626		1
4-Ethyltoluene	ND	0.200	ND	0.982		1
Acetone	ND	1.00	ND	2.37		1
Benzene	ND	0.200	ND	0.638		1
Bromodichloromethane	ND	0.200	ND	1.34		1
Bromoform	ND	0.200	ND	2.06		1
Bromomethane	ND	0.200	ND	0.776		1
Carbon disulfide	ND	0.200	ND	0.622		1



Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 04/03/10 15:07

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab for sample(s): 01-04 Batch: WG406687-4						
Carbon tetrachloride	ND	0.200	ND	1.26		1
Chlorobenzene	ND	0.200	ND	0.920		1
Chloroethane	ND	0.200	ND	0.527		1
Chloroform	ND	0.200	ND	0.976		1
Chloromethane	ND	0.200	ND	0.413		1
cis-1,2-Dichloroethene	ND	0.200	ND	0.792		1
cis-1,3-Dichloropropene	ND	0.200	ND	0.907		1
Cyclohexane	ND	0.200	ND	0.688		1
Dibromochloromethane	ND	0.200	ND	1.70		1
Dichlorodifluoromethane	ND	0.200	ND	0.988		1
Ethylbenzene	ND	0.200	ND	0.868		1
Freon-113	ND	0.200	ND	1.53		1
Freon-114	ND	0.200	ND	1.40		1
Hexachlorobutadiene	ND	0.200	ND	2.13		1
Methylene chloride	ND	0.500	ND	1.74		1
4-Methyl-2-pentanone	ND	0.200	ND	0.819		1
Methyl tert butyl ether	ND	0.200	ND	0.720		1
p/m-Xylene	ND	0.400	ND	1.74		1
o-Xylene	ND	0.200	ND	0.868		1
Heptane	ND	0.200	ND	0.819		1
n-Hexane	ND	0.200	ND	0.704		1
Styrene	ND	0.200	ND	0.851		1
Tetrachloroethene	ND	0.200	ND	1.36		1
Toluene	ND	0.200	ND	0.753		1
trans-1,2-Dichloroethene	ND	0.200	ND	0.792		1



Project Name: NPS

Lab Number: L1004707

Project Number: 5983

Report Date: 04/05/10

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 04/03/10 15:07

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab for sample(s): 01-04 Batch: WG406687-4						
trans-1,3-Dichloropropene	ND	0.200	ND	0.907		1
Trichloroethene	ND	0.200	ND	1.07		1
Trichlorofluoromethane	ND	0.200	ND	1.12		1
Vinyl bromide	ND	0.200	ND	0.874		1
Vinyl chloride	ND	0.200	ND	0.511		1
2-Chlorotoluene	ND	0.200	ND	1.03		1
Tertiary butyl Alcohol	ND	0.500	ND	1.52		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01-04 Batch: WG406687-3								
1,1,1-Trichloroethane	101		-		70-130	-		
1,1,2,2-Tetrachloroethane	116		-		70-130	-		
1,1,2-Trichloroethane	113		-		70-130	-		
1,1-Dichloroethane	94		-		70-130	-		
1,1-Dichloroethene	104		-		70-130	-		
1,2,4-Trichlorobenzene	118		-		70-130	-		
1,2,4-Trimethylbenzene	118		-		70-130	-		
1,2-Dibromoethane	106		-		70-130	-		
1,2-Dichlorobenzene	119		-		70-130	-		
1,2-Dichloroethane	93		-		70-130	-		
1,2-Dichloropropane	104		-		70-130	-		
1,3,5-Trimethylbenzene	111		-		70-130	-		
1,3-Butadiene	102		-		70-130	-		
1,3-Dichlorobenzene	120		-		70-130	-		
1,4-Dichlorobenzene	120		-		70-130	-		
2,2,4-Trimethylpentane	102		-		70-130	-		
2-Butanone	103		-		70-130	-		
3-Chloropropene	96		-		70-130	-		
4-Ethyltoluene	114		-		70-130	-		
Acetone	114		-		70-130	-		
Benzene	98		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01-04 Batch: WG406687-3								
Bromodichloromethane	102		-		70-130	-		
Bromoform	101		-		70-130	-		
Bromomethane	108		-		70-130	-		
Carbon disulfide	105		-		70-130	-		
Carbon tetrachloride	100		-		70-130	-		
Chlorobenzene	105		-		70-130	-		
Chloroethane	105		-		70-130	-		
Chloroform	100		-		70-130	-		
Chloromethane	103		-		70-130	-		
cis-1,2-Dichloroethene	92		-		70-130	-		
cis-1,3-Dichloropropene	102		-		70-130	-		
Cyclohexane	96		-		70-130	-		
Dibromochloromethane	107		-		70-130	-		
Dichlorodifluoromethane	105		-		70-130	-		
Ethylbenzene	105		-		70-130	-		
1,1,2-Trichloro-1,2,2-Trifluoroethane	112		-		70-130	-		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	114		-		70-130	-		
Hexachlorobutadiene	120		-		70-130	-		
Methylene chloride	101		-		70-130	-		
4-Methyl-2-pentanone	108		-		70-130	-		
Methyl tert butyl ether	90		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01-04 Batch: WG406687-3								
p/m-Xylene	108		-		70-130	-		
o-Xylene	106		-		70-130	-		
Heptane	94		-		70-130	-		
n-Hexane	96		-		70-130	-		
Styrene	107		-		70-130	-		
Tetrachloroethene	102		-		70-130	-		
Toluene	103		-		70-130	-		
trans-1,2-Dichloroethene	90		-		70-130	-		
trans-1,3-Dichloropropene	89		-		70-130	-		
Trichloroethene	106		-		70-130	-		
Trichlorofluoromethane	110		-		70-130	-		
Vinyl bromide	110		-		70-130	-		
Vinyl chloride	107		-		70-130	-		
o-Chlorotoluene	108		-		70-130	-		
tert-Butyl Alcohol	96		-		70-130	-		

Lab Duplicate Analysis

Batch Quality Control

Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG406687-5 QC Sample: L1004707-01 Client ID: IA-1						
1,1,1-Trichloroethane	ND	ND	ppbV	NC		25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC		25
1,1,2-Trichloroethane	ND	ND	ppbV	NC		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC		25
1,2,4-Trimethylbenzene	0.602	0.523	ppbV	14		25
1,2-Dibromoethane	ND	ND	ppbV	NC		25
1,2-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2-Dichloroethane	ND	ND	ppbV	NC		25
1,2-Dichloropropane	ND	ND	ppbV	NC		25
1,3,5-Trimethylbenzene	ND	ND	ppbV	NC		25
1,3-Butadiene	ND	ND	ppbV	NC		25
1,3-Dichlorobenzene	ND	ND	ppbV	NC		25
1,4-Dichlorobenzene	0.564	0.475	ppbV	17		25
2,2,4-Trimethylpentane	0.216	0.204	ppbV	6		25
2-Butanone	0.665	0.589	ppbV	12		25
3-Chloropropene	ND	ND	ppbV	NC		25
4-Ethyltoluene	ND	ND	ppbV	NC		25

Lab Duplicate Analysis

Batch Quality Control

Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG406687-5 QC Sample: L1004707-01 Client ID: IA-1					
Acetone	ND	ND	ppbV	NC	25
Benzene	12.6	11.6	ppbV	8	25
Bromodichloromethane	ND	ND	ppbV	NC	25
Bromoform	ND	ND	ppbV	NC	25
Bromomethane	ND	ND	ppbV	NC	25
Carbon disulfide	ND	ND	ppbV	NC	25
Carbon tetrachloride	ND	ND	ppbV	NC	25
Chlorobenzene	ND	ND	ppbV	NC	25
Chloroethane	ND	ND	ppbV	NC	25
Chloroform	ND	ND	ppbV	NC	25
Chloromethane	0.684	0.711	ppbV	4	25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC	25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC	25
Cyclohexane	0.881	0.842	ppbV	5	25
Dibromochloromethane	ND	ND	ppbV	NC	25
Dichlorodifluoromethane	0.620	0.617	ppbV	0	25
Ethylbenzene	0.739	0.637	ppbV	15	25
Freon-113	ND	ND	ppbV	NC	25
Freon-114	ND	ND	ppbV	NC	25

Lab Duplicate Analysis

Batch Quality Control

Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG406687-5 QC Sample: L1004707-01 Client ID: IA-1					
Hexachlorobutadiene	ND	ND	ppbV	NC	25
Methylene chloride	ND	ND	ppbV	NC	25
4-Methyl-2-pentanone	ND	ND	ppbV	NC	25
Methyl tert butyl ether	0.239	0.214	ppbV	11	25
p/m-Xylene	1.64	1.39	ppbV	17	25
o-Xylene	0.396	0.360	ppbV	10	25
Heptane	0.402	0.360	ppbV	11	25
n-Hexane	0.892	0.826	ppbV	8	25
Styrene	ND	ND	ppbV	NC	25
Tetrachloroethene	0.981	0.865	ppbV	13	25
Toluene	1.83	1.58	ppbV	15	25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC	25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC	25
Trichloroethene	ND	ND	ppbV	NC	25
Trichlorofluoromethane	0.384	0.361	ppbV	6	25
Vinyl bromide	ND	ND	ppbV	NC	25
Vinyl chloride	ND	ND	ppbV	NC	25
2-Chlorotoluene	ND	ND	ppbV	NC	25
Tertiary butyl Alcohol	ND	ND	ppbV	NC	25

Lab Duplicate Analysis
Batch Quality Control

Project Name: NPS

Project Number: 5983

Lab Number: L1004707

Report Date: 04/05/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG406687-5 QC Sample: L1004707-01 Client ID: IA-1					

Project Name: NPS

04051009:42

Lab Number: L1004707

Project Number: 5983

Report Date: 04/05/10

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Cleaning Batch ID	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Out mL/min	Flow In mL/min	% RSD
L1004707-01	IA-1	0402	#16 AMB		-	-	3.1	3.2	3
L1004707-01	IA-1	811	6.0L Can	I1004071	-29.3	-3.6	-	-	-
L1004707-02	IA-2	0145	#16 AMB		-	-	3.1	3.1	0
L1004707-02	IA-2	775	6.0L Can	I1004071	-29.2	-3.0	-	-	-
L1004707-03	IA-3	0181	#16 AMB		-	-	3.1	3.2	3
L1004707-03	IA-3	574	6.0L Can	I1004071	-29.3	-4.2	-	-	-
L1004707-04	IA-4	0285	#16 AMB		-	-	3.0	3.1	3
L1004707-04	IA-4	1621	6.0L Can	I1004071	-29.3	-3.4	-	-	-



Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
N/A	Present/Intact

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis
L1004707-01A	Canister - 6 Liter	N/A	N/A		NA	Present/Intact	TO15-LL(30)
L1004707-02A	Canister - 6 Liter	N/A	N/A		NA	Present/Intact	TO15-LL(30)
L1004707-03A	Canister - 6 Liter	N/A	N/A		NA	Present/Intact	TO15-LL(30)
L1004707-04A	Canister - 6 Liter	N/A	N/A		NA	Present/Intact	TO15-LL(30)

*Hold days indicated by values in parentheses

Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

GLOSSARY

Acronyms

- EPA** - Environmental Protection Agency.
- LCS** - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
- LCS D** - Laboratory Control Sample Duplicate: Refer to LCS.
- MS** - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
- MS D** - Matrix Spike Sample Duplicate: Refer to MS.
- NA** - Not Applicable.
- NC** - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
- NI** - Not Ignitable.
- RDL** - Reported Detection Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
- RPD** - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RDL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reported detection limit (RDL) for the sample.

Report Format: Data Usability Report



Project Name: NPS
Project Number: 5983

Lab Number: L1004707
Report Date: 04/05/10

REFERENCES

- 48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Woods Hole Labs shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Woods Hole Labs.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certificate/Approval Program Summary

Last revised December 15, 2009 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable), Total Cyanide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Corrosivity, TCLP 1311. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: SM2320B, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: EPA 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Maine Department of Human Services Certificate/Lab ID: MA0030.

Wastewater (Inorganic Parameters: EPA 120.1, 300.0, SM 2320, 2510B, 2540C, 2540D, EPA 245.1. Organic Parameters: 608, 624.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. NELAP Accredited.

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. NELAP Accredited.

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Pennsylvania Department of Environmental Protection Certificate/Lab ID: 68-02089. NELAP Accredited.

Non-Potable Water (Organic Parameters: EPA 5030B, EPA 8260)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. NELAP Accredited via LA-DEQ.

Refer to MA-DEP Certificate for Non-Potable Water.

Refer to LA-DEQ Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. NELAP Accredited.

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 3005A,3020, 6020, 245.1, 245.7, 1631E, 7470A, 7474, 9014, 120.1, 9050A, 180.1, SM4500H-B, 2320B, 2510B, 2540D,9040. Organic Parameters: EPA 3510C, 5030B, 9010B, 624, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **8270C**: Biphenyl.



Alpha Analytical
 320 Forbes Blvd
 Mansfield, MA 02048-1806
 Tel: 508-822-9300
 Fax: 508-822-3288

AIR Chain-of-Custody - NJ

Date Rec'd in Lab: _____ ALPHA Job# L1004907

Client Contact Information		Project Information	
Company: <u>TTI Environmental Inc</u>	Project Name: <u>NPS</u>	Site/Location: <u>Wilson Ave</u>	Project Manager: <u>Tim Popp</u>
Address: <u>1253 N. Church St</u>	City/State/Zip: <u>Morris town NJ 08057</u>	Site Contact: _____	Phone: <u>609 304 3968</u>
Phone: <u>856 840 8800</u>	FAX: <u>856 840 8815</u>	Email: <u>timp@ttienv.com</u>	Analysis Turn-Around Time
Standard (Specify) _____		Rush (Specify) <u>24 hr.</u>	

Carrier: _____ 1 of 1 COCs

Samplers Name(s) Tim Popp

Report Information - Data Deliverables:

FAX: _____

ADEx Criteria Checker: _____

EMail (standard pdf report)

Billing Information

Same as Client Info PO #: 5983

ALPHA LAB ID (Lab Use Only)	Sample Identification	Sample Date(s)	Time Start (24 hr clock)	Time Stop (24 hr clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Outgoing Canister Pressure ("Hg) (Lab)	Incoming Canister Pressure ("Hg) (Lab)	Flow Reg. ID	Can ID	Can Size (L)	Flow Controller Readout (ml/min)	Can Cert ID	TO-15	EPA 3C	Indoor / Ambient Air	Soil Gas
<u>44001-1</u>	<u>IA-1</u>	<u>4/1/10</u>	<u>1142</u>	<u>1124</u>	<u>30+</u>	<u>5.5</u>	<u>71.0</u>	<u>70.8</u>			<u>0402</u>	<u>811</u>				<u>X</u>			
<u>-2</u>	<u>IA-2</u>	<u>4/1/10</u>	<u>1147</u>	<u>1128</u>	<u>30</u>	<u>5</u>	<u>70.8</u>	<u>69.8</u>			<u>0145</u>	<u>775</u>				<u>X</u>			
<u>-3</u>	<u>IA-3</u>	<u>4/1/10</u>	<u>1150</u>	<u>1131</u>	<u>30+</u>	<u>5</u>	<u>70.4</u>	<u>69.7</u>			<u>0181</u>	<u>547</u>				<u>X</u>			
<u>-4</u>	<u>IA-4</u>	<u>4/1/10</u>	<u>1155</u>	<u>1133</u>	<u>28</u>	<u>3.5</u>	<u>69.8</u>	<u>69.7</u>			<u>0285</u>	<u>1621</u>				<u>X</u>			

Temperature (Fahrenheit)				
	Ambient	Maximum	Minimum	
Start	<u>63.1</u>			
Stop	<u>64.2</u>			
Pressure (inches of Hg)				
	Ambient	Maximum	Minimum	
Start	<u>30.19</u>			
Stop	<u>30.19</u>			

GC/MS Analyst Signature (TO-15) _____

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: <u>[Signature]</u>	Date/Time: _____	Canisters Received by: <u>[Signature]</u>	Date/Time: _____
Samples Relinquished by: <u>[Signature]</u>	Date/Time: <u>4/2/10</u>	Received by: <u>[Signature]</u>	Date/Time: <u>4/2/10 1215</u>
Relinquished by: <u>[Signature]</u>	Date/Time: <u>4/2/10 1300</u>	Received by: <u>[Signature]</u>	Date/Time: _____
<u>Fed Ex 4/3/10 12:35</u>		<u>Celine Sullivan 4/3/10 12:35</u>	

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until all ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms. See reverse page.

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