

Report Date:
01-Dec-09 11:03

- Final Report
- Re-Issued Report
- Revised Report



SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

ATC Associates, Inc.
73 Williams Franks Drive
West Springfield, MA 01089
Attn: Terri Routhier

Project: Petersham - Petersham, MA
Project #: [none]

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SB04268-01	ATC-1	Soil	13-Nov-09 08:30	16-Nov-09 11:20
SB04268-02	ATC-2	Soil	13-Nov-09 09:25	16-Nov-09 11:20
SB04268-03	LF-1	Soil	13-Nov-09 10:10	16-Nov-09 11:20
SB04268-04	ATC-3	Soil	13-Nov-09 10:45	16-Nov-09 11:20
SB04268-05	GT-1	Soil	13-Nov-09 11:45	16-Nov-09 11:20
SB04268-06	ATC-4B	Soil	13-Nov-09 12:30	16-Nov-09 11:20

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received. All applicable NELAC requirements have been met.

- Massachusetts # M-MA138-MA1110
- Connecticut # PH-0777
- Florida # E87600/E87936
- Maine # MA138
- New Hampshire # 2538
- New Jersey # MA011/MA012
- New York # 11393/11840
- Pennsylvania # 68-04426/68-02924
- Rhode Island # 98
- USDA # S-51435
- Vermont # VT-11393



Authorized by:

Hamid C. Tayeh, Ph.D.
President/Laboratory Director

Technical Reviewer's Initial:

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please note that this report contains 29 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analytes, copies of the subcontractor's test report is available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).

Please contact the Laboratory or Technical Director at 800-789-9113 with any questions regarding the data contained in this laboratory report.

2009 Soil

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TABLE 1
SUMMARY OF EPH IN SOIL
 Former Niehewong Inn and Academy
 25 Commons Street
 Petosham, Massachusetts

Sample Type Sample Point Sample Date Depth (ft) Unit	Soil Sample ID						Reportable Concentrations	
	ATC-1	LF-1	ATC-3	GT-1	ATC-4B	RCS-1	RCS-2	
	1/17/2009 4-8 µg/kg	1/17/2009 4-8 µg/kg	1/17/2009 4-8 µg/kg	1/17/2009 4-8 µg/kg	1/17/2009 4-8 µg/kg	µg/kg	µg/kg	
EPH Compounds								
C9-C18 Aliphatics	<10,900	<10,900	<10,800	<10,900	<11,600	3,000,000	3,000,000	
C19-C26 Aliphatics	<10,900	<10,900	<10,800	<10,900	<11,600	3,000,000	3,000,000	
C11-C22 Aromatics	<10,900	<10,900	<10,800	<10,900	<11,600	3,000,000	3,000,000	
Acenaphthene	<363	<362	<359	<362	<385	4,000	3,000,000	
Anthracene	<363	<362	<359	<362	<385	1,000,000	3,000,000	
Acenaphthylene	<363	<362	<359	<362	<385	1,000	10,000	
Benzo (h) anthracene	<363	<362	<359	<362	<385	7,000	40,000	
Benzo (a) pyrene	<363	<362	<359	<362	<385	2,000	4,000	
Benzo (b) fluoranthene	<363	<362	<359	<362	<385	7,000	40,000	
Benzo (k) perylene	<363	<362	<359	<362	<385	1,000,000	3,000,000	
Benzo (k) fluoranthene	<363	<362	<359	<362	<385	70,000	400,000	
Chrysene	<363	<362	<359	<362	<385	70,000	40,000	
Dibenzo (a,h) anthracene	<363	<362	<359	<362	<385	700	4,000	
Fluoranthene	<363	<362	<359	<362	<385	1,000,000	3,000,000	
Fluorene	<363	<362	<359	<362	<385	1,000,000	3,000,000	
Indeno (1,2,3-cd) pyrene	<363	<362	<359	<362	<385	7,000	40,000	
2-Methylnaphthalene	<363	<362	<359	<362	<385	700	80,000	
Naphthalene	<363	<362	<359	<362	<385	4,000	40,000	
Phenanthrene	<363	<362	<359	<362	<385	10,000	1,000,000	
Pyrene	<363	<362	<359	<362	<385	1,000,000	3,000,000	

Notes:
 EPH - Extractable Petroleum Hydrocarbons
 BOLD indicates detected above reportable concentrations
 µg/kg - micrograms per kilogram (ppb)
 < - Less than the laboratory reporting limit

Table 2
SUMMARY OF VPH IN SOIL ANALYTICAL DATA
 Former Nichewaug Inn and Academy
 25 Commons Street
 Petersham, Massachusetts

Sample Type	Soil Sample ID	Reportable Concentrations	
Sample Point	ATC-1	RCS-1	RCS-2
Sample Date	11/13/2009		
Depth (ft)	4-8		
Unit	µg/kg	µg/kg	µg/kg
VPH Compounds			
C5-C8 Aliphatic	<904	100,000	500,000
C9-C12 Aliphatic	<301	1,000,000	3,000,000
C9-C10 Aromatic	<301	100,000	500,000
Benzene	<60.3	2,000	200,000
Ethylbenzene	<60.3	40,000	1,000,000
MTBE	<60.3	100	100,000
Naphthalene	<60.3	4,000	40,000
Toluene	<60.3	30,000	1,000,000
m,p-Xylene	<121	300,000	300,000
o-Xylene	<60.3	300,000	300,000

Notes:

VPH - Volatile Petroleum Hydrocarbons

BOLD indicates detected above reportable concentrations

µg/kg - micrograms per kilogram (ppb)

< - Less than the laboratory reporting limit

NS - No standard promulgated

TABLE 3
SUMMARY OF VOCs in SOIL ANALYTICAL DATA
 Former Nicholas Inn and Academy
 25 Commons Street
 Peterboro, Massachusetts

Sample Type	Soil Sample	Reportable Concentrations	
		RCS-1	RCS-1
Sampling Point	LF-1		
Sample Depth (ft)	4-8		
Unit	µg/kg	µg/lb	µg/lb
Method 8260 Compounds			
Chloroethane	<55.7	100,000	1,000,000
1,1-Dichloroethane	<55.7	3,000	100,000
1,1-Dichloroethene (1,1-Dichloroethene)	<55.7	100	100
cis-1,2-Dichloroethene (cis-1,2-Dichloroethene)	<55.7	NP	NP
trans-1,2-Dichloroethene (trans-1,2-Dichloroethene)	<55.7	4,000	500,000
Methyl tert-butyl ether (MTBE)	<55.7	300	200,000
Methylene Chloride	<55.7	100	200,000
Tetrachloroethylene (PCE, Perchloroethylene, Tetrachloroethene)	<55.7	500	30,000
1,1,1-Trichloroethane	<55.7	30,000	500,000
Trichloroethylene (TCE, Trichloroethene)	<55.7	400	20,000
Naphthalene	<55.7	4,000	40,000
Vinyl Chloride	<55.7	300	300
All other Method 8260 Compounds	ND	NA	NA
Ethylene Dibromide (EDB)	<60.3	100	100

Notes:
 Environmental Protection Agency (EPA) Method 8260
 < - less than laboratory detection limit
 NS - Not Sampled
 NP - Not Published
 NA - Not Applicable
 µg/kg - micrograms per kilogram (ppb)
 Bold indicies compound was detected above applicable Reportable Concentration.
 Reportable Concentrations from 310 CMR 40.1600 Table 1.

TABLE 4
SUMMARY OF METALS IN SOIL ANALYTICAL DATA
Former Niehewaug Inn and Academy
25 Common Street
Petersham, Massachusetts

Sample Type	Soil Sample ID		Reportable Concentrations	
	Sample Point	ATC-1	LP-1	RCS-1
Sample Date	11/13/2009	11/13/2009		
Depth (ft)	4-8	4-8		
Unit	µg/kg	µg/kg	µg/kg	µg/kg
Total Metals				
Silver	NS	4,200	100,000	200,000
Arsenic	NS	<1,410	20,000	20,000
Barium	NS	93,000	100,000	200,000
Cadmium	NS	<471	2,000	30,000
Chromium	NS	12,100	30,000	200,000
Mercury	NS	<31.1	20,000	30,000
Lead	6,750	5,400	300,000	300,000
Selenium	NS	2,370	400,000	800,000

BOLD indicates detected above reportable concentrations
µg/kg - micrograms per kilogram (ppb)
NS - Not sampled
< - Less than the laboratory reporting limit.
NS - No standard promulgated

TABLE 5
SUMMARY OF EPH IN GROUNDWATER ANALYTICAL DATA
 Former Niberraug Inn and Academy
 25 Common Street
 Peterstam, Massachusetts

Sample Type Sampling Point	Groundwater Sample				Reportable Concentrations	
	ATC-2	ATC-3	ATC-4	RCGW-1	RCGW-2	
	12/3/2009 ug/L	12/3/2009 ug/L	12/3/2009 ug/L	ug/L	ug/L	
EPH Compounds						
C9-C18 Aliphatic Hydrocarbons	<100	<100	<100	700	5,000	
C19-C36 Aliphatic Hydrocarbons	<100	<100	<100	14,000	50,000	
C11-C22 Aromatic Hydrocarbons	<100	<100	<100	200	5,000	
Naphthalene	<5.49	<5.49	<5.32	140	1,000	
2-Methylnaphthalene	<5.49	<5.49	<5.32	10	2,000	
Acenaphthylene	<5.49	<5.49	<5.32	30	40	
Acenaphthene	<5.49	<5.49	<5.32	20	6,000	
Fluorene	<5.49	<5.49	<5.32	30	40	
Phenanthrene	<5.49	<5.49	<5.32	40	10,000	
Anthracene	<5.49	<5.49	<5.32	30	30	
Fluoranthene	<5.49	<5.49	<5.32	90	200	
Benzo(a)anthracene	<5.49	<5.49	<5.32	1	1,000	
Benzo(b)fluoranthene	<5.49	<5.49	<5.32	1	400	
Indeno(1,2,3-cd)pyrene	<5.49	<5.49	<5.32	0.5	100	
Benzo(g,h,i)perylene	<5.49	<5.49	<5.32	20	20	

Notes:
 BPH - Extractable Petroleum Hydrocarbons
 < - Concentration reported less than the laboratory limit.
 ug/L - micrograms per liter (ppm)
 Bold indicates compound was detected above applicable Reportable Concentration.
 NS - No standard promulgated

TABLE 6
SUMMARY OF VPH, EDB and Lead IN GROUNDWATER ANALYTICAL DATA
 Former Nichewang Inn and Academy
 25 Commons Street
 Petersham, Massachusetts

Sample Type	Groundwater Sample	Reportable	
		RCGW-1	RCGW-2
Sampling Point	ATC-1		
Date	12/3/2009		
Unit	ug/L	ug/L	ug/L
VPH Compounds			
C3-C8 Aliphatic Hydrocarbons	<75	300	3,000
C9-C12 Aliphatic Hydrocarbons	<25	700	5,000
C9-C10 Aromatic Hydrocarbons	<25	200	1,000
Benzene	<5	5	2,000
Ethylbenzene	<5	700	5,000
MTBE	<5	70	5,000
Naphthalene	<5	140	1,000
Toluene	<5	1,000	40,000
m,p-Xylene	<10	5,000	5,000
o-Xylene	<5	5,000	5,000
Ethylene Dibromide (EDB)	<20	0.02	2
Dissolved Lead	<7.5	10	10

Notes:
 VPH - Volatile Petroleum Hydrocarbons
 VOC - Volatile Organic Compounds
 < - Concentrations less than the laboratory limit.
 NA - Not Applicable
 NS - No standard promulgated
 ug/L - micrograms per liter (ppm)
 Bold indicates compound was detected above applicable Reportable Concentration.