APPENDIX C

FINAL SEDIMENT ANALYSIS REPORT

Final Sediment Analysis Report

Portsmouth Naval Shipyard –Lifting and Handling Improvements: Structural Repairs at Berths 11, 12, and 13

PREPARED FOR:

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ESS Project No. N492-003

November 16, 2015
Revised February 2016

www.essgroup.com

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EXECUTIVE SUMMARY

Eleven (11) in-water sediment samples were collected along the faces of Berths 11 and 13 in November 2014 and January 2015 and an additional four (4) sediment samples were collected along the face of Berth 11A to evaluate the sediment that is proposed to be dredged for the PNSY Lifting and Handling Improvement Project.

The analysis results were compared to Maine Department of Environmental Protection (DEP) Solid Waste Management Rules (Chapter 418) for Beneficial Use of Solid Wastes and the Environmental Protection Agency's (EPA's) Hazardous Waste Characteristics Regulations. If dredged material has constituent levels exceeding the levels cited in Maine DEP Chapter 418, but by less than a factor of two, the dredged material may be beneficially used as construction fill provided that the dredge material is combined with borrow material at a proportion that will lower the contaminant levels below the levels cited in the Rules.

Based on the chemical analysis results, we have assumed that sediment removed from most of Berth 13 and Berth 11B and 11C can be amended (as needed) and reused as backfill on site. Sediment from in front of Berth 11A exceeded the DEP threshold levels by more than a factor of two, hence we have assumed that the dredge material is not reusable on site. However, comparison of the Toxicity Characteristic Leaching Procedure (TCLP) results to EPA regulations indicate that this material can be properly disposed of by the Contractor and that the contamination levels would not require the Government to take over control of the material and the disposal effort.

1.0 INTRODUCTION

In preparation for design and permitting of proposed improvements to Berths 11, 12, and 13, a multiple phase sediment sampling program was conducted in accordance with an approved Sediment Sampling and Analysis Plan (SAP) in the vicinity of the proposed dredging activities at the Portsmouth Naval Shipyard (PNSY) in Kittery, Maine. Dredging will be required as part of the proposed improvements and will take place along the proposed bulkhead in the area previously approved for maintenance dredging by the Maine Department of Environmental Protection (DEP) and U.S. Army Corps of Engineers (USACE).

After the submittal of the SAP to the Navy on October 17, 2014 an initial sampling program was conducted in November 2014 and January 2015. A draft analysis report was submitted in April 2015 presenting the results from the initial sampling program. Based on these results, a second sampling program was conducted in August 2015 to further evaluate the sediment to determine proper disposal methods.

2.0 SEDIMENT SAMPLE COLLECTION METHODS

For the initial sampling program, eleven in-water sediment samples were collected by Haley and Aldrich from seven locations along the faces of Berths 11 and 13 between November 26, 2014 and January 21, 2015 in accordance with the protocols outlined in the SAP. The number of sample locations for each berth area was determined based on an approximate frequency of one sample per 1,500 cubic yards of dredging. Three locations were sampled along Berth 13 (SC-01 through SC-03) and four locations were sampled along Berth 11 (SC-04 through SC-07). Samples were obtained using a drilling rig mounted on a barge that was equipped with a three inch split spoon with a soft basket (trap).

Based on the results from the initial sampling program, indicating the presence of compounds that would not meet the re-use criteria, four additional locations along Berth 11A (SC-08 through SC-11) were sampled for further evaluation. Sediment samples were obtained by CR Environmental, Inc. using a vibracore rig mounted on an A-frame boat that was equipped with three inch macros sleeves with a soft basket (trap).

Each sediment core was visually examined and logged using a standard sediment sample field logging sheet and a field book. A copy of all field logs is provided in Appendix A. Following visual assessment and logging, sediment was collected from each core for chemical analysis according to the SAP and amendment. During the initial sampling program sediment cores were also sub-sampled for physical characteristics. If no stratification was observed throughout the length of a sample, one (1) composite of the sample was selected for laboratory analysis. If individual horizons were observed within the sample, then each distinct stratum was sampled separately. Distinct horizons were observed within four of the seven initial cores collected, resulting in two samples being collected at SC-01, SC-03, SC-04 and SC-06. A distinct horizon was also observed within sample SC-10; however the lower stratum observed at SC-10 appeared to be native soils and was not collected for analysis.

Samples for chemical analysis were collected in a standard 8 and 16 ounce glass jars. Sediment was homogenized prior to placement in the sample container to ensure that representative samples were obtained. Material larger than one-quarter inch was removed and noted, including twigs, leaves, shells, and gravel. For physical samples, all materials were maintained in the sample unless it was too large for the sample container or if it misrepresented the sample. Samples were placed on ice and sent (via courier) to Alpha Analytical in Mansfield, Massachusetts for analysis. The samples submitted for laboratory analysis were preserved, stored, handled, and transmitted to the laboratory within allowable hold times. Laboratory-supplied chain-of-custody forms were used to track sample custody. The chain-of-custody forms were completed immediately after each sample was processed to minimize the potential for errors.

Samples collected for chemical analysis from the initial sampling effort were analyzed for organics, semivolatiles, pesticides, metals, total organic carbon, and grain size. The additional samples collected along the face of Bert 11A were analyzed for metals, PAHs, PCBs, and dioxins. In anticipation of being able to beneficially reuse the dredged material as construction fill, the results from both sampling programs were compared to Maine Department of Environmental Protection (DEP) Solid Waste Management Rules (Chapter 418) for Beneficial Use of Solid Wastes. Based on the comparison to Maine DEP Chapter 418, a subset of samples also underwent Toxicity Characteristic Leaching Procedure (TCLP) analysis and results were compared to the Environmental Protection Agency's (EPA's) Hazardous Waste Characteristics Regulations.

3.0 SEDIMENT ANALYSIS RESULTS

The results of both the initial and supplemental sediment sampling programs are provided in the sections below. Alpha Analytical conducted all analysis at their Mansfield, Massachusetts laboratory, with the exception of the dioxin analysis, which was subcontracted to SGS. The complete lab reports for each phase of sampling are provided in Appendix B (Physical/Chemistry) and Appendix C (TCLP).

3.1 Field Sediment Observations

A summary of the intervals sampled and observations recorded by Haley and Aldrich and ESS scientists during the field sampling is provided in Table 1.

3.2 Physical Laboratory Results

Laboratory grain size (ASTM D-422), total solids and moisture content (SM-2450G), and Total Organic Carbon (EPA SW-846 Method 9060) analyses were performed on the eleven (11) sediment samples collected during the initial sampling program.

The bulk physical sediment laboratory results for Berths 11 and 13 are summarized in Tables 2 and 3, respectively. Total Organic Carbon (TOC) values ranged from 0.163% to 4% with most samples having a TOC greater than 1%. Moisture Content values ranged from 13.6% to 51.5% with most samples having a

moisture content above 20%. Grain size varied greatly among samples, containing a mix of coarse and fine material. The complete laboratory report is provided in Appendix A.

3.3 Chemical Laboratory Results

Samples collected for chemical analysis from the initial sampling effort were analyzed for organics, semivolatiles, pesticides, metals, total organic carbon, and grain size. The additional samples collected along the face of Bert 11A were analyzed for metals, PAHs, PCBs, and dioxins. The chemical laboratory results for Berths 11 and 13 are summarized in Tables 2 and 3, respectively. Based on the bulk chemistry results, a subset of samples were also selected for TCLP analysis. Table 4 provides a summary of the TCLP results.

3.4 Comparison to Sediment Guidelines

In anticipation of being able to beneficially reuse the dredged material as construction fill, the results from both sampling programs were compared to Maine Department of Environmental Protection (DEP) Solid Waste Management Rules (Chapter 418) for Beneficial Use of Solid Wastes and the Environmental Protection Agency's (EPA's) Hazardous Waste Characteristics Regulations. If the dredged material has constituents levels exceeding the levels cited in the DEP Rules, but by less than a factor of two, the dredged material may be beneficially used as construction fill, provided that the dredged material is combined with borrow material a proportion which will lower the contaminant levels below the levels cited in the Rules. Additionally, the Solid Waste Management Rules indicate that sediment with total chromium or lead levels exceeding 100 mg/kg, or mercury levels exceeding 4 mg/kg require further analysis by Toxicity Characteristic Leaching Procedure (TCLP), prior to approval for use as construction fill. For dredged material with constituents levels that exceed the levels cited in the DEP Rules by more than two times the value indicated for at least one constituents, the material can't be reused, and must be disposed of in an authorized facility (i.e. landfill). Tables 2 and 3 present the bulk chemistry results in comparison to the Maine Department of Environmental Protection (DEP) Solid Waste Management Rules (Chapter 418) for Beneficial Use of Solid Wastes; while Table 4 presents the TCLP results in comparison to the Environmental Protection Agency's (EPA's) Hazardous Waste Characteristics Regulations.

Three of the eleven samples collected during the initial program exceeded the levels cited in the Maine DEP Solid Waste Management Rules (Chapter 418) by more than two times the value for at least one constituent. These samples are SC-04-1 (exceeded more than 2 times the level for lead), SC-04-2 (exceeded more than 2 times the level for arsenic and lead), and SC-01-S1 (exceeded more than 2 times the level for total PCBs (Tables 2 and 3). Additionally, based on the results of the bulk chemical analysis, sediment collected from samples SC-03-S1, SC-03-S2, and SC-06-S2 (lead); SC-02-S1 (lead and mercury); and SC-04-1 and SC-04-2 (chromium and lead) were analyzed using TCLP methods. The TCLP results for these samples did not exceed the criteria for toxicity, and are deemed non-hazardous, according to Environmental Protection Agency's (EPA's) hazardous waste characteristics regulations (Table 4).

Results from the August 2015 sampling program are consistent with the findings from the initial program. Three of the four samples collected and analyzed for bulk chemistry (SC-08, SC-09, and SC-10) exceeded the levels cited in the Maine DEP Solid Waste Management Rules (Chapter 418) by more than two times the threshold for lead. SC-08 also exceeded the threshold for benzo(a)pyrene; SC-09, SC-10, and SC-11 exceed the threshold for arsenic; and SC-11 exceeded the threshold for dioxin TEQ (Table 2). Further analysis by TCLP indicates that the samples did not exceed the criteria for toxicity, and are deemed non-hazardous, according to Environmental Protection Agency's (EPA's) hazardous waste characteristics regulations (Table 4).

4.0 CONCLUSIONS

In summary, based on the sampling and analysis conducted between November 2014 and August 2015, and comparison to ME DEP Guidelines and EPA Hazardous Waste Regulations, the sediment proposed to be dredged from Berths 11B, 11C, and most of Berth 13 is eligible (pending receipt of the Project's permits) to be amended (as needed) and re-used as backfill on site. The results further indicate that sediment from Berth 11A (samples SC-04-1, SC-04-2, SC-08, SC-09, SC-10) and eastern side of Berth 13 (samples SC-01-S1) is not eligible for reuse on-site. However, the sediments dredged from Berth 11A and Berth 13 that are not reusable on site, can be properly disposed of by the Contractor once the Project's permits are obtained since the contamination levels do not require the Government to take over control of the material disposal.

Tables

Table 1: Sample Composite Intervals and Field Observations
Portsmouth Naval Shipyard – Berths 11 and 13
Kittery, Maine

Date	Sample ID	Composite Interval	Observations
12/11/14	SC-01-S1	0-2 feet	Black sandy organic soil with gravel.
12/11/14	SC-01-S2	2-8 feet	Olive gray to gray-light brown, mostly lean clay.
12/8/14	SC-02-01	0-8 feet	Black organic soil with sand.
1/21/15	SC-03-S1	0-4 feet	Black organic silty sand with gravel.
1/21/15	SC-03-S2	4-7.2 feet	Black poorly graded sand with organic silt.
11/26/14	SC-04-1	0-3 feet	Soft black sandy organic soil.
11/26/14	SC-04-2	3-4.5 feet	Loose black organic silty sand.
12/5/14	SC-05-S1	0-3.5 feet	Black organic soil with sand/black silty sand with gravel.
12/3/14	SC-06-S1	0-2.5 feet	Hard black to olive brown sandy organic soil.
12/3/14	SC-06-S2	2.5-6 feet	Medium dense gray brown sand.
12/2/14	SC-07-S1	0-1.6 feet	Black sandy organic soil.
8/12/15	SC-08	0-3 feet	Black silty sand with trace medium coarse sand, trace shells and trace fine sand.
8/12/15	SC-09	0-5 feet	Black silty sand with trace shells and trace medium sand.
8/12/15	SC-10-S1	0-4 feet	Black silty sand with trace wood, trace medium sand and trace fine gravel. Has decomposing organic odor.
8/12/15	SC-11	0-4 feet	Black silty sand with trace concrete, trace fine gravel, trace glass and trace wood.

Table 2: Bulk Physical and Chemical Analysis
Portsmouth Naval Shipyard - Berth 11
Kittery, Maine

			Client Sample ID	SC-07-S1		SC-06-S1		SC-06-S2		SC-05A-S1		SC-08		SC-09		SC-04-1		SC-04-2		SC-10-S1		SC-11	
			Sampling Date	02-DEC-14		03-DEC-14		03-DEC-14		05-DEC-14		12-Aug-15		12-Aug-15		26-NOV-14		26-NOV-14		12-Aug-15		12-Aug-15	
			Depth Interval	0-1.6 feet	Qual	0-2.5 feet	Qual	2.5-6 feet	Qual	0-3.5 feet	Qual	0-3 feet	Qual	0-5 feet	Qual	0-3 feet	Qual	3-4.5 feet	Qual	0-4 feet	Qual	0-4 feet	Qual
	ME DEP Solid Waste Mgmnt - Beneficial Reuse	2x ME DEP Solid Waste Mgmnt - Beneficial Reuse	Units																				
Solids, Total	NS	NS	%	56.4		75.4		86.4		68		69.7		60.2		54.2		81.3		81.7		49	
Total Organic Carbon (Rep1)	NS	NS	%	2.3		0.836		0.239		1.52		-		-		1.09		0.398		-		-	
Total Organic Carbon (Rep2)	NS	NS	%	1.87		0.747		0.279		1.63		-		-		1.02		0.403		-		-	
Moisture	NS	NS	%	43.6		24.6		13.6		32		-		-		45.8		18.7		-		-	
% Total Gravel	NS	NS	%	32.4		33.4		27.3		14.7		-		-		14.4		1.3		-		-	
% Coarse Sand	NS	NS	%	5.9		8.6		21.1		8.4		-		-		7		3.4		-		-	
% Medium Sand	NS	NS	%	8.9		20.5		33		20.7		-		-		40.6		69.1		-		-	
% Fine Sand	NS	NS	%	23.3		27.7		14.9		38		-		-		13.6		19.1		-		-	
% Total Fines	NS	NS	%	29.5		9.8		3.7		18.2		-		-		24.4		7.1		-		-	
Total Metals																							
Arsenic, Total	29	58	mg/kg	17		12.4		10.4		7.28		7.07		43.7		37.5		63.4		52		14.8	
Cadmium, Total	8	16	mg/kg	0.225		0.2		0.067	U	0.134		2.87		1.42		0.618		1.15		1.23		1.03	
Chromium, Total	NS	NS	mg/kg	55.7		36.2		31.8		32.5		203		310		207		295		321		225	
Copper, Total	NS	NS	mg/kg	63.3		502		128		98.2		-		-		1720		5060		-		-	
Lead, Total	800	1600	mg/kg	55		69.7		137		65.6		7050		5290		1740		3700		5210		338	
Mercury, Total	60	120	mg/kg	0.144		0.177		0.018	U	0.09		0.327		0.796		0.653		0.632		1		0.596	
Nickel, Total	NS	NS	mg/kg	24.8		73		46.2		25.1		-		-		350		816		-		-	
Zinc, Total	NS	NS	mg/kg	156		520		507		638		-		-		9470		24800		-		-	
PAHs/PCB Congeners by GC/MS																							
Acenaphthene	NS	NS	mg/kg	0.0345	U	0.0104		0.00853	U	0.0284	U	0.368		0.0339		0.135	U	0.0149		0.0383		0.75	
Acenaphthylene	NS	NS	mg/kg	0.0345	U	0.02		0.00853	U	0.0284	U	0.0815		0.048		0.135	U	0.0228		0.136		0.137	
Anthracene	NS	NS	mg/kg	0.189		0.0641		0.0129		0.0416		0.893		0.109		0.135	U	0.0746		0.271		0.669	
Benz(a)anthracene	2	4	mg/kg	0.539		0.282		0.07		0.148		3.63		0.571		0.639		0.401		0.64		1.76	
Benzo(a)pyrene	8	16	mg/kg	0.465		0.244		0.0493		0.142		1.2		0.316		0.432		0.181		0.484		1.06	
Benzo(b)fluoranthene	5	10	mg/kg	0.521		0.26		0.0601		0.166		1.88		0.477		0.703		0.262		0.52		1.23	
Benzo(ghi)perylene	NS	NS	mg/kg	0.301		0.151		0.0276		0.1		0.42		0.2		0.24		0.119		0.305		0.46	
Benzo(k)fluoranthene	49	98	mg/kg	0.402		0.223		0.0522		0.121		1.54		0.354		0.428		0.171		0.431		0.975	
Chrysene	160	320	mg/kg	0.5		0.283		0.0792		0.149		2.92		0.719		1.22		1.36		1.03		1.78	
Cl10-BZ#209*	NS	NS	mg/kg	0.00345	U	0.000942	U	0.000853	U	0.00284	U	-		-		0.0135	U	0.00525		-		-	
Cl2-BZ#8*	NS	NS	mg/kg	0.00345	U	0.000942	U	0.000853	U	0.00284	U	-		-		0.0135	U	0.000959	U	-		-	
Cl3-BZ#18*	NS	NS	mg/kg	0.00345	U	0.00116		0.000853	U	0.00284	U	-		-		0.0135	U	0.000959	U	-		-	
Cl3-BZ#28*	NS	NS	mg/kg	0.00345	U	0.000942	U	0.000853	U	0.00284	U	-		-		0.0135	U	0.000959	U	-		-	
Cl4-BZ#44*	NS	NS	mg/kg	0.00345	U	0.00199		0.000853	U	0.00284	U	-		-		0.0135	U	0.00266		-		-	
Cl4-BZ#49	NS	NS	mg/kg	0.00345	U	0.000942	U	0.000853	U	0.00284	U	-		-		0.0135	U	0.0017		-		-	
Cl4-BZ#52*	NS	NS	mg/kg	0.00345	U	0.0043		0.000853	U	0.00284	U	-		-		0.0171		0.00342		-		-	
Cl4-BZ#66*	NS	NS	mg/kg	0.00345	U	0.000942	U	0.000853	U	0.00284	U	-		-		0.0135	U	0.00126		-		-	
Cl5-BZ#101*	NS	NS	mg/kg	0.00345	U	0.00657		0.000853	U	0.00284	U	-		-		0.0135	U	0.0074		-		-	
Cl5-BZ#105*	NS	NS	mg/kg	0.00345	U	0.00234		0.000853	U	0.00284	U	-		-		0.0135	U	0.00259		-		-	
Cl5-BZ#118*	NS	NS	mg/kg	0.00345	U	0.00538		0.000853	U	0.00284	U	-		-		0.0204		0.00571		-		-	
Cl5-BZ#87	NS	NS	mg/kg	0.00345	U	0.00249		0.000853	U	0.00284	U	-		-		0.0135	U	0.00372		-		-	
Cl6-BZ#128*	NS	NS	mg/kg	0.00345	U	0.00195		0.000853	U	0.00284	U	-		-		0.0135	U	0.00186		-		-	
Cl6-BZ#138*	NS	NS	mg/kg	0.00345	U	0.00723		0.000853	U	0.00284	U	-		-		0.0135	U	0.00654		-		-	
Cl6-BZ#153*	NS	NS	mg/kg	0.00345	U	0.00435		0.000853	U	0.00284	U	-		-		0.0135	U	0.00494		-		-	
Cl7-BZ#170*	NS	NS	mg/kg	0.00345	U	0.00101		0.000853	U	0.00284	U	-		-		0.0135	U	0.00205		-		-	
Cl7-BZ#180*	NS	NS	mg/kg	0.00345	U	0.00148		0.000853	U	0.00284	U	-		-		0.0135	U	0.00273		-		-	
Cl7-BZ#183	NS	NS	mg/kg	0.00345	U	0.000942	U	0.000853	U	0.00284	U	-		-		0.0135	U	0.00101		-		-	
Cl7-BZ#184	NS	NS	mg/kg	0.00345	U	0.000942	U	0.000853	U	0.00284	U	-		-		0.0135	U	0.000959	U	-		-	
Cl7-BZ#187*	NS	NS	mg/kg	0.00345	U	0.000942	U	0.000853	U	0.00284	U	-		-		0.0135	U	0.00197		-		-	
Cl8-BZ#195*	NS	NS	mg/kg	0.00345	U	0.000942	U	0.000853	U	0.00284	U	-		-		0.0135	U	0.000959	U	-		-	
Cl9-BZ#206*	NS	NS	mg/kg	0.00345	U	0.000942	U	0.000853	U	0.00284	U	-		-		0.0135	U	0.0014		-		-	
Total PCB Congeners	0.74	1.48	mg/kg	0.1242		0.088708		0.030708		0.10224		-		-		0.507		0.107232		-		-	
Dibenz(a,h)anthracene	2	4	mg/kg	0.0785		0.0382		0.00853	U	0.0284	U	0.136		0.0504		0.135	U	0.0285		0.0708		0.126	
Fluoranthene	NS	NS	mg/kg	0.864		0.487		0.218		0.3		11.8		1.33		1.08		0.684		1.44		7.38	
Fluorene	NS	NS	mg/kg	0.0478		0.0195		0.00853	U	0.0284	U	0.61		0.0355		0.135	U	0.0328		0.0942		0.347	
Indeno(1,2,3-cd)Pyrene	14	28	mg/kg	0.33		0.162		0.0305		0.101		0.577		0.212		0.266		0.119		0.327		0.572	
Naphthalene	NS	NS	mg/kg	0.0345	U	0.0261		0.00853	U	0.0284	U	0.0615		0.079		0.135	U	0.0407		0.0197		0.0814	
Phenanthrene	NS	NS	mg/kg	0.487		0.209		0.0982		0.139		6.29		0.262		0.265		0.248		0.757		2.04	
Pyrene	NS	NS	mg/kg	1.16		0.791		0.215		0.352		8.84		2.93		2.63		1.51		1.83		4.99	

* - 18 PCB Congeners used in estimating total PCBs
NS - No standard established
If the result is highlighted in yellow, then it exceeds the ME DEP Solid Waste Management Beneficial Reuse Criteria
If the result is highlighted in blue, then it exceeds two times the ME DEP Solid Waste Management Beneficial Reuse Criteria
"**-**" = Indicates compound not analyzed
"**U**" = Indicates compound is Non Detect

Table 2: Bulk Physical and Chemical Analysis
Portsmouth Naval Shipyard - Berth 11
Kittery, Maine

			Client Sample ID	SC-07-S1		SC-06-S1		SC-06-S2		SC-05A-S1		SC-08		SC-09		SC-04-1		SC-04-2		SC-10-S1		SC-11	
			Sampling Date	02-DEC-14		03-DEC-14		03-DEC-14		05-DEC-14		12-Aug-15		12-Aug-15		26-NOV-14		26-NOV-14		12-Aug-15		12-Aug-15	
			Depth Interval	0-1.6 feet	Qual	0-2.5 feet	Qual	2.5-6 feet	Qual	0-3.5 feet	Qual	0-3 feet	Qual	0-5 feet	Qual	0-3 feet	Qual	3-4.5 feet	Qual	0-4 feet	Qual	0-4 feet	Qual
	ME DEP Solid Waste Mgmnt - Beneficial Reuse	2x ME DEP Solid Waste Mgmnt - Beneficial Reuse	Units																				
Organochlorine Pesticides																							
4,4'-DDD	NS	NS	mg/kg	0.000499		0.000284	U	0.000471	U	0.000426	U	-		-		0.00903		0.0906		-		-	
4,4'-DDE	NS	NS	mg/kg	0.000833		0.000284	U	0.000471	U	0.000426	U	-		-		0.00521		0.00258		-		-	
4,4'-DDT	NS	NS	mg/kg			0.000284	U					-		-		0.00179		0.0979		-		-	
4,4'-DDT	NS	NS	mg/kg	0.000348		0.00142	U	0.0011		0.000426	U	-		-		0.0111		0.258		-		-	
Aldrin	NS	NS	mg/kg	0.000348	U	0.000284	U	0.000471	U	0.000426	U	-		-		0.000337	U	0.00048	U	-		-	
cis-Chlordane	NS	NS	mg/kg	0.000348	U	0.000284	U	0.000471	U	0.000426	U	-		-		0.000669		0.00048	U	-		-	
cis-Nonachlor	NS	NS	mg/kg									-		-				0.00048	U	-		-	
cis-Nonachlor	NS	NS	mg/kg	0.000348	U	0.000284	U	0.000471	U	0.000426	U	-		-		0.000337	U	0.00959	U	-		-	
Dieldrin	NS	NS	mg/kg	0.000348	U	0.000284	U	0.000471	U	0.000426	U	-		-		0.0023		0.001		-		-	
Endosulfan I	NS	NS	mg/kg	0.000348	U	0.000284	U	0.000471	U	0.000426	U	-		-		0.000337	U	0.00048	U	-		-	
Endosulfan II	NS	NS	mg/kg	0.000348	U	0.000284	U	0.000471	U	0.000426	U	-		-		0.000426		0.00048	U	-		-	
Endrin	NS	NS	mg/kg			0.000284	U					-		-		0.000337	U	0.00048	U	-		-	
Endrin	NS	NS	mg/kg	0.000348	U	0.00142	U	0.000471	U	0.000426	U	-		-		0.00168	U	0.00959	U	-		-	
gamma-BHC	NS	NS	mg/kg	0.000348	U	0.000284	U	0.000471	U	0.000426	U	-		-		0.000337	U	0.00048	U	-		-	
Heptachlor	NS	NS	mg/kg	0.000348	U	0.000284	U	0.000471	U	0.000426	U	-		-		0.000337	U	0.00048	U	-		-	
Heptachlor epoxide	NS	NS	mg/kg	0.000695	U	0.000568	U	0.000942	U	0.000853	U	-		-		0.000673	U	0.000959	U	-		-	
Hexachlorobenzene	NS	NS	mg/kg	0.000695	U	0.000568	U	0.000942	U	0.000853	U	-		-		0.000673	U	0.000959	U	-		-	
Methoxychlor	NS	NS	mg/kg			0.00284	U					-		-		0.00337	U	0.0048	U	-		-	
Methoxychlor	NS	NS	mg/kg	0.00348	U	0.0142	U	0.00471	U	0.00426	U	-		-		0.0168	U	0.0959	U	-		-	
Oxychlordane	NS	NS	mg/kg	0.000695	U	0.000568	U	0.0018		0.00139		-		-		0.000673	U	0.000959	U	-		-	
Toxaphene	NS	NS	mg/kg			0.0143	U					-		-		0.0169	U	0.0241	U	-		-	
Toxaphene	NS	NS	mg/kg	0.0174	U	0.0713	U	0.0236	U	0.0214	U	-		-		0.0845	U	0.481	U	-		-	
trans-Chlordane	NS	NS	mg/kg	0.000348	U	0.000284	U	0.000471	U	0.000426	U	-		-		0.000337	U	0.00048	U	-		-	
trans-Nonachlor	NS	NS	mg/kg	0.000348	U	0.000284	U	0.000471	U	0.000426	U	-		-		0.00314		0.00048	U	-		-	
Polychlorinated Biphenyls by GC																							
Aroclor 1016	NS	NS	mg/kg	-		-		-		-		0.0114	U	0.0125	U	-		-		0.00969	U	0.0153	U
Aroclor 1221	NS	NS	mg/kg	-		-		-		-		0.0114	U	0.0125	U	-		-		0.00969	U	0.0153	U
Aroclor 1232	NS	NS	mg/kg	-		-		-		-		0.0114	U	0.0125	U	-		-		0.00969	U	0.0153	U
Aroclor 1242	NS	NS	mg/kg	-		-		-		-		0.0114	U	0.0125	U	-		-		0.00969	U	0.0153	U
Aroclor 1248	NS	NS	mg/kg	-		-		-		-		0.0114	U	0.0125	U	-		-		0.00969	U	0.0153	U
Aroclor 1254	NS	NS	mg/kg	-		-		-		-		0.0926		0.124		-		-		0.0388		0.093	
Aroclor 1260	NS	NS	mg/kg	-		-		-		-		0.0882		0.0842		-		-		0.0254		0.0825	
Aroclor 1262	NS	NS	mg/kg	-		-		-		-		0.0114	U	0.0125	U	-		-		0.00969	U	0.0153	U
Aroclor 1268	NS	NS	mg/kg	-		-		-		-		0.0114	U	0.0125	U	-		-		0.00969	U	0.0153	U
PCBs, Total	0.74	1.48	mg/kg	-		-		-		-		0.181		0.208		-		-		0.0642		0.176	
General Chemistry																							
Chromium, Hexavalent	38	76	mg/kg	-		-		-		-		1.1	U	1.3	U	-		-		0.98	U	1.6	U
Dioxin TEQ																							
Total TEQ	16	32	pg/g	-		-		-		-		6.947		11.101		-		-		2.1038		20.156	

* - 18 PCB Congeners used in estimating total PCBs
NS - No standard established
If the result is highlighted in yellow, then it exceeds the ME DEP Solid Waste Management Beneficial Reuse Criteria
If the result is highlighted in blue, then it exceeds two times the ME DEP Solid Waste Management Beneficial Reuse Criteria
"**-**" = Indicates compound not analyzed
"**U**" = Indicates compound is Non Detect

Table 3: Bulk Physical and Chemical Analysis
Portsmouth Naval Shipyard - Berth 13
Kittery, Maine

			Client Sample ID	SC-01-S1		SC-01-S2		SC-02-S1		SC-03-S1		SC-03-S2	
			Sampling Date	11-DEC-14		11-DEC-14		08-DEC-14		21-JAN-15		21-JAN-15	
			Depth Interval	0-2 feet	Qual	2-8 feet	Qual	0-8 feet	Qual	0-4 feet	Qual	4-7.2 feet	Qual
	ME DEP Solid Waste Mgmnt - Beneficial Reuse	2x ME DEP Solid Waste Mgmnt - Beneficial Reuse	Units										
Solids, Total	NS	NS	%	48.5		82		60		77		73.2	
Total Organic Carbon (Rep1)	NS	NS	%	2.38		0.163		2.25		0.868		0.414	
Total Organic Carbon (Rep2)	NS	NS	%	1.12		0.208		4		0.734		0.479	
Moisture	NS	NS	%	51.5		18		40		23		26.8	
% Total Gravel	NS	NS	%	41.5		31.9		14.5		10.9		29.9	
% Coarse Sand	NS	NS	%	9.7		4.9		15.3		8.2		10.7	
% Medium Sand	NS	NS	%	11.1		9		21.6		31.1		35.3	
% Fine Sand	NS	NS	%	13.3		17.4		17.1		41.9		20.7	
% Total Fines	NS	NS	%	24.4		36.8		31.5		7.9		3.4	
Total Metals													
Arsenic, Total	29	58	mg/kg	14.8		12.4		12.4		12.1		11.3	
Cadmium, Total	8	16	mg/kg	0.974		0.138		0.554		0.763		0.289	
Chromium, Total	NS	NS	mg/kg	79.9		30		89.7		99.3		72.4	
Copper, Total	NS	NS	mg/kg	238		37.5		74.5		764		445	
Lead, Total	800	1600	mg/kg	57		10.4		384		185		638	
Mercury, Total	60	120	mg/kg	0.421		0.372		5.95		0.844		0.586	
Nickel, Total	NS	NS	mg/kg	106		32.5		38.8		108		107	
Zinc, Total	NS	NS	mg/kg	160		55		215		1340		2480	
PAHs/PCB Congeners by GC/MS													
Acenaphthene	NS	NS	mg/kg	0.131		0.00478	U	0.213		0.12		0.522	
Acenaphthylene	NS	NS	mg/kg	0.0943		0.00478	U	0.0712		0.0182		0.022	
Anthracene	NS	NS	mg/kg	0.345		0.00478	U	0.323		0.143		0.262	
Benz(a)anthracene	2	4	mg/kg	1.31		0.0238		1.83		0.382		0.67	
Benzo(a)pyrene	8	16	mg/kg	0.905		0.0104		0.92		0.208		0.297	
Benzo(b)fluoranthene	5	10	mg/kg	1.1		0.016		1.44		0.298		0.47	
Benzo(ghi)perylene	NS	NS	mg/kg	0.5		0.00521		0.432		0.113		0.16	
Benzo(k)fluoranthene	49	98	mg/kg	0.948		0.0121		0.841		0.179		0.319	
Chrysene	160	320	mg/kg	1.42		0.02		1.6		0.395		2.03	
Cl10-BZ#209*	NS	NS	mg/kg	0.004	U	0.000478	U	0.00323	U	0.00129		0.00185	
Cl2-BZ#8*	NS	NS	mg/kg	0.004	U	0.000478	U	0.00323	U	0.00111	U	0.0013	U
Cl3-BZ#18*	NS	NS	mg/kg	0.004	U	0.000478	U	0.00323	U	0.002		0.0023	
Cl3-BZ#28*	NS	NS	mg/kg	0.004	U	0.000478	U	0.00323	U	0.00258		0.0013	U
Cl4-BZ#44*	NS	NS	mg/kg	0.024		0.000478	U	0.00529		0.04		0.00513	
Cl4-BZ#49	NS	NS	mg/kg	0.0174		0.000478	U	0.00581		0.0145		0.00275	
Cl4-BZ#52*	NS	NS	mg/kg	0.0658		0.000478	U	0.02		0.0917		0.00948	
Cl4-BZ#66*	NS	NS	mg/kg	0.0179		0.000478	U	0.00323	U	0.0184		0.00303	
Cl5-BZ#101*	NS	NS	mg/kg	0.179		0.000478	U	0.0133		0.138		0.0089	
Cl5-BZ#105*	NS	NS	mg/kg	0.0642		0.000478	U	0.00334		0.0292		0.00327	
Cl5-BZ#118*	NS	NS	mg/kg	0.149		0.000478	U	0.00727		0.0638		0.00686	
Cl5-BZ#87	NS	NS	mg/kg	0.0799		0.000478	U	0.00364		0.0606		0.00406	
Cl6-BZ#128*	NS	NS	mg/kg	0.038		0.000478	U	0.00323	U	0.0101		0.00144	
Cl6-BZ#138*	NS	NS	mg/kg	0.15		0.000478	U	0.0276		0.043		0.00775	
Cl6-BZ#153*	NS	NS	mg/kg	0.092		0.000478	U	0.0252		0.0245		0.00576	
Cl7-BZ#170*	NS	NS	mg/kg	0.0187		0.000478	U	0.0153		0.00375		0.00419	
Cl7-BZ#180*	NS	NS	mg/kg	0.0221		0.000478	U	0.0237		0.0055		0.00392	
Cl7-BZ#183	NS	NS	mg/kg	0.00616		0.000478	U	0.00605		0.00157		0.0013	U
Cl7-BZ#184	NS	NS	mg/kg	0.004	U	0.000478	U	0.00323	U	0.00111	U	0.0013	U
Cl7-BZ#187*	NS	NS	mg/kg	0.0108		0.000478	U	0.0141		0.0032		0.00254	
Cl8-BZ#195*	NS	NS	mg/kg	0.004	U	0.000478	U	0.00323	U	0.00111	U	0.0013	U
Cl9-BZ#206*	NS	NS	mg/kg	0.004	U	0.000478	U	0.00446		0.00275		0.00397	
Total PCB Congeners	0.74	1.48	mg/kg	1.711		0.017208		0.36434		0.96398		0.14858	
Dibenz(a,h)anthracene	2	4	mg/kg	0.144		0.00478	U	0.116		0.0303		0.0404	
Fluoranthene	NS	NS	mg/kg	3.19		0.099		3.2		1.61		3.57	
Fluorene	NS	NS	mg/kg	0.172		0.00478	U	0.132		0.0908		0.462	
Indeno(1,2,3-cd)Pyrene	14	28	mg/kg	0.572		0.00522		0.468		0.128		0.186	
Naphthalene	NS	NS	mg/kg	0.04	U	0.00478	U	0.0929		0.114		0.161	
Phenanthrene	NS	NS	mg/kg	1.24		0.00658		0.652		0.597		1.54	
Pyrene	NS	NS	mg/kg	4.9		0.111		6.84		1.23		3.47	

* - 18 PCB Congeners used in estimating total PCBs
NS - No standard established
If the result is highlighted in yellow, then it exceeds the ME DEP Solid Waste Management Beneficial Reuse Criteria
If the result is highlighted in blue, then it exceeds two times the ME DEP Solid Waste Management Beneficial Reuse Criteria
"-" = Indicates compound not analyzed
"**U**" = Indicates compound is Non Detect

Table 3: Bulk Physical and Chemical Analysis
Portsmouth Naval Shipyard - Berth 13
Kittery, Maine

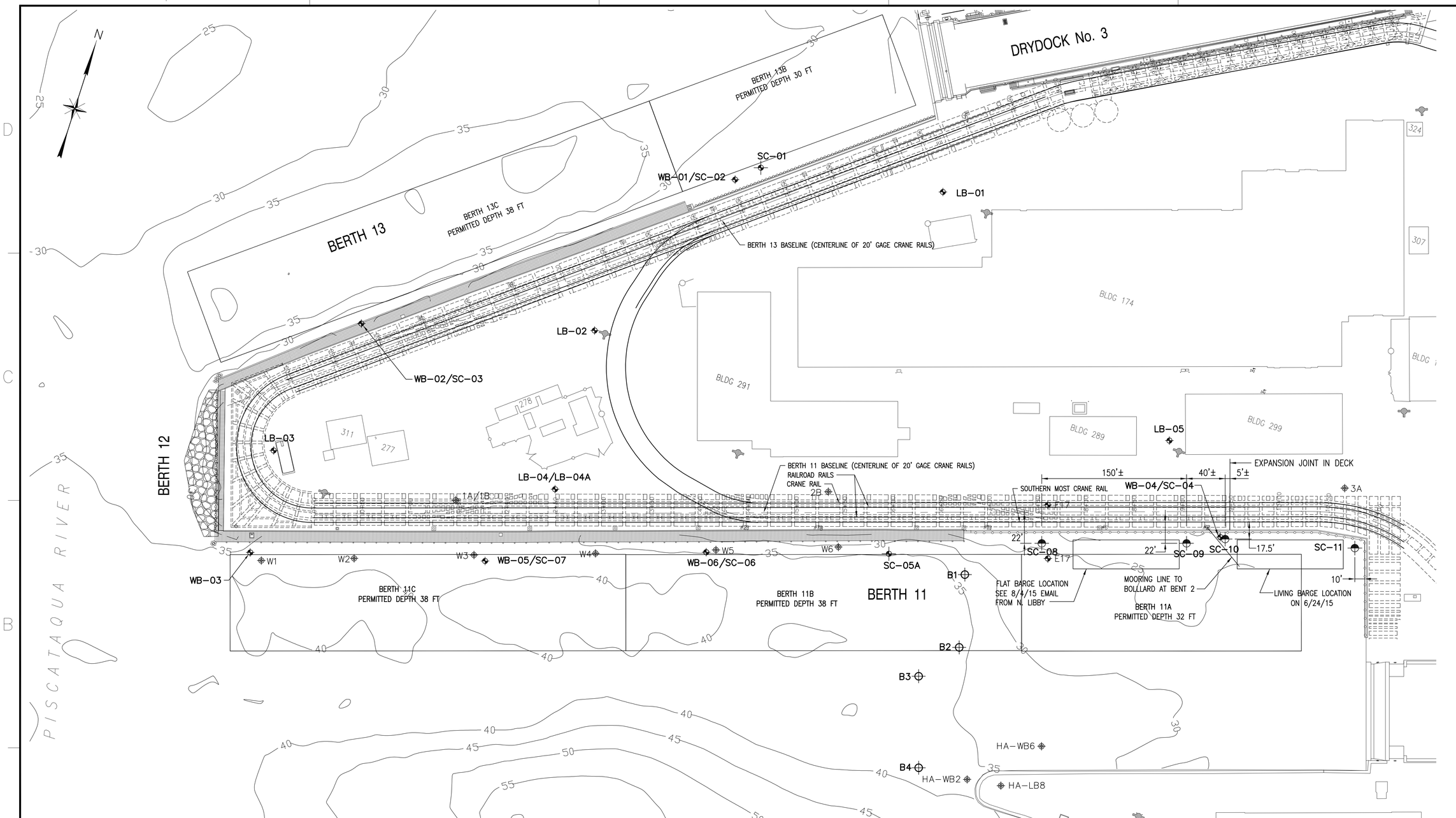
			Client Sample ID	SC-01-S1		SC-01-S2		SC-02-S1		SC-03-S1		SC-03-S2	
			Sampling Date	11-DEC-14		11-DEC-14		08-DEC-14		21-JAN-15		21-JAN-15	
			Depth Interval	0-2 feet	Qual	2-8 feet	Qual	0-8 feet	Qual	0-4 feet	Qual	4-7.2 feet	Qual
	ME DEP Solid Waste Mgmnt - Beneficial Reuse	2x ME DEP Solid Waste Mgmnt - Beneficial Reuse	Units										
Organochlorine Pesticides													
4,4'-DDD	NS	NS	mg/kg	0.0022		0.000239	U	0.00726		0.0015		0.00343	
4,4'-DDE	NS	NS	mg/kg	0.0004	U	0.000239	U	0.00318		0.000554	U	0.00145	
4,4'-DDT	NS	NS	mg/kg	0.00785				0.00196		0.00327		0.000929	
4,4'-DDT	NS	NS	mg/kg	0.0102		0.000239	U	0.00323	U				
Aldrin	NS	NS	mg/kg	0.0004	U	0.000239	U	0.000323	U	0.000554	U	0.000652	U
cis-Chlordane	NS	NS	mg/kg	0.0004	U	0.000239	U	0.000558		0.000554	U	0.000652	U
cis-Nonachlor	NS	NS	mg/kg							0.000554	U	0.000652	U
cis-Nonachlor	NS	NS	mg/kg	0.0004	U	0.000239	U	0.000323	U				
Dieldrin	NS	NS	mg/kg	0.0004	U	0.000239	U	0.000474		0.000554	U	0.000652	U
Endosulfan I	NS	NS	mg/kg	0.0004	U	0.000239	U	0.000323	U	0.000554	U	0.000652	U
Endosulfan II	NS	NS	mg/kg	0.0004	U	0.000239	U	0.00048		0.000554	U	0.000652	U
Endrin	NS	NS	mg/kg	0.0004	U			0.000323	U	0.000554	U	0.000652	U
Endrin	NS	NS	mg/kg	0.004	U	0.000239	U	0.00323	U				
gamma-BHC	NS	NS	mg/kg	0.0004	U	0.000239	U	0.000323	U	0.000554	U	0.000652	U
Heptachlor	NS	NS	mg/kg	0.0004	U	0.000239	U	0.000323	U	0.000554	U	0.000652	U
Heptachlor epoxide	NS	NS	mg/kg	0.0008	U	0.000478	U	0.000645	U	0.00111	U	0.0013	U
Hexachlorobenzene	NS	NS	mg/kg	0.0008	U	0.000478	U	0.000645	U	0.00111	U	0.0013	U
Methoxychlor	NS	NS	mg/kg	0.004	U			0.00323	U	0.00554	U	0.00652	U
Methoxychlor	NS	NS	mg/kg	0.04	U	0.00239	U	0.0323	U				
Oxychlordane	NS	NS	mg/kg	0.0008	U	0.000478	U	0.000645	U	0.00111	U	0.0013	U
Toxaphene	NS	NS	mg/kg	0.0201	U			0.0162	U	0.0278	U	0.0327	U
Toxaphene	NS	NS	mg/kg	0.201	U	0.012	U	0.162	U				
trans-Chlordane	NS	NS	mg/kg	0.0004	U	0.000239	U	0.000323	U	0.000554	U	0.000652	U
trans-Nonachlor	NS	NS	mg/kg	0.0119		0.000239	U	0.00264		0.000554	U	0.000652	U
Polychlorinated Biphenyls by GC													
Aroclor 1016	NS	NS	mg/kg	-		-		-		-		-	
Aroclor 1221	NS	NS	mg/kg	-		-		-		-		-	
Aroclor 1232	NS	NS	mg/kg	-		-		-		-		-	
Aroclor 1242	NS	NS	mg/kg	-		-		-		-		-	
Aroclor 1248	NS	NS	mg/kg	-		-		-		-		-	
Aroclor 1254	NS	NS	mg/kg	-		-		-		-		-	
Aroclor 1260	NS	NS	mg/kg	-		-		-		-		-	
Aroclor 1262	NS	NS	mg/kg	-		-		-		-		-	
Aroclor 1268	NS	NS	mg/kg	-		-		-		-		-	
PCBs, Total	0.74	1.48	mg/kg	-		-		-		-		-	
General Chemistry													
Chromium, Hexavalent	38	76	mg/kg	-		-		-		-		-	
Dioxin TEQ													
Total TEQ	16	32	pg/g	-		-		-		-		-	

* - 18 PCB Congeners used in estimating total PCBs
NS - No standard established
If the result is highlighted in yellow, then it exceeds the ME DEP Solid Waste Management Beneficial Reuse Criteria
If the result is highlighted in blue, then it exceeds two times the ME DEP Solid Waste Management Beneficial Reuse Criteria
"**-**" = Indicates compound not analyzed
"**U**" = Indicates compound is Non Detect

Table 4: TCLP Metals Analysis
Portsmouth Naval Shipyard - Berths 11 and 13
Kittery, Maine

		BERTH 11							BERTH 13		
	Sample ID	SC-06-S2	SC-08	SC-09	SC-04-1	SC-04-2	SC-10-S1	SC-11	SC-02-S1	SC-03-S1	SC-03-S2
	Sampling Date	3-Dec-14	12-Aug-15	12-Aug-15	26-Nov-14	26-Nov-14	12-Aug-15	12-Aug-15	8-Dec-14	21-Jan-15	21-Jan-15
Parameter (mg/L)	EPA TCLP Limits (mg/L)										
Chromium, TCLP	5.0		<0.2	<0.2	<2.0	<2.0	<0.2	<0.2			
Lead, TCLP	5.0	<5.0	<0.5	<0.5	<5.0	<5.0	<0.5	<0.5	<5.0	<5.0	1.6
Mercury, TCLP	0.2								<0.0010		

Figures



PLAN

SCALE: 1"=50'

SAMPLING NOTES:

1. LOCATE SAMPLES SC-09 AND SC-10 AS CLOSE TO THE BARGE AS POSSIBLE WITHIN THE OFFSET FROM RAIL AS INDICATED.
2. PROJECT CONSTRUCTION WILL REQUIRE DREDGING TO ELEVATION -37' MLLW.
3. HISTORIC DOCUMENTS INDICATE DEEPEST BERTH DEPTH WAS ELEVATION -25' MLLW.

SAMPLE	NORTHING	EASTING
SC-08	90866.30	2798508.57
SC-09	90911.55	2798651.58
SC-10	90927.82	2798688.39
SC-11	90959.46	2798819.30

HORIZONTAL DATUM IS BASED ON THE MAINE WEST (LAMBERT) STATE PLANE COORDINATE SYSTEM, ZONE 1802, U.S. SURVEY FEET (NAD83).

LEGEND:

- B1 — ADDITIONAL REQUESTED BORINGS
- WB-04 — WATER BORING LOCATION
- LB-02 — LAND BORING LOCATION
- SC-01 — SEDIMENT SAMPLE LOCATION
- W6 — PRIOR BORINGS
- SC-08 — PROPOSED ADDITIONAL SEDIMENT SAMPLE LOCATION

NOTES:

1. DEPTH SOUNDINGS AND/OR CONTOURS ARE SHOWN IN FEET BELOW MEAN LOWER LOW WATER DATUM.

GRAPHIC SCALE

0 25' 50' 100'

1" = 50'

SYM	DESCRIPTION	DATE	APPR

NAVFAC

NOT FOR CONSTRUCTION

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES — DRW — CHK —

PM/DM

BRANCH MANAGER

CHIEF ENG/ARCH

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
PUBLIC WORKS DEPARTMENT ~ MAINE
NAVAL SHIPYARD ~ KITTERY, ME
PORTSMOUTH NAVAL SHIPYARD
KITTERY, MAINE

DRYDOCK NO. 1
LIFTING AND HANDLING IMPROVEMENTS

ADDITIONAL SAMPLE LOCATIONS PLAN

MAXIMO No.: NA

EPROJECT NO.: NA

CONSTR. CONTR. NO. N40085-XX-C-XXXX

NAVFAC DRAWING NO. —

SHEET 1 OF 1

SL1

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: R:\TP-104A PNSY Lifting Study\02 CADD\08 Structural\01 Permits & Report Figs\Boring Plans\Superseded\ADDITIONAL SAMPLE LOCATIONS PLAN.dwg LAYOUT NAME: SAMPLE LOCATIONS PLAN PLOTTED: Friday, August 07, 2015 - 1:59pm USER: tripp_r

Appendix A

Core Logs

Captain - Jody Young
Driller - Sam Cooley
Helper - Sam Shaw

35° Light Snow

15' west and 5' north of planned

SEDIMENT SAMPLE FIELD LOG SHEET

Sediment Sample ID : SC-01

Depth of Water During Sampling:

Date Collected : 12/11/14 **Time Collected:**

Logged By : Matt Dodson

Project Name: Portsmouth Naval Shipyard, Kittery Maine

Project No.: 41242-000

Client: Fay, Spofford, and Thorndike

Sediment Spoon Size : 2" : 0-2, 2-4, 4-6, 6-8 , 3" 0-4' and 4-8'

Penetration/Recovery (ft/ft, observed during sampling) : 0-2 2/1.0, 2-4 2/0.5, 4-6 2/0.7, 6-8 2/0.4

Depth Interval	Sample Description	Comments
0.0 – 2.0	Black sandy ORGANIC SOIL with gravel (OL/OH), no structure, slight H_2S and petroleum like odors, wet. Trace wood and organic fibers, shell specks and particles occasional trace sheen. – BENTHIC ZONE –	Due to poor recovery with 2in spoon collected additional sample for volume using 3" spoon over a 4' interval
2.0 – 4.0	Olive gray to brown lean CLAY (CL), mps 1.0 in, no structure, no odor, wet.	
4.0 – 6.0	Gray to light brown sandy lean CLAY (CL), mps 1.2 in, no structure, no odor, wet.	0-4 and 4-8'.
6.0 – 8.0	Gray gravelly lean CLAY (CL), mps 1.5 in, no structure, no odor, wet – MARINE DEPOSITS –	

Time	Sample ID	Composite Interval	Approx. fines (< or >10%)	Physical Sample	Chemical Sample	Comments:	Legend:
	SC-01-S1	0-2	60	Yes or No	Yes or No		use USCS
	SC-01-S2	2-8	70	Yes or No	Yes or No		
				Yes or No	Yes or No		
				Yes or No	Yes or No		

Captain Jolly Young
Driller Sam Cadary
Helper Sam Shaw

Cold 15° breezy occasional flurries.
Rising Mud Tide High Tide ~1300

SEDIMENT SAMPLE FIELD LOG SHEET

Sediment Sample ID : SC-02

Depth of Water During Sampling: 29.0'

Date Collected : 12/8/14 **Time Collected:** 0920

Logged By : Matt Dodson

Project Name: Portsmouth Naval Shipyard, Kittery Maine

Project No.: 41242-000

Client: Fay, Spofford, and Thorndike

Sediment Spoon Size : 2".

Penetration/Recovery (ft/ft, observed during sampling) : 6.0/2.0 + 2.0/1.4

Depth Interval	Sample Description	Comments
0.0 – 6.0	NOTE: spoon dropped 6' upon placing @ mud surface Black ORGANIC SOIL with sand (OL/OH) no structure, faint H_2S odor, wet, 5% shell specks/particles, trace organic fibers, trace worms, occasional trace sheen — BENTHIC ZONE —	~25% SAND + Gravel 2" spoon Dropped 6' below mud when lowered into casing.
6.0 – 8.0	Similar to above except sandier/more gravel "Sandy black ORGANIC SOIL" (OL/OH). ~5% occasional sheen.	~45% sand + gravel S1 – composit of 2 spoons 0-6' and 6-8'

Time	Sample ID	Composite Interval	Approx. fines (< or >10%)	Physical Sample	Chemical Sample	Comments:	Legend:
0920	SC-02-01	0.0 – 8.0	65%	Yes or No	Yes or No	Composit of 2 spoons 0-6 and 6-8'	use USCS
				Yes or No	Yes or No		
				Yes or No	Yes or No		
				Yes or No	Yes or No		

Driller: Sam Cooley
Helper: Sam Shaw
Captain: Jody Young.

Drizzle to Snow 42-36°
Rising tide 25.5-27.0 ft of water

SEDIMENT SAMPLE FIELD LOG SHEET

Sediment Sample ID : SC-04

Depth of Water During Sampling: 25.5 - 27.0'

Date Collected : 11/26/14 **Time Collected:**

Logged By : Matthew Dodson

Project Name: Portsmouth Naval Shipyard, Kittery Maine

Project No.: 41242-000

Client: Fay, Spofford, and Thorndike

Sediment Spoon Size : 0-3' 2" 3-4.5' 3"

Penetration/Recovery (ft/ft, observed during sampling) : 0-3'/0.9' 3-4.5/17"

Depth Interval	Sample Description	Comments
1.0 – 3.0	Very soft black sandy ORGANIC SOIL (OL/OH), mps 1.0in, becoming slightly more sandy with depth, H_2S/organic odor, wet, 5% shells/fragments, trace wood fibers.	Composit of spoon samples 1 and 2 both 2" spoons, 0.0 – 3.0' below mudline
3.0 – 4.5	Loose black (organic) silty SAND (SM), mps 2.5in, layered, occasionally more or less sandy slight H_2S/organic odor, wet.	3rd spoon sample (3in), composited from 3.0 – 4.5'

Time	Sample ID	Composite Interval	Approx. fines (< or >10%)	Physical Sample	Chemical Sample	Comments:	Legend:
1045	SC-04-1	0.0 – 3.0'	55%	Yes or No	Yes or No		use USCS
1120	SC-04-2	3.0 – 4.5		Yes or No	Yes or No		
				Yes or No	Yes or No		
				Yes or No	Yes or No		

SC-05 7' south of planned
SC-05A 7' south of planned
10' West of planned

Captain Jody Young
Driller - Sam Cooley
Helper - Sam Shaw

SEDIMENT SAMPLE FIELD LOG SHEET

Sediment Sample ID : SC-05A

Project Name: Portsmouth Naval Shipyard, Kittery Maine

Project No.: 41242-000

Depth of Water During Sampling: 43.0-41.5'

Client: Fay, Spofford, and Thorndike

Date Collected : 12/5/14 **Time Collected:** 1000-1140

Sediment Spoon Size : 2"

Logged By : Matt Dodson

Penetration/Recovery (ft/ft, observed during sampling) : 2" Spoon 1.0/1.0 3" Spoon 1.0/0.4

Depth Interval	Sample Description	Comments
0.0 – 2.0	Black ORGANIC SOIL with sand (OL/OH), no structure, faint H_2S odor, wet. trace worms, shell specks/fragments. - BENTHIC ZONE -	Composit of 2 spoons, 2" + 3" driven same depth/penetration
2.0 – 2.9	Similar to above	
2.9 – 3.5	Black (organic) silty SAND with gravel (SM), mps 1.2in no structure, no odor, wet, 10% shell specks and fragments.	NOTE: unable to separate stratum from above due to refusal/lack of recovery,
	REFUSAL on PROBABLE BEDROCK @ 3.5' BELOW MUDLINE Advance roller bit to 4.5' into probable rock to confirm.	wanted to represent all sediment within dredge zone.

Time	Sample ID	Composite Interval	Approx. fines (< or >10%)	Physical Sample	Chemical Sample
1000-1140	SC-05-S1	0.0-3.5	70%	(Yes) or No	(Yes) or No
				Yes or No	Yes or No
				Yes or No	Yes or No
				Yes or No	Yes or No

Comments: Combined 2 stratum due to refusal + recovery, needed to represent all sediment within dredge zone

Legend: use USCS

Captain Tody Young
Driller Sam Cooley
Helper Sam Shaw.

37.8
- 1.5
35.3

1050 + 6.0
1210 + 7.7

SEDIMENT SAMPLE FIELD LOG SHEET

Sediment Sample ID : SC-06

Depth of Water During Sampling: (S1) ~45.0 - (S2) ~41.0'

Date Collected : 12/3/14 **Time Collected:**

Logged By : Matthew Dodson

Project Name: Portsmouth Naval Shipyard, Kittery Maine

Project No.: 41242-000

Client: Fay, Spofford, and Thorndike

Sediment Spoon Size : 2"

Penetration/Recovery (ft/ft, observed during sampling) : SC-06-S1

Depth Interval	Sample Description	Comments
0.0 - 2.5	Hard black to olive brown sandy ORGANIC SOIL (OL/OH) interbedded with 20% poorly to well graded SAND with gravel (SP/SW), mps 1.2 in, slight H_2S odor, wet, trace shell specks/particles. - BENTHIC ZONE -	SC-06-S1 collected as composit from 2 spoons.
2.5 - 4.0	Medium dense gray brown poorly graded SAND (SP), mps 1.3 in, becomes more coarse with depth (to coarse SAND by 3.5 ft), no odor, wet, occasional layers with (organic) silt, trace shell particles/specks. - FLUVIAL DEPOSITS -	SC-06-S2 composit from 2 spoons.
4.0 - 6.0	Medium dense gray brown well graded SAND with gravel (SW), mps 1.0 in, no visible structure, no odor, wet. - FLUVIAL DEPOSITS -	

Time	Sample ID	Composite Interval	Approx. fines (< or >10%)	Physical Sample	Chemical Sample	Comments:
1050	SC-06-S1	0.0-2.5	60%	Yes or No	Yes or No	
1210	SC-06-S2	2.5-6.0	5%	Yes or No	Yes or No	maybe? ~5% fines or less.
				Yes or No	Yes or No	
				Yes or No	Yes or No	

Legend: use USCS

Captain Jody Young
Driller Sam Cooley
Helper Sam Shaw

SEDIMENT SAMPLE FIELD LOG SHEET

Sediment Sample ID : SC-07

Project Name: Portsmouth Naval Shipyard, Kittery Maine

Project No.: 41242-000

Depth of Water During Sampling:

Client: Fay, Spofford, and Thorndike

Date Collected : 12/2/14 **Time Collected:**

Sediment Spoon Size : 1.375 ID 2" Spoon.

Logged By : Matt Dodson

Penetration/Recovery (ft/ft, observed during sampling) : 1.9/1.9

Depth Interval	Sample Description	Comments
0.0 – 1.7	Black sandy ORGANIC SOIL (OL/OH) no structure, slight H_2S odor, wet, Sr. shell specks, trace wood fibers, 10% angular gravel. - BENTHIC ZONE -	2" Spoon Drove 23" before refusal. Bottom 3" of recovery is decomposed BEDROCK see below
1.7 – 1.9	Brown to dark gray well graded GRAVEL with silt and sand (GW-GM), mps 1.3in, no visible structure, no odor wet - PROBABBLE HEIGHLY WEATHERED BEDROCK -	NOTE: Did not collect weathered BEDROCK for analysis.

Time	Sample ID	Composite Interval	Approx. fines (< or >10%)	Physical Sample	Chemical Sample
1105	SC-07-S1	0.0 - 1.6	65%	Yes or No	Yes or No
				Yes or No	Yes or No
				Yes or No	Yes or No
				Yes or No	Yes or No

Comments: 1.6 – 1.8 primarily gravel only 2" Recovery, did no collect sample due to recovery and lack of fines.

Legend: use USCS

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2014-1121-HAI-PNSY Sediment Sampling Form-D1.xls

SEDIMENT SAMPLE
FIELD LOG SHEET

Sediment Sample ID : SC-03

Depth of Water During Sampling: 39.0 -

Date Collected : 1/21/15 **Time Collected:**

Logged By : Matthew Dodson

Project Name: Portsmouth Naval Shipyard, Kittery Maine

Project No.: 41242-000

Client: Fay, Spofford, and Thorndike

Sediment Spoon Size : 2.0in / 3in

Penetration/Recovery (ft/ft, observed during sampling): S1 1.3/2.0 S2

	Depth Interval	Sample Description	Comments
S1	0.0 – 2.0	Black (organic) silty SAND with gravel (SM), mps 2.5in, no structure, slight unnatural industrial-like odor, wet, trace - 5% shell fragments. - ESTUARINE DEPOSITS -	- ESTUARINE DEPOSITS -
S2	2.0 – 4.0	Similar to above interbedded with black sandy ORGANIC SOIL (OL/OH), faint unnatural industrial-like odor, wet, trace organic fibers.	
S3	4.0 – 6.0	Black poorly graded SAND with (organic) silt (SP-SM), mps 1.0 in, faint unnatural industrial-like odor, faint H_2S like odor, wet; occasional sandy ORGANIC SOIL layers (5-10%).	- ESTUARINE DEPOSITS -
S4	6.0 – 7.2	Similar to above except finer less organic, no ORGANIC SOIL layers, no visible structure, faint unnatural industrial-like odor, wet.	
		NOTE: S4 driven to 7.4' but bottom 2in of recovery is decomposed/weathered gray bedrock, not included in composit.	

Time	Sample ID	Composite Interval	Approx. fines (< or >10%)	Physical Sample	Chemical Sample	Comments:	Legend:
1100	SC-03-S1	0.0-4.0'	20-25%	Yes or No	Yes or No		use USCS
1200	SC-03-S2	4.0-7.2'	~10%	Yes or No	Yes or No		
				Yes or No	Yes or No		
				Yes or No	Yes or No		

VIBRACORE FIELD LOG SHEET

2nd Attempt
2798519.32 90850.29

Project: Portsmouth Naval Shipyard/ N492-003.01 **CORE ID:** SC-08 **E:** 2798515.05 **N:** 90865.83

Contractor: CR Envt'l **Vibracore Size :** 4-inch **Penetration:** 5.2/5.3 **Date Collected :** 8/12/15

Depth to sediment: ≈ 33' **Recovery:** 3.8/3.5 **Date Logged:** 8/12/15

Weather (sky/wind/sea): Clear/<5mph/calm **Logged By :** M. Phillips

Depth (feet)	Sample ID	Sample Interval (ft)	Sample Time	%Fines >/<10	Phys Smpl?	Chem Smpl?	Material Description	Torvane (kg/cm²)	Vane (ratio) (2.5 1 0.2)
1	SC-08	0-3	1515	>	N	Y	0-3.8 wet, Blk, Silty Sand, trace med. Coarse Sand, trace shells, trace fine Sand.		¾" 1" 1 ⅞"
2									¾" 1" 1 ⅞"
3									¾" 1" 1 ⅞"
4									¾" 1" 1 ⅞"
5									¾" 1" 1 ⅞"
6									¾" 1" 1 ⅞"
7									¾" 1" 1 ⅞"
8									¾" 1" 1 ⅞"
9									¾" 1" 1 ⅞"
10									¾" 1" 1 ⅞"
11									¾" 1" 1 ⅞"
12									¾" 1" 1 ⅞"
13									¾" 1" 1 ⅞"
14									¾" 1" 1 ⅞"
15									¾" 1" 1 ⅞"
16									¾" 1" 1 ⅞"

Comments:

VIBRACORE FIELD LOG SHEET

Project: Portsmouth Naval Shipyard/ N492-003.01

CORE ID: SC-9 **E:** 2798686.02 **N:** 90916.40

Contractor: CR Envt'l **Vibracore Size :** 4-inch

Penetration: 6.3' **Date Collected :** 8/12/15

Depth to sediment: ~ 24.5

Recovery: 5.3' **Date Logged:** 8/12/15

Weather (sky/wind/sea): Clear / <5 mph / Calm

Logged By : M. Phillips

Depth (feet)	Sample ID	Sample Interval (ft)	Sample Time	%Fines >/<10	Phys Smpl?	Chem Smpl?	Material Description	Torvane (kg/cm²)	Vane (ratio) (2.5 1 0.2)
1	SC-09	0-5	1445	>	N	Y	0-5 wet, Blk, Silty Sand, trace shells, trace medium sand.		¾" 1" 1 ⅞"
2									¾" 1" 1 ⅞"
3									¾" 1" 1 ⅞"
4									¾" 1" 1 ⅞"
5									¾" 1" 1 ⅞"
6									¾" 1" 1 ⅞"
7									¾" 1" 1 ⅞"
8									¾" 1" 1 ⅞"
9									¾" 1" 1 ⅞"
10									¾" 1" 1 ⅞"
11									¾" 1" 1 ⅞"
12									¾" 1" 1 ⅞"
13									¾" 1" 1 ⅞"
14									¾" 1" 1 ⅞"
15									¾" 1" 1 ⅞"
16									¾" 1" 1 ⅞"

Comments:

VIBRACORE FIELD LOG SHEET

Project: Portsmouth Naval Shipyard/ N492-003.01

CORE ID: [redacted] SC-10 **E:** 2798668.10 **N:** 90904.10

Contractor: CR Envt'l **Vibracore Size :** 4-inch

Penetration: 6'11" **Date Collected :** 8/12/15

Depth to sediment: ≈ 27'

Recovery: 5'2" **Date Logged:** 8/12/15

Weather (sky/wind/sea): Clear/<5mph/calm

Logged By : M. Phillips

Depth (feet)	Sample ID	Sample Interval (ft)	Sample Time	%Fines >/<10	Phys Smpl?	Chem Smpl?	Material Description	Torvane (kg/cm²)	Vane (ratio) (2.5 1 0.2)
1	SC-10-S1	0-4	1423	>	N	Y	0-4' wet, Blk, Silty Sand, trace wood, decomposing organic odor, trace fine gravel, trace medium sand.		¾" 1" 1⅞"
2									¾" 1" 1⅞"
3									¾" 1" 1⅞"
4									¾" 1" 1⅞"
5				<	N	N	4-5.2' wet, Brn, Fine Sand + Silt.		¾" 1" 1⅞"
6									¾" 1" 1⅞"
7									¾" 1" 1⅞"
8									¾" 1" 1⅞"
9									¾" 1" 1⅞"
10									¾" 1" 1⅞"
11									¾" 1" 1⅞"
12									¾" 1" 1⅞"
13									¾" 1" 1⅞"
14									¾" 1" 1⅞"
15									¾" 1" 1⅞"
16									¾" 1" 1⅞"

Comments:

VIBRACORE FIELD LOG SHEET

Project: Portsmouth Naval Shipyard/ N492-003.01

CORE ID: (MP) [redacted] SC-11 **E:** 2798817.10 **N:** 90931.3

Contractor: CR Envt'l **Vibracore Size :** 4-inch

Penetration: 6.6' **Date Collected :** 8/12/15

Depth to sediment: ≈ 18'

Recovery: 5.2' **Date Logged:** 8/12/15

Weather (sky/wind/sea): Clear / <5mph / calm

Logged By : M. Phillips

Depth (feet)	Sample ID	Sample Interval (ft)	Sample Time	%Fines >/<10	Phys Smpl?	Chem Smpl?	Material Description	Torvane (kg/cm²)	Vane (ratio) (2.5 1 0.2)
1							0-5.2 wet, Blk, silty sand, trace concrete, trace fine gravel, trace glass, trace wood.		¾" 1" 1 ⅞"
2	SC-11 @ 1350	0-4	1350	>	N	Y			¾" 1" 1 ⅞"
3									¾" 1" 1 ⅞"
4									¾" 1" 1 ⅞"
5									¾" 1" 1 ⅞"
6									¾" 1" 1 ⅞"
7									¾" 1" 1 ⅞"
8									¾" 1" 1 ⅞"
9									¾" 1" 1 ⅞"
10									¾" 1" 1 ⅞"
11									¾" 1" 1 ⅞"
12									¾" 1" 1 ⅞"
13									¾" 1" 1 ⅞"
14									¾" 1" 1 ⅞"
15									¾" 1" 1 ⅞"
16									¾" 1" 1 ⅞"

Comments: Petroleum odor.

Appendix B

Bulk Chemistry and Physical Laboratory Results

ANALYTICAL REPORT

Lab Number:	L1429023
Client:	ESS Group, Inc. 100 Fifth Avenue 5th Floor Waltham, MA 02451
ATTN:	Susan Herz
Phone:	(781) 419-7732
Project Name:	PNSY
Project Number:	N492-000
Report Date:	01/09/15

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), 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: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1429023-01	SC-04-1	SEDIMENT	KITTERY, MAINE	11/26/14 10:45	12/01/14
L1429023-02	SC-04-2	SEDIMENT	KITTERY, MAINE	11/26/14 11:20	12/01/14
L1429023-03	SC-07-S1	SEDIMENT	KITTERY, MAINE	12/02/14 11:05	12/04/14
L1429023-04	SC-06-S1	SEDIMENT	KITTERY, MAINE	12/03/14 10:50	12/04/14
L1429023-05	SC-06-S2	SEDIMENT	KITTERY, MAINE	12/03/14 12:10	12/04/14
L1429023-06	SC-05A-S1	SEDIMENT	KITTERY, MAINE	12/05/14 11:40	12/08/14
L1429023-07	SC-02-S1	SEDIMENT	KITTERY, MAINE	12/08/14 09:20	12/10/14
L1429023-08	SC-01-S1	SEDIMENT	KITTERY, MAINE	12/11/14 11:10	12/15/14
L1429023-09	SC-01-S2	SEDIMENT	KITTERY, MAINE	12/11/14 11:55	12/15/14

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

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. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: PNSY **Lab Number:** L1429023
Project Number: N492-000 **Report Date:** 01/09/15

Case Narrative (continued)

PAH/PCB Congeners

Samples L1429023-01, -01dup, -01ms , -01msd, -03, -06, -07, and -08 were analyzed at dilution due to matrix interferences.

The WG747233-4/-5 MS/MSD recoveries, performed on L1429023-01, are outside the acceptance criteria for several compounds. The unacceptable percent recoveries are attributed to the elevated concentrations of target compounds present in the sample utilized for the MS/MSD. In addition, the RPDs are also above the acceptance criteria for several compounds.

The WG747233-6 Laboratory Duplicate RPD, performed on L1429023-01, is outside the acceptance criteria for several compounds. The elevated RPD's have been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

The WG747233-7 SRM recoveries are outside the acceptance criteria for Dibenz(a,h)anthracene (163%), Cl3-BZ#18 (154%) and Cl4-BZ#52 (154%); however, the associated LCS/LCSD recoveries are within overall method allowances. No further action was required.

Pesticides

The pesticide analysis was performed utilizing dual column confirmation with the higher of the two values reported. If the relative percent difference (RPD) was above the acceptance criteria the compound is reported with a "P" qualifier. Technical judgment was employed in the case of an observed interference. In the case that interference was observed on one column, the lower value is reported and qualified with an "I".

The matrix spike WG747232-4, performed on sample L1429023-01, recovered Heptachlor epoxide (132%) above the acceptance criteria. The associated laboratory control sample and its duplicate was within acceptance criteria for all compounds, therefore no further correction action was taken.

The matrix spike duplicate WG747232-5, performed on sample L1429023-01, recovered Aldrin (124%) above

Case Narrative (continued)

the acceptance criteria. In addition the relative percent difference (RPD) for this compound (35%) was above the acceptance limit. The associated laboratory control sample and its duplicate was within acceptance criteria for all compounds, therefore no further correction action was taken.

The duplicate WG747232-6, performed on sample L1429023-01, had the relative percent difference (RPD) for trans-nonachlor (56%) and dieldrin (90%) above the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

The standard reference material WG747232-7 had the compound Trans-nonachlor recovered above the acceptance criteria at 704% due to matrix interference. All other monitored compounds were recovered within acceptance criteria.

The opening continuing calibration standard WG753223-1, associated with WG747232-1, -2, -3 and WG749835-1, -2, -3, had the response for 4,4'-DDE (16.4%D-column A) outside the individual acceptance criteria but within method allowance, therefore no further action was taken.

The continuing calibration standard WG753223-2, which is the closing for WG747232-1, -2, -3 and WG749835-1, -2, -3, and the opening for sample L1429023-01D, WG747232-6D, L1429023-04, -05 and -09 had the response for 4,4'-DDE (16.9%D-column A), 4,4'-DDD (15.8%D-column A) outside the individual acceptance criteria but within method allowance, therefore no further action was taken.

The continuing calibration standard WG753223-3, which is the closing for sample L142903-01D, WG747232-6D, L1429023-04, -05 and -09 had the response for aldrin (19.1%D-column A, 15.9%D-column B), gamma-chlordane (15.9%D-column A), endosulfan I (15.3%D-column A), dieldrin (18.5%D-column A), 4,4'-DDT (16.1%D-column A), methoxychlor (18.4%D-column B), above the individual acceptance criteria but within method allowance. In addition the responses for 4,4'-DDE (20.8%D-column A), 4,4'-DDD (30%D-column A, 22.9%D-column B) outside the acceptance criteria for the method. These outliers represented a high bias and the associated samples were non-detect, therefore no further action was taken.

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Case Narrative (continued)

The continuing calibration standard WG753223-5, closing for WG747232-4, -5, 7D, L1429023-02D, -07D, and the opening for L142903-03, -06D, -08D had the response for methoxychlor (18.8%D-column B) above the individual acceptance criteria but within method allowance, therefore no further action was taken.

The continuing calibration standard WG753223-6, which is the closing for sample L142903-03, -06D, -08D, and the opening for sample L142903-01, WG747232-6, L1429023-02, -06, -07 and -08 had the response for methoxychlor (16.2%D-column A, 20%D-column B) outside the individual acceptance criteria but within method allowance, therefore no further action was taken.

The continuing calibration standard WG753223-7, which is the closing for sample L142903-01, WG747232-6, L1429023-02, -06, -07 and -08 had the response for aldrin (16.6%D-column A, 17.7%D-column B), heptachlor (18.3%D-column B), 4,4'-DDD (19.4%D-column A) outside the individual acceptance criteria but within method allowance. In addition the response for endrin (22%D-column A, 33.7%D-column B), 4,4'-DDT (61.2%D-column A, 65.9%D-column B) and methoxychlor (68.9%D-column A, 70.8%D-column B) outside the acceptance criteria for the method, The criteria were achieved upon re-analysis of the associated samples at dilution. Both sets of data are reported for these compounds affected.

Metals

The WG752202-4/-5 MS/MSD recovery for Copper (MSD 0%), Lead (42%/0%), zinc (127%/0%), performed on L1429023-01, do not apply because the sample concentrations are greater than four times the spike amount added.

The WG752202-4/-5 MS/MSD recoveries, performed on L1429023-01, is outside the acceptance criteria for chromium (MS 137%) and Nickel (MSD 36%); however, the associated LCS/LCSD recoveries are within criteria. No further action was taken.

The WG752202-5 MS/MSD RPDs, performed on L1429023-01, are above the acceptance criteria for zinc (75%) and copper (47%).

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Case Narrative (continued)

The WG752202-3 Laboratory Duplicate RPD, performed on L1429023-01, is outside the acceptance criteria for Arsenic (38%). The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

Total Organic Carbon

L1429023-07 and -08: The Sample Replicate RPDs are outside the acceptance criteria of 30%. A double-burn re-analysis was performed with confirming results. The results of the original analyses are reported. The elevated RPD has been attributed to the non-homogeneous nature of the sample.

The WG747378-7 MS/MSD RPDs, performed on L1429023-01, are above the acceptance criteria for total organic carbon (rep2) (34%).

The WG752217-4/-5 MS/MSD recoveries, performed on L1429023-08, are outside the 75-125% acceptance criteria for total organic carbon (rep1) (41%/172%) , total organic carbon (rep2) (MS 181%), possibly due to sample matrix. The associated SRM recoveries are within criteria indicating the sample batch was in control, and all sample results were accepted.

The WG752217-3 Laboratory Duplicate RPD, performed on L1429023-08, is outside the acceptance criteria for total organic carbon (rep2) (66%). The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

Grain Size Analysis

The WG750891-1 Laboratory Duplicate RPD, performed on L1429023-01, is outside the acceptance criteria for % gravel (63%). The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

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: Cynthia McQueen

Title: Technical Director/Representative Date: 01/09/15

ORGANICS

SEMIVOLATILES

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-01	D	Date Collected:	11/26/14 10:45
Client ID:	SC-04-1		Date Received:	12/01/14
Sample Location:	KITTERY, MAINE		Field Prep:	Not Specified
Matrix:	Sediment		Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)		Extraction Date:	12/10/14 12:06
Analytical Date:	01/08/15 04:14		Cleanup Method:	EPA 3630
Analyst:	CM		Cleanup Date:	01/07/14
Percent Solids:	54%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	135	--	20
Acenaphthylene	ND		ug/kg	135	--	20
Acenaphthene	ND		ug/kg	135	--	20
Fluorene	ND		ug/kg	135	--	20
Phenanthrene	265		ug/kg	135	--	20
Anthracene	ND		ug/kg	135	--	20
Fluoranthene	1080		ug/kg	135	--	20
Pyrene	2630		ug/kg	135	--	20
Benz(a)anthracene	639		ug/kg	135	--	20
Chrysene	1220		ug/kg	135	--	20
Benzo(b)fluoranthene	703		ug/kg	135	--	20
Benzo(k)fluoranthene	428		ug/kg	135	--	20
Benzo(a)pyrene	432		ug/kg	135	--	20
Indeno(1,2,3-cd)Pyrene	266		ug/kg	135	--	20
Dibenz(a,h)anthracene	ND		ug/kg	135	--	20
Benzo(ghi)perylene	240		ug/kg	135	--	20
Cl2-BZ#8	ND		ug/kg	13.5	--	20
Cl3-BZ#18	ND		ug/kg	13.5	--	20
Cl3-BZ#28	ND		ug/kg	13.5	--	20
Cl4-BZ#44	ND		ug/kg	13.5	--	20
Cl4-BZ#49	ND		ug/kg	13.5	--	20
Cl4-BZ#52	17.1		ug/kg	13.5	--	20
Cl4-BZ#66	ND		ug/kg	13.5	--	20
Cl5-BZ#87	ND		ug/kg	13.5	--	20
Cl5-BZ#101	ND		ug/kg	13.5	--	20
Cl5-BZ#105	ND		ug/kg	13.5	--	20
Cl5-BZ#118	20.4		ug/kg	13.5	--	20
Cl6-BZ#128	ND		ug/kg	13.5	--	20
Cl6-BZ#138	ND		ug/kg	13.5	--	20
Cl6-BZ#153	ND		ug/kg	13.5	--	20

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

SAMPLE RESULTS

Lab ID: L1429023-01 D Date Collected: 11/26/14 10:45

Client ID: SC-04-1 Date Received: 12/01/14

Sample Location: KITTERY, MAINE Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	13.5	--	20
Cl7-BZ#180	ND		ug/kg	13.5	--	20
Cl7-BZ#183	ND		ug/kg	13.5	--	20
Cl7-BZ#184	ND		ug/kg	13.5	--	20
Cl7-BZ#187	ND		ug/kg	13.5	--	20
Cl8-BZ#195	ND		ug/kg	13.5	--	20
Cl9-BZ#206	ND		ug/kg	13.5	--	20
Cl10-BZ#209	ND		ug/kg	13.5	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	64		30-150
Pyrene-d10	76		30-150
Benzo(b)fluoranthene-d12	70		30-150
DBOB	79		30-150
BZ 198	84		30-150

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-02	Date Collected:	11/26/14 11:20
Client ID:	SC-04-2	Date Received:	12/01/14
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	12/10/14 12:06
Analytical Date:	01/07/15 23:41	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	01/07/14
Percent Solids:	81%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	40.7		ug/kg	9.59	--	1
Acenaphthylene	22.8		ug/kg	9.59	--	1
Acenaphthene	14.9		ug/kg	9.59	--	1
Fluorene	32.8		ug/kg	9.59	--	1
Phenanthrene	248		ug/kg	9.59	--	1
Anthracene	74.6		ug/kg	9.59	--	1
Fluoranthene	684		ug/kg	9.59	--	1
Pyrene	1510		ug/kg	9.59	--	1
Benz(a)anthracene	401		ug/kg	9.59	--	1
Chrysene	1360		ug/kg	9.59	--	1
Benzo(b)fluoranthene	262		ug/kg	9.59	--	1
Benzo(k)fluoranthene	171		ug/kg	9.59	--	1
Benzo(a)pyrene	181		ug/kg	9.59	--	1
Indeno(1,2,3-cd)Pyrene	119		ug/kg	9.59	--	1
Dibenz(a,h)anthracene	28.5		ug/kg	9.59	--	1
Benzo(ghi)perylene	119		ug/kg	9.59	--	1
Cl2-BZ#8	ND		ug/kg	0.959	--	1
Cl3-BZ#18	ND		ug/kg	0.959	--	1
Cl3-BZ#28	ND		ug/kg	0.959	--	1
Cl4-BZ#44	2.66		ug/kg	0.959	--	1
Cl4-BZ#49	1.70		ug/kg	0.959	--	1
Cl4-BZ#52	3.42		ug/kg	0.959	--	1
Cl4-BZ#66	1.26		ug/kg	0.959	--	1
Cl5-BZ#87	3.72		ug/kg	0.959	--	1
Cl5-BZ#101	7.40		ug/kg	0.959	--	1
Cl5-BZ#105	2.59		ug/kg	0.959	--	1
Cl5-BZ#118	5.71		ug/kg	0.959	--	1
Cl6-BZ#128	1.86		ug/kg	0.959	--	1
Cl6-BZ#138	6.54		ug/kg	0.959	--	1
Cl6-BZ#153	4.94		ug/kg	0.959	--	1

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

SAMPLE RESULTS

Lab ID: L1429023-02 Date Collected: 11/26/14 11:20

Client ID: SC-04-2 Date Received: 12/01/14

Sample Location: KITTERY, MAINE Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	2.05		ug/kg	0.959	--	1
Cl7-BZ#180	2.73		ug/kg	0.959	--	1
Cl7-BZ#183	1.01		ug/kg	0.959	--	1
Cl7-BZ#184	ND		ug/kg	0.959	--	1
Cl7-BZ#187	1.97		ug/kg	0.959	--	1
Cl8-BZ#195	ND		ug/kg	0.959	--	1
Cl9-BZ#206	1.40		ug/kg	0.959	--	1
Cl10-BZ#209	5.25		ug/kg	0.959	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	85		30-150
Pyrene-d10	96		30-150
Benzo(b)fluoranthene-d12	89		30-150
DBOB	98		30-150
BZ 198	93		30-150

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-03	D	Date Collected:	12/02/14 11:05
Client ID:	SC-07-S1		Date Received:	12/04/14
Sample Location:	KITTERY, MAINE		Field Prep:	Not Specified
Matrix:	Sediment		Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)		Extraction Date:	12/10/14 12:06
Analytical Date:	01/08/15 01:43		Cleanup Method:	EPA 3630
Analyst:	CM		Cleanup Date:	01/07/14
Percent Solids:	56%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	34.5	--	5
Acenaphthylene	ND		ug/kg	34.5	--	5
Acenaphthene	ND		ug/kg	34.5	--	5
Fluorene	47.8		ug/kg	34.5	--	5
Phenanthrene	487		ug/kg	34.5	--	5
Anthracene	189		ug/kg	34.5	--	5
Fluoranthene	864		ug/kg	34.5	--	5
Pyrene	1160		ug/kg	34.5	--	5
Benz(a)anthracene	539		ug/kg	34.5	--	5
Chrysene	500		ug/kg	34.5	--	5
Benzo(b)fluoranthene	521		ug/kg	34.5	--	5
Benzo(k)fluoranthene	402		ug/kg	34.5	--	5
Benzo(a)pyrene	465		ug/kg	34.5	--	5
Indeno(1,2,3-cd)Pyrene	330		ug/kg	34.5	--	5
Dibenz(a,h)anthracene	78.5		ug/kg	34.5	--	5
Benzo(ghi)perylene	301		ug/kg	34.5	--	5
Cl2-BZ#8	ND		ug/kg	3.45	--	5
Cl3-BZ#18	ND		ug/kg	3.45	--	5
Cl3-BZ#28	ND		ug/kg	3.45	--	5
Cl4-BZ#44	ND		ug/kg	3.45	--	5
Cl4-BZ#49	ND		ug/kg	3.45	--	5
Cl4-BZ#52	ND		ug/kg	3.45	--	5
Cl4-BZ#66	ND		ug/kg	3.45	--	5
Cl5-BZ#87	ND		ug/kg	3.45	--	5
Cl5-BZ#101	ND		ug/kg	3.45	--	5
Cl5-BZ#105	ND		ug/kg	3.45	--	5
Cl5-BZ#118	ND		ug/kg	3.45	--	5
Cl6-BZ#128	ND		ug/kg	3.45	--	5
Cl6-BZ#138	ND		ug/kg	3.45	--	5
Cl6-BZ#153	ND		ug/kg	3.45	--	5

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

SAMPLE RESULTS

Lab ID: L1429023-03 D Date Collected: 12/02/14 11:05

Client ID: SC-07-S1 Date Received: 12/04/14

Sample Location: KITTERY, MAINE Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	3.45	--	5
Cl7-BZ#180	ND		ug/kg	3.45	--	5
Cl7-BZ#183	ND		ug/kg	3.45	--	5
Cl7-BZ#184	ND		ug/kg	3.45	--	5
Cl7-BZ#187	ND		ug/kg	3.45	--	5
Cl8-BZ#195	ND		ug/kg	3.45	--	5
Cl9-BZ#206	ND		ug/kg	3.45	--	5
Cl10-BZ#209	ND		ug/kg	3.45	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	78		30-150
Pyrene-d10	89		30-150
Benzo(b)fluoranthene-d12	82		30-150
DBOB	84		30-150
BZ 198	81		30-150

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-04	Date Collected:	12/03/14 10:50
Client ID:	SC-06-S1	Date Received:	12/04/14
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	12/10/14 12:06
Analytical Date:	01/08/15 00:11	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	01/07/14
Percent Solids:	75%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	26.1		ug/kg	9.42	--	1
Acenaphthylene	20.0		ug/kg	9.42	--	1
Acenaphthene	10.4		ug/kg	9.42	--	1
Fluorene	19.5		ug/kg	9.42	--	1
Phenanthrene	209		ug/kg	9.42	--	1
Anthracene	64.1		ug/kg	9.42	--	1
Fluoranthene	487		ug/kg	9.42	--	1
Pyrene	791		ug/kg	9.42	--	1
Benz(a)anthracene	282		ug/kg	9.42	--	1
Chrysene	283		ug/kg	9.42	--	1
Benzo(b)fluoranthene	260		ug/kg	9.42	--	1
Benzo(k)fluoranthene	223		ug/kg	9.42	--	1
Benzo(a)pyrene	244		ug/kg	9.42	--	1
Indeno(1,2,3-cd)Pyrene	162		ug/kg	9.42	--	1
Dibenz(a,h)anthracene	38.2		ug/kg	9.42	--	1
Benzo(ghi)perylene	151		ug/kg	9.42	--	1
Cl2-BZ#8	ND		ug/kg	0.942	--	1
Cl3-BZ#18	1.16		ug/kg	0.942	--	1
Cl3-BZ#28	ND		ug/kg	0.942	--	1
Cl4-BZ#44	1.99		ug/kg	0.942	--	1
Cl4-BZ#49	ND		ug/kg	0.942	--	1
Cl4-BZ#52	4.30		ug/kg	0.942	--	1
Cl4-BZ#66	ND		ug/kg	0.942	--	1
Cl5-BZ#87	2.49		ug/kg	0.942	--	1
Cl5-BZ#101	6.57		ug/kg	0.942	--	1
Cl5-BZ#105	2.34		ug/kg	0.942	--	1
Cl5-BZ#118	5.38		ug/kg	0.942	--	1
Cl6-BZ#128	1.95		ug/kg	0.942	--	1
Cl6-BZ#138	7.23		ug/kg	0.942	--	1
Cl6-BZ#153	4.35		ug/kg	0.942	--	1

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

SAMPLE RESULTS

Lab ID: L1429023-04 Date Collected: 12/03/14 10:50

Client ID: SC-06-S1 Date Received: 12/04/14

Sample Location: KITTERY, MAINE Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	1.01		ug/kg	0.942	--	1
Cl7-BZ#180	1.48		ug/kg	0.942	--	1
Cl7-BZ#183	ND		ug/kg	0.942	--	1
Cl7-BZ#184	ND		ug/kg	0.942	--	1
Cl7-BZ#187	ND		ug/kg	0.942	--	1
Cl8-BZ#195	ND		ug/kg	0.942	--	1
Cl9-BZ#206	ND		ug/kg	0.942	--	1
Cl10-BZ#209	ND		ug/kg	0.942	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	74		30-150
Pyrene-d10	86		30-150
Benzo(b)fluoranthene-d12	81		30-150
DBOB	83		30-150
BZ 198	85		30-150

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-05	Date Collected:	12/03/14 12:10
Client ID:	SC-06-S2	Date Received:	12/04/14
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	12/10/14 12:06
Analytical Date:	01/08/15 00:42	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	01/07/14
Percent Solids:	86%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	8.53	--	1
Acenaphthylene	ND		ug/kg	8.53	--	1
Acenaphthene	ND		ug/kg	8.53	--	1
Fluorene	ND		ug/kg	8.53	--	1
Phenanthrene	98.2		ug/kg	8.53	--	1
Anthracene	12.9		ug/kg	8.53	--	1
Fluoranthene	218		ug/kg	8.53	--	1
Pyrene	215		ug/kg	8.53	--	1
Benz(a)anthracene	70.0		ug/kg	8.53	--	1
Chrysene	79.2		ug/kg	8.53	--	1
Benzo(b)fluoranthene	60.1		ug/kg	8.53	--	1
Benzo(k)fluoranthene	52.2		ug/kg	8.53	--	1
Benzo(a)pyrene	49.3		ug/kg	8.53	--	1
Indeno(1,2,3-cd)Pyrene	30.5		ug/kg	8.53	--	1
Dibenz(a,h)anthracene	ND		ug/kg	8.53	--	1
Benzo(ghi)perylene	27.6		ug/kg	8.53	--	1
Cl2-BZ#8	ND		ug/kg	0.853	--	1
Cl3-BZ#18	ND		ug/kg	0.853	--	1
Cl3-BZ#28	ND		ug/kg	0.853	--	1
Cl4-BZ#44	ND		ug/kg	0.853	--	1
Cl4-BZ#49	ND		ug/kg	0.853	--	1
Cl4-BZ#52	ND		ug/kg	0.853	--	1
Cl4-BZ#66	ND		ug/kg	0.853	--	1
Cl5-BZ#87	ND		ug/kg	0.853	--	1
Cl5-BZ#101	ND		ug/kg	0.853	--	1
Cl5-BZ#105	ND		ug/kg	0.853	--	1
Cl5-BZ#118	ND		ug/kg	0.853	--	1
Cl6-BZ#128	ND		ug/kg	0.853	--	1
Cl6-BZ#138	ND		ug/kg	0.853	--	1
Cl6-BZ#153	ND		ug/kg	0.853	--	1

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

SAMPLE RESULTS

Lab ID: L1429023-05 Date Collected: 12/03/14 12:10

Client ID: SC-06-S2 Date Received: 12/04/14

Sample Location: KITTERY, MAINE Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	0.853	--	1
Cl7-BZ#180	ND		ug/kg	0.853	--	1
Cl7-BZ#183	ND		ug/kg	0.853	--	1
Cl7-BZ#184	ND		ug/kg	0.853	--	1
Cl7-BZ#187	ND		ug/kg	0.853	--	1
Cl8-BZ#195	ND		ug/kg	0.853	--	1
Cl9-BZ#206	ND		ug/kg	0.853	--	1
Cl10-BZ#209	ND		ug/kg	0.853	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	92		30-150
Pyrene-d10	97		30-150
Benzo(b)fluoranthene-d12	92		30-150
DBOB	92		30-150
BZ 198	89		30-150

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-06	D	Date Collected:	12/05/14 11:40
Client ID:	SC-05A-S1		Date Received:	12/08/14
Sample Location:	KITTERY, MAINE		Field Prep:	Not Specified
Matrix:	Sediment		Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)		Extraction Date:	12/10/14 12:06
Analytical Date:	01/08/15 02:13		Cleanup Method:	EPA 3630
Analyst:	CM		Cleanup Date:	01/07/14
Percent Solids:	68%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	28.4	--	5
Acenaphthylene	ND		ug/kg	28.4	--	5
Acenaphthene	ND		ug/kg	28.4	--	5
Fluorene	ND		ug/kg	28.4	--	5
Phenanthrene	139		ug/kg	28.4	--	5
Anthracene	41.6		ug/kg	28.4	--	5
Fluoranthene	300		ug/kg	28.4	--	5
Pyrene	352		ug/kg	28.4	--	5
Benz(a)anthracene	148		ug/kg	28.4	--	5
Chrysene	149		ug/kg	28.4	--	5
Benzo(b)fluoranthene	166		ug/kg	28.4	--	5
Benzo(k)fluoranthene	121		ug/kg	28.4	--	5
Benzo(a)pyrene	142		ug/kg	28.4	--	5
Indeno(1,2,3-cd)Pyrene	101		ug/kg	28.4	--	5
Dibenz(a,h)anthracene	ND		ug/kg	28.4	--	5
Benzo(ghi)perylene	100		ug/kg	28.4	--	5
Cl2-BZ#8	ND		ug/kg	2.84	--	5
Cl3-BZ#18	ND		ug/kg	2.84	--	5
Cl3-BZ#28	ND		ug/kg	2.84	--	5
Cl4-BZ#44	ND		ug/kg	2.84	--	5
Cl4-BZ#49	ND		ug/kg	2.84	--	5
Cl4-BZ#52	ND		ug/kg	2.84	--	5
Cl4-BZ#66	ND		ug/kg	2.84	--	5
Cl5-BZ#87	ND		ug/kg	2.84	--	5
Cl5-BZ#101	ND		ug/kg	2.84	--	5
Cl5-BZ#105	ND		ug/kg	2.84	--	5
Cl5-BZ#118	ND		ug/kg	2.84	--	5
Cl6-BZ#128	ND		ug/kg	2.84	--	5
Cl6-BZ#138	ND		ug/kg	2.84	--	5
Cl6-BZ#153	ND		ug/kg	2.84	--	5

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

SAMPLE RESULTS

Lab ID: L1429023-06 D Date Collected: 12/05/14 11:40

Client ID: SC-05A-S1 Date Received: 12/08/14

Sample Location: KITTERY, MAINE Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	2.84	--	5
Cl7-BZ#180	ND		ug/kg	2.84	--	5
Cl7-BZ#183	ND		ug/kg	2.84	--	5
Cl7-BZ#184	ND		ug/kg	2.84	--	5
Cl7-BZ#187	ND		ug/kg	2.84	--	5
Cl8-BZ#195	ND		ug/kg	2.84	--	5
Cl9-BZ#206	ND		ug/kg	2.84	--	5
Cl10-BZ#209	ND		ug/kg	2.84	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	82		30-150
Pyrene-d10	89		30-150
Benzo(b)fluoranthene-d12	86		30-150
DBOB	91		30-150
BZ 198	89		30-150

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-07	D	Date Collected:	12/08/14 09:20
Client ID:	SC-02-S1		Date Received:	12/10/14
Sample Location:	KITTERY, MAINE		Field Prep:	Not Specified
Matrix:	Sediment		Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)		Extraction Date:	12/18/14 11:34
Analytical Date:	01/08/15 02:43		Cleanup Method:	EPA 3630
Analyst:	CM		Cleanup Date:	01/07/14
Percent Solids:	60%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	92.9		ug/kg	32.3	--	5
Acenaphthylene	71.2		ug/kg	32.3	--	5
Acenaphthene	213		ug/kg	32.3	--	5
Fluorene	132		ug/kg	32.3	--	5
Phenanthrene	652		ug/kg	32.3	--	5
Anthracene	323		ug/kg	32.3	--	5
Fluoranthene	3200		ug/kg	32.3	--	5
Pyrene	6840		ug/kg	32.3	--	5
Benz(a)anthracene	1830		ug/kg	32.3	--	5
Chrysene	1600		ug/kg	32.3	--	5
Benzo(b)fluoranthene	1440		ug/kg	32.3	--	5
Benzo(k)fluoranthene	841		ug/kg	32.3	--	5
Benzo(a)pyrene	920		ug/kg	32.3	--	5
Indeno(1,2,3-cd)Pyrene	468		ug/kg	32.3	--	5
Dibenz(a,h)anthracene	116		ug/kg	32.3	--	5
Benzo(ghi)perylene	432		ug/kg	32.3	--	5
Cl2-BZ#8	ND		ug/kg	3.23	--	5
Cl3-BZ#18	ND		ug/kg	3.23	--	5
Cl3-BZ#28	ND		ug/kg	3.23	--	5
Cl4-BZ#44	5.29		ug/kg	3.23	--	5
Cl4-BZ#49	5.81		ug/kg	3.23	--	5
Cl4-BZ#52	20.0		ug/kg	3.23	--	5
Cl4-BZ#66	ND		ug/kg	3.23	--	5
Cl5-BZ#87	3.64		ug/kg	3.23	--	5
Cl5-BZ#101	13.3		ug/kg	3.23	--	5
Cl5-BZ#105	3.34		ug/kg	3.23	--	5
Cl5-BZ#118	7.27		ug/kg	3.23	--	5
Cl6-BZ#128	ND		ug/kg	3.23	--	5
Cl6-BZ#138	27.6		ug/kg	3.23	--	5
Cl6-BZ#153	25.2		ug/kg	3.23	--	5

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

SAMPLE RESULTS

Lab ID: L1429023-07 D Date Collected: 12/08/14 09:20

Client ID: SC-02-S1 Date Received: 12/10/14

Sample Location: KITTERY, MAINE Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	15.3		ug/kg	3.23	--	5
Cl7-BZ#180	23.7		ug/kg	3.23	--	5
Cl7-BZ#183	6.05		ug/kg	3.23	--	5
Cl7-BZ#184	ND		ug/kg	3.23	--	5
Cl7-BZ#187	14.1		ug/kg	3.23	--	5
Cl8-BZ#195	ND		ug/kg	3.23	--	5
Cl9-BZ#206	4.46		ug/kg	3.23	--	5
Cl10-BZ#209	ND		ug/kg	3.23	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	83		30-150
Pyrene-d10	91		30-150
Benzo(b)fluoranthene-d12	85		30-150
DBOB	93		30-150
BZ 198	89		30-150

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-08	D	Date Collected:	12/11/14 11:10
Client ID:	SC-01-S1		Date Received:	12/15/14
Sample Location:	KITTERY, MAINE		Field Prep:	Not Specified
Matrix:	Sediment		Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)		Extraction Date:	12/18/14 11:34
Analytical Date:	01/08/15 03:13		Cleanup Method:	EPA 3630
Analyst:	CM		Cleanup Date:	01/07/14
Percent Solids:	49%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	40.0	--	5
Acenaphthylene	94.3		ug/kg	40.0	--	5
Acenaphthene	131		ug/kg	40.0	--	5
Fluorene	172		ug/kg	40.0	--	5
Phenanthrene	1240		ug/kg	40.0	--	5
Anthracene	345		ug/kg	40.0	--	5
Fluoranthene	3190		ug/kg	40.0	--	5
Pyrene	4900		ug/kg	40.0	--	5
Benz(a)anthracene	1310		ug/kg	40.0	--	5
Chrysene	1420		ug/kg	40.0	--	5
Benzo(b)fluoranthene	1100		ug/kg	40.0	--	5
Benzo(k)fluoranthene	948		ug/kg	40.0	--	5
Benzo(a)pyrene	905		ug/kg	40.0	--	5
Indeno(1,2,3-cd)Pyrene	572		ug/kg	40.0	--	5
Dibenz(a,h)anthracene	144		ug/kg	40.0	--	5
Benzo(ghi)perylene	500		ug/kg	40.0	--	5
Cl2-BZ#8	ND		ug/kg	4.00	--	5
Cl3-BZ#18	ND		ug/kg	4.00	--	5
Cl3-BZ#28	ND		ug/kg	4.00	--	5
Cl4-BZ#44	24.0		ug/kg	4.00	--	5
Cl4-BZ#49	17.4		ug/kg	4.00	--	5
Cl4-BZ#52	65.8		ug/kg	4.00	--	5
Cl4-BZ#66	17.9		ug/kg	4.00	--	5
Cl5-BZ#87	79.9		ug/kg	4.00	--	5
Cl5-BZ#101	179		ug/kg	4.00	--	5
Cl5-BZ#105	64.2		ug/kg	4.00	--	5
Cl5-BZ#118	149		ug/kg	4.00	--	5
Cl6-BZ#128	38.0		ug/kg	4.00	--	5
Cl6-BZ#138	150		ug/kg	4.00	--	5
Cl6-BZ#153	92.0		ug/kg	4.00	--	5

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

SAMPLE RESULTS

Lab ID: L1429023-08 D Date Collected: 12/11/14 11:10

Client ID: SC-01-S1 Date Received: 12/15/14

Sample Location: KITTERY, MAINE Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	18.7		ug/kg	4.00	--	5
Cl7-BZ#180	22.1		ug/kg	4.00	--	5
Cl7-BZ#183	6.16		ug/kg	4.00	--	5
Cl7-BZ#184	ND		ug/kg	4.00	--	5
Cl7-BZ#187	10.8		ug/kg	4.00	--	5
Cl8-BZ#195	ND		ug/kg	4.00	--	5
Cl9-BZ#206	ND		ug/kg	4.00	--	5
Cl10-BZ#209	ND		ug/kg	4.00	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	73		30-150
Pyrene-d10	79		30-150
Benzo(b)fluoranthene-d12	73		30-150
DBOB	77		30-150
BZ 198	68		30-150

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-09	Date Collected:	12/11/14 11:55
Client ID:	SC-01-S2	Date Received:	12/15/14
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	12/18/14 11:34
Analytical Date:	01/08/15 01:13	Cleanup Method:	EPA 3630
Analyst:	CM	Cleanup Date:	01/07/14
Percent Solids:	82%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	ND		ug/kg	4.78	--	1
Acenaphthylene	ND		ug/kg	4.78	--	1
Acenaphthene	ND		ug/kg	4.78	--	1
Fluorene	ND		ug/kg	4.78	--	1
Phenanthrene	6.58		ug/kg	4.78	--	1
Anthracene	ND		ug/kg	4.78	--	1
Fluoranthene	99.0		ug/kg	4.78	--	1
Pyrene	111		ug/kg	4.78	--	1
Benz(a)anthracene	23.8		ug/kg	4.78	--	1
Chrysene	20.0		ug/kg	4.78	--	1
Benzo(b)fluoranthene	16.0		ug/kg	4.78	--	1
Benzo(k)fluoranthene	12.1		ug/kg	4.78	--	1
Benzo(a)pyrene	10.4		ug/kg	4.78	--	1
Indeno(1,2,3-cd)Pyrene	5.22		ug/kg	4.78	--	1
Dibenz(a,h)anthracene	ND		ug/kg	4.78	--	1
Benzo(ghi)perylene	5.21		ug/kg	4.78	--	1
Cl2-BZ#8	ND		ug/kg	0.478	--	1
Cl3-BZ#18	ND		ug/kg	0.478	--	1
Cl3-BZ#28	ND		ug/kg	0.478	--	1
Cl4-BZ#44	ND		ug/kg	0.478	--	1
Cl4-BZ#49	ND		ug/kg	0.478	--	1
Cl4-BZ#52	ND		ug/kg	0.478	--	1
Cl4-BZ#66	ND		ug/kg	0.478	--	1
Cl5-BZ#87	ND		ug/kg	0.478	--	1
Cl5-BZ#101	ND		ug/kg	0.478	--	1
Cl5-BZ#105	ND		ug/kg	0.478	--	1
Cl5-BZ#118	ND		ug/kg	0.478	--	1
Cl6-BZ#128	ND		ug/kg	0.478	--	1
Cl6-BZ#138	ND		ug/kg	0.478	--	1
Cl6-BZ#153	ND		ug/kg	0.478	--	1

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

SAMPLE RESULTS

Lab ID: L1429023-09 Date Collected: 12/11/14 11:55

Client ID: SC-01-S2 Date Received: 12/15/14

Sample Location: KITTERY, MAINE Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	ND		ug/kg	0.478	--	1
Cl7-BZ#180	ND		ug/kg	0.478	--	1
Cl7-BZ#183	ND		ug/kg	0.478	--	1
Cl7-BZ#184	ND		ug/kg	0.478	--	1
Cl7-BZ#187	ND		ug/kg	0.478	--	1
Cl8-BZ#195	ND		ug/kg	0.478	--	1
Cl9-BZ#206	ND		ug/kg	0.478	--	1
Cl10-BZ#209	ND		ug/kg	0.478	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	51		30-150
Pyrene-d10	56		30-150
Benzo(b)fluoranthene-d12	55		30-150
DBOB	52		30-150
BZ 198	56		30-150

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 01/07/15 20:40
Analyst: CM

Extraction Method: EPA 3570
Extraction Date: 12/10/14 12:06
Cleanup Method: EPA 3630
Cleanup Date: 01/07/14

Parameter	Result	Qualifier	Units	RL	MDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 01-06 Batch: WG747233-1					
Naphthalene	ND		ug/kg	8.00	--
Acenaphthylene	ND		ug/kg	8.00	--
Acenaphthene	ND		ug/kg	8.00	--
Fluorene	ND		ug/kg	8.00	--
Phenanthrene	ND		ug/kg	8.00	--
Anthracene	ND		ug/kg	8.00	--
Fluoranthene	ND		ug/kg	8.00	--
Pyrene	ND		ug/kg	8.00	--
Benz(a)anthracene	ND		ug/kg	8.00	--
Chrysene	ND		ug/kg	8.00	--
Benzo(b)fluoranthene	ND		ug/kg	8.00	--
Benzo(k)fluoranthene	ND		ug/kg	8.00	--
Benzo(a)pyrene	ND		ug/kg	8.00	--
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	8.00	--
Dibenz(a,h)anthracene	ND		ug/kg	8.00	--
Benzo(ghi)perylene	ND		ug/kg	8.00	--
Cl2-BZ#8	ND		ug/kg	0.800	--
Cl3-BZ#18	ND		ug/kg	0.800	--
Cl3-BZ#28	ND		ug/kg	0.800	--
Cl4-BZ#44	ND		ug/kg	0.800	--
Cl4-BZ#49	ND		ug/kg	0.800	--
Cl4-BZ#52	ND		ug/kg	0.800	--
Cl4-BZ#66	ND		ug/kg	0.800	--
Cl5-BZ#87	ND		ug/kg	0.800	--
Cl5-BZ#101	ND		ug/kg	0.800	--
Cl5-BZ#105	ND		ug/kg	0.800	--
Cl5-BZ#118	ND		ug/kg	0.800	--
Cl6-BZ#128	ND		ug/kg	0.800	--
Cl6-BZ#138	ND		ug/kg	0.800	--

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 01/07/15 20:40
Analyst: CM

Extraction Method: EPA 3570
Extraction Date: 12/10/14 12:06
Cleanup Method: EPA 3630
Cleanup Date: 01/07/14

Parameter	Result	Qualifier	Units	RL	MDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 01-06 Batch: WG747233-1					
Cl6-BZ#153	ND		ug/kg	0.800	--
Cl7-BZ#170	ND		ug/kg	0.800	--
Cl7-BZ#180	ND		ug/kg	0.800	--
Cl7-BZ#183	ND		ug/kg	0.800	--
Cl7-BZ#184	ND		ug/kg	0.800	--
Cl7-BZ#187	ND		ug/kg	0.800	--
Cl8-BZ#195	ND		ug/kg	0.800	--
Cl9-BZ#206	ND		ug/kg	0.800	--
Cl10-BZ#209	ND		ug/kg	0.800	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	87		30-150
Pyrene-d10	90		30-150
Benzo(b)fluoranthene-d12	89		30-150
DBOB	90		30-150
BZ 198	89		30-150

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 01/07/15 22:10
Analyst: CM

Extraction Method: EPA 3570
Extraction Date: 12/18/14 11:34
Cleanup Method: EPA 3630
Cleanup Date: 01/07/14

Parameter	Result	Qualifier	Units	RL	MDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 07-09 Batch: WG749834-1					
Naphthalene	ND		ug/kg	8.00	--
Acenaphthylene	ND		ug/kg	8.00	--
Acenaphthene	ND		ug/kg	8.00	--
Fluorene	ND		ug/kg	8.00	--
Phenanthrene	ND		ug/kg	8.00	--
Anthracene	ND		ug/kg	8.00	--
Fluoranthene	ND		ug/kg	8.00	--
Pyrene	ND		ug/kg	8.00	--
Benz(a)anthracene	ND		ug/kg	8.00	--
Chrysene	ND		ug/kg	8.00	--
Benzo(b)fluoranthene	ND		ug/kg	8.00	--
Benzo(k)fluoranthene	ND		ug/kg	8.00	--
Benzo(a)pyrene	ND		ug/kg	8.00	--
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	8.00	--
Dibenz(a,h)anthracene	ND		ug/kg	8.00	--
Benzo(ghi)perylene	ND		ug/kg	8.00	--
Cl2-BZ#8	ND		ug/kg	0.800	--
Cl3-BZ#18	ND		ug/kg	0.800	--
Cl3-BZ#28	ND		ug/kg	0.800	--
Cl4-BZ#44	ND		ug/kg	0.800	--
Cl4-BZ#49	ND		ug/kg	0.800	--
Cl4-BZ#52	ND		ug/kg	0.800	--
Cl4-BZ#66	ND		ug/kg	0.800	--
Cl5-BZ#87	ND		ug/kg	0.800	--
Cl5-BZ#101	ND		ug/kg	0.800	--
Cl5-BZ#105	ND		ug/kg	0.800	--
Cl5-BZ#118	ND		ug/kg	0.800	--
Cl6-BZ#128	ND		ug/kg	0.800	--
Cl6-BZ#138	ND		ug/kg	0.800	--

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 01/07/15 22:10
Analyst: CM

Extraction Method: EPA 3570
Extraction Date: 12/18/14 11:34
Cleanup Method: EPA 3630
Cleanup Date: 01/07/14

Parameter	Result	Qualifier	Units	RL	MDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 07-09 Batch: WG749834-1					
Cl6-BZ#153	ND		ug/kg	0.800	--
Cl7-BZ#170	ND		ug/kg	0.800	--
Cl7-BZ#180	ND		ug/kg	0.800	--
Cl7-BZ#183	ND		ug/kg	0.800	--
Cl7-BZ#184	ND		ug/kg	0.800	--
Cl7-BZ#187	ND		ug/kg	0.800	--
Cl8-BZ#195	ND		ug/kg	0.800	--
Cl9-BZ#206	ND		ug/kg	0.800	--
Cl10-BZ#209	ND		ug/kg	0.800	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	89		30-150
Pyrene-d10	93		30-150
Benzo(b)fluoranthene-d12	91		30-150
DBOB	84		30-150
BZ 198	84		30-150

Lab Control Sample Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-06 Batch: WG747233-2 WG747233-3								
Naphthalene	99		105		50-120	22		30
Acenaphthylene	98		104		50-120	22		30
Acenaphthene	97		102		50-120	21		30
Fluorene	97		102		50-120	19		30
Phenanthrene	98		104		50-120	20		30
Anthracene	91		99		50-120	24		30
Fluoranthene	94		102		50-120	21		30
Pyrene	93		99		50-120	21		30
Benz(a)anthracene	101		107		50-120	21		30
Chrysene	93		101		50-120	20		30
Benzo(b)fluoranthene	106		114		50-120	29		30
Benzo(k)fluoranthene	94		100		50-120	13		30
Benzo(a)pyrene	99		105		50-120	22		30
Indeno(1,2,3-cd)Pyrene	102		110		50-120	19		30
Dibenz(a,h)anthracene	101		107		50-120	22		30
Benzo(ghi)perylene	101		107		50-120	21		30
Cl2-BZ#8	95		101		50-120	17		30
Cl3-BZ#18	91		99		50-120	20		30
Cl3-BZ#28	97		105		50-120	20		30
Cl4-BZ#44	98		104		50-120	17		30
Cl4-BZ#49	92		100		50-120	20		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-06 Batch: WG747233-2 WG747233-3								
Cl4-BZ#52	94		100		50-120	17		30
Cl4-BZ#66	95		101		50-120	17		30
Cl5-BZ#87	91		99		50-120	19		30
Cl5-BZ#101	91		98		50-120	18		30
Cl5-BZ#105	95		102		50-120	19		30
Cl5-BZ#118	95		102		50-120	18		30
Cl6-BZ#128	91		97		50-120	18		30
Cl6-BZ#138	91		99		50-120	19		30
Cl6-BZ#153	92		100		50-120	20		30
Cl7-BZ#170	94		100		50-120	20		30
Cl7-BZ#180	87		94		50-120	19		30
Cl7-BZ#183	93		100		50-120	19		30
Cl7-BZ#184	92		100		50-120	19		30
Cl7-BZ#187	95		102		50-120	21		30
Cl8-BZ#195	90		98		50-120	19		30
Cl9-BZ#206	80		87		50-120	18		30
Cl10-BZ#209	89		97		50-120	19		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: PNSY

Project Number: N492-000

Lab Number: L1429023

Report Date: 01/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-06 Batch: WG747233-2 WG747233-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Methylnaphthalene-d10	94		98		30-150
Pyrene-d10	95		98		30-150
Benzo(b)fluoranthene-d12	95		99		30-150
DBOB	91		98		30-150
BZ 198	92		99		30-150

Lab Control Sample Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 07-09 Batch: WG749834-2 WG749834-3								
Naphthalene	84		91		50-120	8		30
Acenaphthylene	83		90		50-120	8		30
Acenaphthene	83		88		50-120	6		30
Fluorene	84		89		50-120	6		30
Phenanthrene	85		91		50-120	7		30
Anthracene	78		82		50-120	5		30
Fluoranthene	83		88		50-120	6		30
Pyrene	80		86		50-120	7		30
Benz(a)anthracene	87		94		50-120	8		30
Chrysene	83		89		50-120	7		30
Benzo(b)fluoranthene	85		90		50-120	6		30
Benzo(k)fluoranthene	88		95		50-120	8		30
Benzo(a)pyrene	84		90		50-120	7		30
Indeno(1,2,3-cd)Pyrene	91		98		50-120	7		30
Dibenz(a,h)anthracene	86		93		50-120	8		30
Benzo(ghi)perylene	87		94		50-120	8		30
Cl2-BZ#8	85		88		50-120	3		30
Cl3-BZ#18	81		85		50-120	5		30
Cl3-BZ#28	86		91		50-120	6		30
Cl4-BZ#44	88		92		50-120	4		30
Cl4-BZ#49	82		87		50-120	6		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 07-09 Batch: WG749834-2 WG749834-3								
Cl4-BZ#52	84		89		50-120	6		30
Cl4-BZ#66	85		89		50-120	5		30
Cl5-BZ#87	82		86		50-120	5		30
Cl5-BZ#101	82		87		50-120	6		30
Cl5-BZ#105	84		88		50-120	5		30
Cl5-BZ#118	85		88		50-120	3		30
Cl6-BZ#128	81		85		50-120	5		30
Cl6-BZ#138	82		86		50-120	5		30
Cl6-BZ#153	82		88		50-120	7		30
Cl7-BZ#170	82		86		50-120	5		30
Cl7-BZ#180	78		82		50-120	5		30
Cl7-BZ#183	83		86		50-120	4		30
Cl7-BZ#184	83		88		50-120	6		30
Cl7-BZ#187	83		90		50-120	8		30
Cl8-BZ#195	81		85		50-120	5		30
Cl9-BZ#206	73		76		50-120	4		30
Cl10-BZ#209	80		85		50-120	6		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: PNSY

Project Number: N492-000

Lab Number: L1429023

Report Date: 01/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 07-09 Batch: WG749834-2 WG749834-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Methylnaphthalene-d10	87		93		30-150
Pyrene-d10	88		93		30-150
Benzo(b)fluoranthene-d12	88		93		30-150
DBOB	86		88		30-150
BZ 198	85		85		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG747233-4 WG747233-5 QC Sample: L1429023-01 Client ID: SC-04-1												
Naphthalene	ND	458	356	69		749	**168**	Q	50-120	**71**	Q	30
Acenaphthylene	ND	458	352	63		450	101		50-120	24		30
Acenaphthene	ND	458	364	79		436	98		50-120	18		30
Fluorene	ND	458	383	75		537	120		50-120	**33**	Q	30
Phenanthrene	265	458	969	**157**	Q	3300	**680**	Q	50-120	**109**	Q	30
Anthracene	ND	458	440	73		460	103		50-120	4		30
Fluoranthene	1080	458	1290	**44**	Q	1850	**173**	Q	50-120	**36**	Q	30
Pyrene	2630	458	2630	**31**	Q	23100	**4590**	Q	50-120	**159**	Q	30
Benz(a)anthracene	639	458	893	82		5550	**1100**	Q	50-120	**145**	Q	30
Chrysene	1220	458	1820	113		29600	**6360**	Q	50-120	**177**	Q	30
Benzo(b)fluoranthene	703	458	994	97		1130	96		50-120	13		30
Benzo(k)fluoranthene	428	458	676	**33**	Q	794	82		50-120	16		30
Benzo(a)pyrene	432	458	732	68		767	75		50-120	5		30
Indeno(1,2,3-cd)Pyrene	266	458	603	72		676	92		50-120	11		30
Dibenz(a,h)anthracene	ND	458	333	60		414	93		50-120	22		30
Benzo(ghi)perylene	240	458	585	76		603	81		50-120	3		30
Cl2-BZ#8	ND	91.7	64.7	71		84.1	94		50-120	26		30
Cl3-BZ#18	ND	91.7	69.7	70		77.7	87		50-120	11		30
Cl3-BZ#28	ND	91.7	69.3	76		ND	**0**	Q	50-120	NC		30
Cl4-BZ#44	ND	91.7	68.0	67		68.2	76		50-120	0		30
Cl4-BZ#49	ND	91.7	60.8	66		63.4	71		50-120	4		30

Matrix Spike Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000
Lab Number: L1429023
Report Date: 01/09/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG747233-4 WG747233-5 QC Sample: L1429023-01 Client ID: SC-04-1												
Cl4-BZ#52	17.1	91.7	83.6	73		110	104		50-120	27		30
Cl4-BZ#66	ND	91.7	61.5	67		58.3	65		50-120	5		30
Cl5-BZ#87	ND	91.7	61.1	60		65.9	74		50-120	8		30
Cl5-BZ#101	ND	91.7	71.3	60		68.8	77		50-120	4		30
Cl5-BZ#105	ND	91.7	124	**129**	Q	70.0	79		50-120	**56**	Q	30
Cl5-BZ#118	20.4	91.7	66.3	55		69.2	55		50-120	4		30
Cl6-BZ#128	ND	91.7	60.9	62		63.5	71		50-120	4		30
Cl6-BZ#138	ND	91.7	68.1	58		71.6	80		50-120	5		30
Cl6-BZ#153	ND	91.7	65.9	59		74.5	84		50-120	12		30
Cl7-BZ#170	ND	91.7	61.9	64		67.7	76		50-120	9		30
Cl7-BZ#180	ND	91.7	59.0	58		62.1	70		50-120	5		30
Cl7-BZ#183	ND	91.7	56.5	62		63.6	71		50-120	12		30
Cl7-BZ#184	ND	91.7	60.8	66		61.1	69		50-120	0		30
Cl7-BZ#187	ND	91.7	66.0	66		79.5	89		50-120	19		30
Cl8-BZ#195	ND	91.7	55.7	61		66.6	75		50-120	18		30
Cl9-BZ#206	ND	91.7	51.5	52		60.6	68		50-120	16		30
Cl10-BZ#209	ND	91.7	55.3	60		62.4	70		50-120	12		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	56		78		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG747233-4 WG747233-5 QC Sample: L1429023-01 Client ID: SC-04-1												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
BZ 198	54		87		30-150
Benzo(b)fluoranthene-d12	65		76		30-150
DBOB	67		86		30-150
Pyrene-d10	69		121		30-150

Lab Duplicate Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG747233-6 QC Sample: L1429023-01 Client ID: SC-04-1						
Naphthalene	ND	656	ug/kg	NC		30
Acenaphthylene	ND	ND	ug/kg	NC		30
Acenaphthene	ND	429	ug/kg	NC		30
Fluorene	ND	448	ug/kg	NC		30
Phenanthrene	265	3630	ug/kg	**174**	Q	30
Anthracene	ND	512	ug/kg	NC		30
Fluoranthene	1080	4210	ug/kg	**118**	Q	30
Pyrene	2630	4700	ug/kg	**61**	Q	30
Benz(a)anthracene	639	1550	ug/kg	**100**	Q	30
Chrysene	1220	1820	ug/kg	**33**	Q	30
Benzo(b)fluoranthene	703	1880	ug/kg	**110**	Q	30
Benzo(k)fluoranthene	428	1230	ug/kg	**81**	Q	30
Benzo(a)pyrene	432	1420	ug/kg	**109**	Q	30
Indeno(1,2,3-cd)Pyrene	266	996	ug/kg	**113**	Q	30
Dibenz(a,h)anthracene	ND	232	ug/kg	NC		30
Benzo(ghi)perylene	240	886	ug/kg	**116**	Q	30
Cl2-BZ#8	ND	ND	ug/kg	NC		30
Cl3-BZ#18	ND	ND	ug/kg	NC		30
Cl3-BZ#28	ND	ND	ug/kg	NC		30

Lab Duplicate Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG747233-6 QC Sample: L1429023-01 Client ID: SC-04-1					
Cl4-BZ#44	ND	ND	ug/kg	NC	30
Cl4-BZ#49	ND	ND	ug/kg	NC	30
Cl4-BZ#52	17.1	ND	ug/kg	NC	30
Cl4-BZ#66	ND	ND	ug/kg	NC	30
Cl5-BZ#87	ND	ND	ug/kg	NC	30
Cl5-BZ#101	ND	ND	ug/kg	NC	30
Cl5-BZ#105	ND	ND	ug/kg	NC	30
Cl5-BZ#118	20.4	ND	ug/kg	NC	30
Cl6-BZ#128	ND	ND	ug/kg	NC	30
Cl6-BZ#138	ND	ND	ug/kg	NC	30
Cl6-BZ#153	ND	ND	ug/kg	NC	30
Cl7-BZ#170	ND	ND	ug/kg	NC	30
Cl7-BZ#180	ND	ND	ug/kg	NC	30
Cl7-BZ#183	ND	ND	ug/kg	NC	30
Cl7-BZ#184	ND	ND	ug/kg	NC	30
Cl7-BZ#187	ND	ND	ug/kg	NC	30
Cl8-BZ#195	ND	ND	ug/kg	NC	30
Cl9-BZ#206	ND	ND	ug/kg	NC	30
Cl10-BZ#209	ND	ND	ug/kg	NC	30

Lab Duplicate Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG747233-6 QC Sample: L1429023-01 Client ID: SC-04-1					

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	64		75		30-150
Pyrene-d10	76		83		30-150
Benzo(b)fluoranthene-d12	70		78		30-150
DBOB	79		84		30-150
BZ 198	84		86		30-150

Project Name: PNSY **Lab Number:** L1429023
Project Number: N492-000 **Report Date:** 01/09/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG747233-7

Parameter	% Recovery	Qual	QC Criteria
Phenanthrene	99		40-140
Fluoranthene	92		40-140
Pyrene	82		40-140
Benz(a)anthracene	99		40-140
Chrysene	94		40-140
Benzo(b)fluoranthene	106		40-140
Benzo(k)fluoranthene	121		40-140
Benzo(a)pyrene	66		40-140
Indeno(1,2,3-cd)Pyrene	85		40-140
Dibenz(a,h)anthracene	163	Q	40-140
Benzo(ghi)perylene	87		40-140
Cl2-BZ#8	79		40-140
Cl3-BZ#18	154	Q	40-140
Cl3-BZ#28	59		40-140
Cl4-BZ#44	93		40-140
Cl4-BZ#49	94		40-140
Cl4-BZ#52	154	Q	40-140
Cl4-BZ#66	65		40-140
Cl5-BZ#87	82		40-140
Cl5-BZ#101	96		40-140
Cl5-BZ#105	112		40-140
Cl5-BZ#118	93		40-140
Cl6-BZ#128	129		40-140
Cl6-BZ#138	88		40-140
Cl6-BZ#153	72		40-140
Cl7-BZ#170	96		40-140
Cl7-BZ#180	80		40-140
Cl7-BZ#183	77		40-140
Cl7-BZ#187	77		40-140
Cl9-BZ#206	84		40-140
Cl10-BZ#209	101		40-140
2-Methylnaphthalene-d10 (Surrogate)	91		30-150
Pyrene-d10 (Surrogate)	97		30-150
Benzo(b)fluoranthene-d12 (Surrogate)	91		30-150
DBOB (Surrogate)	109		30-150
BZ 198 (Surrogate)	87		30-150

PESTICIDES

Project Name: PNSY
Project Number: N492-000
Lab Number: L1429023
Report Date: 01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-01	Date Collected:	11/26/14 10:45
Client ID:	SC-04-1	Date Received:	12/01/14
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	12/10/14 12:00
Analytical Date:	01/06/15 22:33	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	12/19/14
Percent Solids:	54%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.673	--	1	A
gamma-BHC	ND		ug/kg	0.337	--	1	A
Heptachlor	ND		ug/kg	0.337	--	1	A
Aldrin	ND		ug/kg	0.337	--	1	A
Heptachlor epoxide	ND		ug/kg	0.673	--	1	B
Oxychlordane	ND		ug/kg	0.673	--	1	B
trans-Chlordane	ND		ug/kg	0.337	--	1	A
Endosulfan I	ND		ug/kg	0.337	--	1	A
cis-Chlordane	0.669	P	ug/kg	0.337	--	1	B
trans-Nonachlor	3.14	P	ug/kg	0.337	--	1	B
4,4'-DDE	5.21		ug/kg	0.337	--	1	A
Dieldrin	2.30	IP	ug/kg	0.337	--	1	A
Endrin	ND		ug/kg	0.337	--	1	A
Endosulfan II	0.426	IP	ug/kg	0.337	--	1	B
4,4'-DDD	9.03		ug/kg	0.337	--	1	A
cis-Nonachlor	ND		ug/kg	0.337	--	1	A
4,4'-DDT	1.79	IP	ug/kg	0.337	--	1	A
Methoxychlor	ND		ug/kg	3.37	--	1	A
Toxaphene	ND		ug/kg	16.9	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	86		30-150	A
BZ 198	74		30-150	A
DBOB	83		30-150	B
BZ 198	82		30-150	B

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-01	D	Date Collected:	11/26/14 10:45
Client ID:	SC-04-1		Date Received:	12/01/14
Sample Location:	KITTERY, MAINE		Field Prep:	Not Specified
Matrix:	Sediment		Extraction Method:	EPA 3570
Analytical Method:	1,8081B		Extraction Date:	12/10/14 12:00
Analytical Date:	01/05/15 15:57		Cleanup Method:	EPA 3630
Analyst:	SF		Cleanup Date:	12/19/14
Percent Solids:	54%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Endrin	ND		ug/kg	1.68	--	5	A
4,4'-DDT	11.1	IP	ug/kg	1.68	--	5	B
Methoxychlor	ND		ug/kg	16.8	--	5	A
Toxaphene	ND		ug/kg	84.5	--	5	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	74		30-150	A
BZ 198	103		30-150	A
DBOB	71		30-150	B
BZ 198	95		30-150	B

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-02	Date Collected:	11/26/14 11:20
Client ID:	SC-04-2	Date Received:	12/01/14
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	12/10/14 12:00
Analytical Date:	01/07/15 00:50	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	12/19/14
Percent Solids:	81%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.959	--	1	A
gamma-BHC	ND		ug/kg	0.480	--	1	A
Heptachlor	ND		ug/kg	0.480	--	1	A
Aldrin	ND		ug/kg	0.480	--	1	A
Heptachlor epoxide	ND		ug/kg	0.959	--	1	B
Oxychlordane	ND		ug/kg	0.959	--	1	B
trans-Chlordane	ND		ug/kg	0.480	--	1	A
Endosulfan I	ND		ug/kg	0.480	--	1	A
cis-Chlordane	ND		ug/kg	0.480	--	1	A
trans-Nonachlor	ND		ug/kg	0.480	--	1	A
4,4'-DDE	2.58		ug/kg	0.480	--	1	B
Dieldrin	1.00	IP	ug/kg	0.480	--	1	A
Endrin	ND		ug/kg	0.480	--	1	A
Endosulfan II	ND		ug/kg	0.480	--	1	A
4,4'-DDD	90.6		ug/kg	0.480	--	1	A
cis-Nonachlor	ND		ug/kg	0.480	--	1	A
4,4'-DDT	97.9		ug/kg	0.480	--	1	A
Methoxychlor	ND		ug/kg	4.80	--	1	A
Toxaphene	ND		ug/kg	24.1	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	85		30-150	A
BZ 198	84		30-150	A
DBOB	92		30-150	B
BZ 198	95		30-150	B

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-02	D	Date Collected:	11/26/14 11:20
Client ID:	SC-04-2		Date Received:	12/01/14
Sample Location:	KITTERY, MAINE		Field Prep:	Not Specified
Matrix:	Sediment		Extraction Method:	EPA 3570
Analytical Method:	1,8081B		Extraction Date:	12/10/14 12:00
Analytical Date:	01/06/15 16:26		Cleanup Method:	EPA 3630
Analyst:	SF		Cleanup Date:	12/19/14
Percent Solids:	81%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Endrin	ND		ug/kg	9.59	--	20	A
cis-Nonachlor	ND		ug/kg	9.59	--	20	A
4,4'-DDT	258	I	ug/kg	9.59	--	20	A
Methoxychlor	ND		ug/kg	95.9	--	20	A
Toxaphene	ND		ug/kg	481	--	20	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	84		30-150	A
BZ 198	95		30-150	A
DBOB	93		30-150	B
BZ 198	102		30-150	B

Project Name: PNSY
Project Number: N492-000
Lab Number: L1429023
Report Date: 01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-03	Date Collected:	12/02/14 11:05
Client ID:	SC-07-S1	Date Received:	12/04/14
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	12/10/14 12:00
Analytical Date:	01/06/15 18:50	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	12/19/14
Percent Solids:	56%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.695	--	1	A
gamma-BHC	ND		ug/kg	0.348	--	1	A
Heptachlor	ND		ug/kg	0.348	--	1	A
Aldrin	ND		ug/kg	0.348	--	1	A
Heptachlor epoxide	ND		ug/kg	0.695	--	1	B
Oxychlordane	ND		ug/kg	0.695	--	1	B
trans-Chlordane	ND		ug/kg	0.348	--	1	A
Endosulfan I	ND		ug/kg	0.348	--	1	A
cis-Chlordane	ND		ug/kg	0.348	--	1	A
trans-Nonachlor	ND		ug/kg	0.348	--	1	A
4,4'-DDE	0.833	IP	ug/kg	0.348	--	1	A
Dieldrin	ND		ug/kg	0.348	--	1	A
Endrin	ND		ug/kg	0.348	--	1	A
Endosulfan II	ND		ug/kg	0.348	--	1	A
4,4'-DDD	0.499		ug/kg	0.348	--	1	B
cis-Nonachlor	ND		ug/kg	0.348	--	1	A
4,4'-DDT	0.348	IP	ug/kg	0.348	--	1	A
Methoxychlor	ND		ug/kg	3.48	--	1	A
Toxaphene	ND		ug/kg	17.4	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	69		30-150	A
BZ 198	76		30-150	A
DBOB	66		30-150	B
BZ 198	81		30-150	B

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-04	Date Collected:	12/03/14 10:50
Client ID:	SC-06-S1	Date Received:	12/04/14
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	12/10/14 12:00
Analytical Date:	01/05/15 19:11	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	12/19/14
Percent Solids:	75%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.942	--	1	A
gamma-BHC	ND		ug/kg	0.471	--	1	A
Heptachlor	ND		ug/kg	0.471	--	1	A
Aldrin	ND		ug/kg	0.471	--	1	A
Heptachlor epoxide	ND		ug/kg	0.942	--	1	B
Oxychlordane	1.80		ug/kg	0.942	--	1	B
trans-Chlordane	ND		ug/kg	0.471	--	1	A
Endosulfan I	ND		ug/kg	0.471	--	1	A
cis-Chlordane	ND		ug/kg	0.471	--	1	A
trans-Nonachlor	ND		ug/kg	0.471	--	1	A
4,4'-DDE	ND		ug/kg	0.471	--	1	A
Dieldrin	ND		ug/kg	0.471	--	1	A
Endrin	ND		ug/kg	0.471	--	1	A
Endosulfan II	ND		ug/kg	0.471	--	1	A
4,4'-DDD	ND		ug/kg	0.471	--	1	A
cis-Nonachlor	ND		ug/kg	0.471	--	1	A
4,4'-DDT	1.10	IP	ug/kg	0.471	--	1	A
Methoxychlor	ND		ug/kg	4.71	--	1	A
Toxaphene	ND		ug/kg	23.6	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	75		30-150	A
BZ 198	81		30-150	A
DBOB	67		30-150	B
BZ 198	82		30-150	B

Project Name: PNSY
Project Number: N492-000
Lab Number: L1429023
Report Date: 01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-05	Date Collected:	12/03/14 12:10
Client ID:	SC-06-S2	Date Received:	12/04/14
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	12/10/14 12:00
Analytical Date:	01/05/15 19:44	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	12/19/14
Percent Solids:	86%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.853	--	1	A
gamma-BHC	ND		ug/kg	0.426	--	1	A
Heptachlor	ND		ug/kg	0.426	--	1	A
Aldrin	ND		ug/kg	0.426	--	1	A
Heptachlor epoxide	ND		ug/kg	0.853	--	1	B
Oxychlordane	1.39		ug/kg	0.853	--	1	B
trans-Chlordane	ND		ug/kg	0.426	--	1	A
Endosulfan I	ND		ug/kg	0.426	--	1	A
cis-Chlordane	ND		ug/kg	0.426	--	1	A
trans-Nonachlor	ND		ug/kg	0.426	--	1	A
4,4'-DDE	ND		ug/kg	0.426	--	1	A
Dieldrin	ND		ug/kg	0.426	--	1	A
Endrin	ND		ug/kg	0.426	--	1	A
Endosulfan II	ND		ug/kg	0.426	--	1	A
4,4'-DDD	ND		ug/kg	0.426	--	1	A
cis-Nonachlor	ND		ug/kg	0.426	--	1	A
4,4'-DDT	ND		ug/kg	0.426	--	1	A
Methoxychlor	ND		ug/kg	4.26	--	1	A
Toxaphene	ND		ug/kg	21.4	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	73		30-150	A
BZ 198	86		30-150	A
DBOB	69		30-150	B
BZ 198	83		30-150	B

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-06	Date Collected:	12/05/14 11:40
Client ID:	SC-05A-S1	Date Received:	12/08/14
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	12/10/14 12:00
Analytical Date:	01/07/15 01:24	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	12/19/14
Percent Solids:	68%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.568	--	1	A
gamma-BHC	ND		ug/kg	0.284	--	1	A
Heptachlor	ND		ug/kg	0.284	--	1	A
Aldrin	ND		ug/kg	0.284	--	1	A
Heptachlor epoxide	ND		ug/kg	0.568	--	1	B
Oxychlordane	ND		ug/kg	0.568	--	1	B
trans-Chlordane	ND		ug/kg	0.284	--	1	A
Endosulfan I	ND		ug/kg	0.284	--	1	A
cis-Chlordane	ND		ug/kg	0.284	--	1	A
trans-Nonachlor	ND		ug/kg	0.284	--	1	A
4,4'-DDE	ND		ug/kg	0.284	--	1	A
Dieldrin	ND		ug/kg	0.284	--	1	A
Endrin	ND		ug/kg	0.284	--	1	A
Endosulfan II	ND		ug/kg	0.284	--	1	A
4,4'-DDD	ND		ug/kg	0.284	--	1	A
cis-Nonachlor	ND		ug/kg	0.284	--	1	A
4,4'-DDT	ND		ug/kg	0.284	--	1	A
Methoxychlor	ND		ug/kg	2.84	--	1	A
Toxaphene	ND		ug/kg	14.3	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	90		30-150	A
BZ 198	79		30-150	A
DBOB	89		30-150	B
BZ 198	80		30-150	B

Project Name: PNSY
Project Number: N492-000
Lab Number: L1429023
Report Date: 01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-06	D	Date Collected:	12/05/14 11:40
Client ID:	SC-05A-S1		Date Received:	12/08/14
Sample Location:	KITTERY, MAINE		Field Prep:	Not Specified
Matrix:	Sediment		Extraction Method:	EPA 3570
Analytical Method:	1,8081B		Extraction Date:	12/10/14 12:00
Analytical Date:	01/06/15 19:58		Cleanup Method:	EPA 3630
Analyst:	SF		Cleanup Date:	12/19/14
Percent Solids:	68%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Endrin	ND		ug/kg	1.42	--	5	A
4,4'-DDT	ND		ug/kg	1.42	--	5	A
Methoxychlor	ND		ug/kg	14.2	--	5	A
Toxaphene	ND		ug/kg	71.3	--	5	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	80		30-150	A
BZ 198	77		30-150	A
DBOB	73		30-150	B
BZ 198	79		30-150	B

Project Name: PNSY
Project Number: N492-000
Lab Number: L1429023
Report Date: 01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-07	Date Collected:	12/08/14 09:20
Client ID:	SC-02-S1	Date Received:	12/10/14
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	12/18/14 10:34
Analytical Date:	01/07/15 01:58	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	12/19/14
Percent Solids:	60%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.645	--	1	A
gamma-BHC	ND		ug/kg	0.323	--	1	A
Heptachlor	ND		ug/kg	0.323	--	1	A
Aldrin	ND		ug/kg	0.323	--	1	A
Heptachlor epoxide	ND		ug/kg	0.645	--	1	B
Oxychlordane	ND		ug/kg	0.645	--	1	B
trans-Chlordane	ND		ug/kg	0.323	--	1	A
Endosulfan I	ND		ug/kg	0.323	--	1	A
cis-Chlordane	0.558	P	ug/kg	0.323	--	1	B
trans-Nonachlor	2.64	P	ug/kg	0.323	--	1	B
4,4'-DDE	3.18		ug/kg	0.323	--	1	A
Dieldrin	0.474	IP	ug/kg	0.323	--	1	A
Endrin	ND		ug/kg	0.323	--	1	A
Endosulfan II	0.480	IP	ug/kg	0.323	--	1	B
4,4'-DDD	7.26		ug/kg	0.323	--	1	A
cis-Nonachlor	ND		ug/kg	0.323	--	1	A
4,4'-DDT	1.96	IP	ug/kg	0.323	--	1	A
Methoxychlor	ND		ug/kg	3.23	--	1	A
Toxaphene	ND		ug/kg	16.2	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	84		30-150	A
BZ 198	74		30-150	A
DBOB	76		30-150	B
BZ 198	75		30-150	B

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-07	D	Date Collected:	12/08/14 09:20
Client ID:	SC-02-S1		Date Received:	12/10/14
Sample Location:	KITTERY, MAINE		Field Prep:	Not Specified
Matrix:	Sediment		Extraction Method:	EPA 3570
Analytical Method:	1,8081B		Extraction Date:	12/18/14 10:34
Analytical Date:	01/06/15 13:36		Cleanup Method:	EPA 3630
Analyst:	SF		Cleanup Date:	12/19/14
Percent Solids:	60%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Endrin	ND		ug/kg	3.23	--	10	A
4,4'-DDT	ND		ug/kg	3.23	--	10	A
Methoxychlor	ND		ug/kg	32.3	--	10	A
Toxaphene	ND		ug/kg	162	--	10	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	81		30-150	A
BZ 198	93		30-150	A
DBOB	77		30-150	B
BZ 198	79		30-150	B

Project Name: PNSY
Project Number: N492-000
Lab Number: L1429023
Report Date: 01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-08	Date Collected:	12/11/14 11:10
Client ID:	SC-01-S1	Date Received:	12/15/14
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	12/18/14 10:34
Analytical Date:	01/07/15 02:32	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	12/19/14
Percent Solids:	49%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.800	--	1	A
gamma-BHC	ND		ug/kg	0.400	--	1	A
Heptachlor	ND		ug/kg	0.400	--	1	A
Aldrin	ND		ug/kg	0.400	--	1	A
Heptachlor epoxide	ND		ug/kg	0.800	--	1	B
Oxychlordane	ND		ug/kg	0.800	--	1	B
trans-Chlordane	ND		ug/kg	0.400	--	1	A
Endosulfan I	ND		ug/kg	0.400	--	1	A
cis-Chlordane	ND		ug/kg	0.400	--	1	A
trans-Nonachlor	11.9	P	ug/kg	0.400	--	1	B
4,4'-DDE	ND		ug/kg	0.400	--	1	A
Dieldrin	ND		ug/kg	0.400	--	1	A
Endrin	ND		ug/kg	0.400	--	1	A
Endosulfan II	ND		ug/kg	0.400	--	1	A
4,4'-DDD	2.20	P	ug/kg	0.400	--	1	A
cis-Nonachlor	ND		ug/kg	0.400	--	1	A
4,4'-DDT	7.85	IP	ug/kg	0.400	--	1	A
Methoxychlor	ND		ug/kg	4.00	--	1	A
Toxaphene	ND		ug/kg	20.1	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	71		30-150	A
BZ 198	68		30-150	A
DBOB	47		30-150	B
BZ 198	50		30-150	B

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-08	D	Date Collected:	12/11/14 11:10
Client ID:	SC-01-S1		Date Received:	12/15/14
Sample Location:	KITTERY, MAINE		Field Prep:	Not Specified
Matrix:	Sediment		Extraction Method:	EPA 3570
Analytical Method:	1,8081B		Extraction Date:	12/18/14 10:34
Analytical Date:	01/06/15 19:24		Cleanup Method:	EPA 3630
Analyst:	SF		Cleanup Date:	12/19/14
Percent Solids:	49%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Endrin	ND		ug/kg	4.00	--	10	A
4,4'-DDT	10.2	IP	ug/kg	4.00	--	10	A
Methoxychlor	ND		ug/kg	40.0	--	10	A
Toxaphene	ND		ug/kg	201	--	10	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	68		30-150	A
BZ 198	95		30-150	A
DBOB	61		30-150	B
BZ 198	73		30-150	B

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-09	Date Collected:	12/11/14 11:55
Client ID:	SC-01-S2	Date Received:	12/15/14
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	12/18/14 10:34
Analytical Date:	01/05/15 21:54	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	12/19/14
Percent Solids:	82%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	0.478	--	1	A
gamma-BHC	ND		ug/kg	0.239	--	1	A
Heptachlor	ND		ug/kg	0.239	--	1	A
Aldrin	ND		ug/kg	0.239	--	1	A
Heptachlor epoxide	ND		ug/kg	0.478	--	1	B
Oxychlordane	ND		ug/kg	0.478	--	1	B
trans-Chlordane	ND		ug/kg	0.239	--	1	A
Endosulfan I	ND		ug/kg	0.239	--	1	A
cis-Chlordane	ND		ug/kg	0.239	--	1	A
trans-Nonachlor	ND		ug/kg	0.239	--	1	A
4,4'-DDE	ND		ug/kg	0.239	--	1	A
Dieldrin	ND		ug/kg	0.239	--	1	A
Endrin	ND		ug/kg	0.239	--	1	A
Endosulfan II	ND		ug/kg	0.239	--	1	A
4,4'-DDD	ND		ug/kg	0.239	--	1	A
cis-Nonachlor	ND		ug/kg	0.239	--	1	A
4,4'-DDT	ND		ug/kg	0.239	--	1	A
Methoxychlor	ND		ug/kg	2.39	--	1	A
Toxaphene	ND		ug/kg	12.0	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	44		30-150	A
BZ 198	53		30-150	A
DBOB	42		30-150	B
BZ 198	54		30-150	B

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 01/05/15 10:32
Analyst: SF

Extraction Method: EPA 3570
Extraction Date: 12/10/14 12:00
Cleanup Method: EPA 3630
Cleanup Date: 12/19/14

Parameter	Result	Qualifier	Units	RL	MDL	Column
RIM Organochlorine Pesticides - Mansfield Lab for sample(s): 01-06 Batch: WG747232-1						
Hexachlorobenzene	ND		ug/kg	0.800	--	A
gamma-BHC	ND		ug/kg	0.400	--	A
Heptachlor	ND		ug/kg	0.400	--	A
Aldrin	ND		ug/kg	0.400	--	A
trans-Chlordane	ND		ug/kg	0.400	--	A
Endosulfan I	ND		ug/kg	0.400	--	A
cis-Chlordane	ND		ug/kg	0.400	--	A
trans-Nonachlor	ND		ug/kg	0.400	--	A
4,4'-DDE	ND		ug/kg	0.400	--	A
Dieldrin	ND		ug/kg	0.400	--	A
Endrin	ND		ug/kg	0.400	--	A
Endosulfan II	ND		ug/kg	0.400	--	A
4,4'-DDD	ND		ug/kg	0.400	--	A
cis-Nonachlor	ND		ug/kg	0.400	--	A
4,4'-DDT	ND		ug/kg	0.400	--	A
Methoxychlor	ND		ug/kg	4.00	--	A
Toxaphene	ND		ug/kg	20.1	--	A
Heptachlor epoxide	ND		ug/kg	0.800	--	B
Oxychlordane	ND		ug/kg	0.800	--	B

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DBOB	69		30-150	A
BZ 198	82		30-150	A
DBOB	67		30-150	B
BZ 198	84		30-150	B

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 01/05/15 12:10
Analyst: SF

Extraction Method: EPA 3570
Extraction Date: 12/18/14 10:34
Cleanup Method: EPA 3630
Cleanup Date: 12/19/14

Parameter	Result	Qualifier	Units	RL	MDL	Column
RIM Organochlorine Pesticides - Mansfield Lab for sample(s): 07-09 Batch: WG749835-1						
Hexachlorobenzene	ND		ug/kg	0.800	--	A
gamma-BHC	ND		ug/kg	0.400	--	A
Heptachlor	ND		ug/kg	0.400	--	A
Aldrin	ND		ug/kg	0.400	--	A
trans-Chlordane	ND		ug/kg	0.400	--	A
Endosulfan I	ND		ug/kg	0.400	--	A
cis-Chlordane	ND		ug/kg	0.400	--	A
trans-Nonachlor	ND		ug/kg	0.400	--	A
4,4'-DDE	ND		ug/kg	0.400	--	A
Dieldrin	ND		ug/kg	0.400	--	A
Endrin	ND		ug/kg	0.400	--	A
Endosulfan II	ND		ug/kg	0.400	--	A
4,4'-DDD	ND		ug/kg	0.400	--	A
cis-Nonachlor	ND		ug/kg	0.400	--	A
4,4'-DDT	ND		ug/kg	0.400	--	A
Methoxychlor	ND		ug/kg	4.00	--	A
Toxaphene	ND		ug/kg	20.1	--	A
Heptachlor epoxide	ND		ug/kg	0.800	--	B
Oxychlordane	ND		ug/kg	0.800	--	B

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DBOB	59		30-150	A
BZ 198	74		30-150	A
DBOB	59		30-150	B
BZ 198	77		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-06 Batch: WG747232-2 WG747232-3									
Hexachlorobenzene	69		66		50-120	4		30	A
gamma-BHC	73		71		50-120	3		30	A
Heptachlor	77		74		50-120	4		30	A
Aldrin	78		76		50-120	3		30	A
trans-Chlordane	90		87		50-120	3		30	A
Endosulfan I	88		84		50-120	5		30	A
cis-Chlordane	88		85		50-120	3		30	A
trans-Nonachlor	92		88		50-120	4		30	A
4,4'-DDE	105		99		50-120	6		30	A
Dieldrin	94		88		50-120	7		30	A
Endrin	87		81		50-120	7		30	A
4,4'-DDD	101		97		50-120	4		30	A
cis-Nonachlor	89		84		50-120	6		30	A
4,4'-DDT	87		84		50-120	4		30	A
Methoxychlor	90		84		50-120	7		30	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: PNSY

Project Number: N492-000

Lab Number: L1429023

Report Date: 01/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-06 Batch: WG747232-2 WG747232-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DBOB	66		62		30-150	A
BZ 198	92		86		30-150	A
DBOB	63		61		30-150	B
BZ 198	92		86		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-06 Batch: WG747232-2 WG747232-3									
Heptachlor epoxide	79		76		50-120	4		30	B
Oxychlordane	80		79		50-120	1		30	B
Endosulfan II	86		79		50-120	8		30	B

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DBOB	66		62		30-150	A
BZ 198	92		86		30-150	A
DBOB	63		61		30-150	B
BZ 198	92		86		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 07-09 Batch: WG749835-2 WG749835-3									
Hexachlorobenzene	61		69		50-120	12		30	A
gamma-BHC	66		72		50-120	9		30	A
Heptachlor	70		76		50-120	8		30	A
Aldrin	70		77		50-120	10		30	A
trans-Chlordane	78		84		50-120	7		30	A
Endosulfan I	76		82		50-120	8		30	A
cis-Chlordane	77		82		50-120	6		30	A
trans-Nonachlor	80		85		50-120	6		30	A
4,4'-DDE	90		96		50-120	6		30	A
Dieldrin	81		87		50-120	7		30	A
Endrin	74		81		50-120	9		30	A
4,4'-DDD	87		95		50-120	9		30	A
cis-Nonachlor	76		82		50-120	8		30	A
4,4'-DDT	75		82		50-120	9		30	A
Methoxychlor	77		85		50-120	10		30	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: PNSY

Project Number: N492-000

Lab Number: L1429023

Report Date: 01/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 07-09 Batch: WG749835-2 WG749835-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DBOB	60		64		30-150	A
BZ 198	81		84		30-150	A
DBOB	57		63		30-150	B
BZ 198	81		85		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: PNSY

Project Number: N492-000

Lab Number: L1429023

Report Date: 01/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 07-09 Batch: WG749835-2 WG749835-3									
Heptachlor epoxide	70		76		50-120	8		30	B
Oxychlordane	72		77		50-120	7		30	B
Endosulfan II	70		78		50-120	11		30	B

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DBOB	60		64		30-150	A
BZ 198	81		84		30-150	A
DBOB	57		63		30-150	B
BZ 198	81		85		30-150	B

Matrix Spike Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits	Column
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG747232-4 WG747232-5 QC Sample: L1429023-01 Client ID: SC-04-1													
Hexachlorobenzene	ND	91.7	72.4	79		74.0	83		50-120	2		30	A
gamma-BHC	ND	91.7	70.6	77		70.1	79		50-120	1		30	A
Heptachlor	ND	91.7	73.6	80		68.1	76		50-120	8		30	A
Aldrin	ND	91.7	77.8	85		111P	**124**	Q	50-120	**35**	Q	30	A
Heptachlor epoxide	ND	91.7	121	**132**	Q	104	117		50-120	15		30	B
Oxychlordane	ND	91.7	86.4	94		83.6	94		50-120	3		30	B
trans-Chlordane	ND	91.7	81.0	88		69.9	78		50-120	15		30	A
Endosulfan I	ND	91.7	77.8	85		69.1	78		50-120	12		30	A
cis-Chlordane	ND	91.7	79.6	87		66.3	74		50-120	18		30	A
trans-Nonachlor	ND	91.7	76.2	83		68.7	77		50-120	10		30	A
4,4'-DDE	5.21	91.7	90.4	93		70.1	73		50-120	25		30	A
Dieldrin	2.30	91.7	68.4	72		63.6	69		50-120	7		30	A
Endrin	ND	91.7	78.0	85		68.6	77		50-120	13		30	A
Endosulfan II	0.426	91.7	74.2IP	81		63.6IP	71		50-120	15		30	B
4,4'-DDD	9.03	91.7	83.5	81		68.4	67		50-120	20		30	A
cis-Nonachlor	ND	91.7	72.2I	79		62.2I	70		50-120	15		30	A
4,4'-DDT	1.79	91.7	85.8IP	92		92.5I	102		50-120	8		30	A
Methoxychlor	ND	91.7	82.8	90		76.5	86		50-120	8		30	A

Matrix Spike Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG747232-4 WG747232-5 QC Sample: L1429023-01 Client ID: SC-04-1												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria	Column
BZ 198	77		82		30-150	A
DBOB	84		90		30-150	A
BZ 198	87		94		30-150	B
DBOB	80		95		30-150	B

Lab Duplicate Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits	
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG747232-6 QC Sample: L1429023-01 Client ID: SC-04-1							
Endrin	ND	ND	ug/kg	NC		30	A
4,4'-DDT	11.1	11.1P	ug/kg	0		30	B
Methoxychlor	ND	ND	ug/kg	NC		30	A

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria	Column
DBOB	74		76		30-150	A
BZ 198	103		84		30-150	A
DBOB	71		64		30-150	B
BZ 198	95		95		30-150	B

Lab Duplicate Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Parameter	Native Sample	Duplicate Sample	Units	RPD		RPD Limits	
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG747232-6 QC Sample: L1429023-01 Client ID: SC-04-1							
Hexachlorobenzene	ND	ND	ug/kg	NC		30	A
gamma-BHC	ND	ND	ug/kg	NC		30	A
Heptachlor	ND	ND	ug/kg	NC		30	A
Aldrin	ND	ND	ug/kg	NC		30	A
Heptachlor epoxide	ND	ND	ug/kg	NC		30	B
Oxychlordane	ND	ND	ug/kg	NC		30	B
trans-Chlordane	ND	ND	ug/kg	NC		30	A
Endosulfan I	ND	ND	ug/kg	NC		30	A
cis-Chlordane	0.669	0.533	ug/kg	23		30	B
trans-Nonachlor	3.14	5.58P	ug/kg	**56**	Q	30	B
4,4'-DDE	5.21	5.64IP	ug/kg	8		30	A
Dieldrin	2.30	0.869IP	ug/kg	**90**	Q	30	A
Endrin	ND	ND	ug/kg	NC		30	A
Endosulfan II	0.426	0.492IP	ug/kg	14		30	B
4,4'-DDD	9.03	8.84	ug/kg	2		30	A
cis-Nonachlor	ND	ND	ug/kg	NC		30	A
4,4'-DDT	1.79	1.93IP	ug/kg	8		30	A
Methoxychlor	ND	ND	ug/kg	NC		30	A
Toxaphene	ND	ND	ug/kg	NC		30	A

Lab Duplicate Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits

RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG747232-6 QC Sample: L1429023-01 Client ID: SC-04-1

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria	Column
DBOB	86		86		30-150	A
BZ 198	74		78		30-150	A
DBOB	83		86		30-150	B
BZ 198	82		93		30-150	B

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG747232-7

Parameter	% Recovery	Qual	QC Criteria
Hexachlorobenzene	108		40-140
cis-Chlordane	121		40-140
trans-Nonachlor	704	Q	40-140
DBOB (Surrogate)	99		30-150
DBOB (Surrogate)	114		30-150
BZ 198 (Surrogate)	74		30-150
BZ 198 (Surrogate)	216	Q	30-150

METALS

Project Name:	PNSY	**Lab Number:**	L1429023
Project Number:	N492-000	**Report Date:**	01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-01	Date Collected:	11/26/14 10:45
Client ID:	SC-04-1	Date Received:	12/01/14
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	54%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	37.5		mg/kg	0.271	--	10	12/29/14 15:00	01/05/15 12:37	EPA 3050B	1,6020A	PD
Cadmium, Total	0.618		mg/kg	0.108	--	10	12/29/14 15:00	01/05/15 12:37	EPA 3050B	1,6020A	PD
Chromium, Total	207		mg/kg	1.08	--	10	12/29/14 15:00	01/05/15 12:37	EPA 3050B	1,6020A	PD
Copper, Total	1720		mg/kg	1.08	--	10	12/29/14 15:00	01/05/15 12:37	EPA 3050B	1,6020A	PD
Lead, Total	1740		mg/kg	0.326	--	10	12/29/14 15:00	01/05/15 12:37	EPA 3050B	1,6020A	PD
Mercury, Total	0.653		mg/kg	0.027	--	5	12/29/14 15:00	01/06/15 11:30	EPA 7474	1,7474	PD
Nickel, Total	350		mg/kg	0.543	--	10	12/29/14 15:00	01/05/15 12:37	EPA 3050B	1,6020A	PD
Zinc, Total	9470		mg/kg	27.1	--	50	12/29/14 15:00	01/05/15 13:13	EPA 3050B	1,6020A	PD

Project Name:	PNSY	**Lab Number:**	L1429023
Project Number:	N492-000	**Report Date:**	01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-02	Date Collected:	11/26/14 11:20
Client ID:	SC-04-2	Date Received:	12/01/14
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	81%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	63.4		mg/kg	0.915	--	50	12/29/14 15:00	01/05/15 13:19	EPA 3050B	1,6020A	PD
Cadmium, Total	1.15		mg/kg	0.366	--	50	12/29/14 15:00	01/05/15 13:19	EPA 3050B	1,6020A	PD
Chromium, Total	295		mg/kg	3.66	--	50	12/29/14 15:00	01/05/15 13:19	EPA 3050B	1,6020A	PD
Copper, Total	5060		mg/kg	3.66	--	50	12/29/14 15:00	01/05/15 13:19	EPA 3050B	1,6020A	PD
Lead, Total	3700		mg/kg	1.10	--	50	12/29/14 15:00	01/05/15 13:19	EPA 3050B	1,6020A	PD
Mercury, Total	0.632		mg/kg	0.017	--	5	12/29/14 15:00	01/06/15 11:43	EPA 7474	1,7474	PD
Nickel, Total	816		mg/kg	1.83	--	50	12/29/14 15:00	01/05/15 13:19	EPA 3050B	1,6020A	PD
Zinc, Total	24800		mg/kg	91.5	--	250	12/29/14 15:00	01/05/15 13:20	EPA 3050B	1,6020A	PD

Project Name: PNSY
Project Number: N492-000
Lab Number: L1429023
Report Date: 01/09/15

SAMPLE RESULTS

Lab ID: L1429023-03
Client ID: SC-07-S1
Sample Location: KITTERY, MAINE
Matrix: Sediment
Percent Solids: 56%

Date Collected: 12/02/14 11:05
Date Received: 12/04/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	17.0		mg/kg	0.248	--	10	12/29/14 15:00	01/05/15 12:44	EPA 3050B	1,6020A	PD
Cadmium, Total	0.225		mg/kg	0.099	--	10	12/29/14 15:00	01/05/15 12:44	EPA 3050B	1,6020A	PD
Chromium, Total	55.7		mg/kg	0.990	--	10	12/29/14 15:00	01/05/15 12:44	EPA 3050B	1,6020A	PD
Copper, Total	63.3		mg/kg	0.990	--	10	12/29/14 15:00	01/05/15 12:44	EPA 3050B	1,6020A	PD
Lead, Total	55.0		mg/kg	0.297	--	10	12/29/14 15:00	01/05/15 12:44	EPA 3050B	1,6020A	PD
Mercury, Total	0.144		mg/kg	0.026	--	5	12/29/14 15:00	01/06/15 11:45	EPA 7474	1,7474	PD
Nickel, Total	24.8		mg/kg	0.495	--	10	12/29/14 15:00	01/05/15 12:44	EPA 3050B	1,6020A	PD
Zinc, Total	156		mg/kg	4.95	--	10	12/29/14 15:00	01/05/15 12:44	EPA 3050B	1,6020A	PD

Project Name: PNSY
Project Number: N492-000
Lab Number: L1429023
Report Date: 01/09/15

SAMPLE RESULTS

Lab ID: L1429023-04
Client ID: SC-06-S1
Sample Location: KITTERY, MAINE
Matrix: Sediment
Percent Solids: 75%

Date Collected: 12/03/14 10:50
Date Received: 12/04/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	12.4		mg/kg	0.174	--	10	12/29/14 15:00	01/05/15 12:46	EPA 3050B	1,6020A	PD
Cadmium, Total	0.200		mg/kg	0.070	--	10	12/29/14 15:00	01/05/15 12:46	EPA 3050B	1,6020A	PD
Chromium, Total	36.2		mg/kg	0.698	--	10	12/29/14 15:00	01/05/15 12:46	EPA 3050B	1,6020A	PD
Copper, Total	502		mg/kg	0.698	--	10	12/29/14 15:00	01/05/15 12:46	EPA 3050B	1,6020A	PD
Lead, Total	69.7		mg/kg	0.209	--	10	12/29/14 15:00	01/05/15 12:46	EPA 3050B	1,6020A	PD
Mercury, Total	0.177		mg/kg	0.020	--	5	12/29/14 15:00	01/06/15 11:48	EPA 7474	1,7474	PD
Nickel, Total	73.0		mg/kg	0.349	--	10	12/29/14 15:00	01/05/15 12:46	EPA 3050B	1,6020A	PD
Zinc, Total	520		mg/kg	3.49	--	10	12/29/14 15:00	01/05/15 12:46	EPA 3050B	1,6020A	PD

Project Name:	PNSY	**Lab Number:**	L1429023
Project Number:	N492-000	**Report Date:**	01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-05	Date Collected:	12/03/14 12:10
Client ID:	SC-06-S2	Date Received:	12/04/14
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	86%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	10.4		mg/kg	0.166	--	10	12/29/14 15:00	01/05/15 12:47	EPA 3050B	1,6020A	PD
Cadmium, Total	ND		mg/kg	0.067	--	10	12/29/14 15:00	01/05/15 12:47	EPA 3050B	1,6020A	PD
Chromium, Total	31.8		mg/kg	0.665	--	10	12/29/14 15:00	01/05/15 12:47	EPA 3050B	1,6020A	PD
Copper, Total	128		mg/kg	0.665	--	10	12/29/14 15:00	01/05/15 12:47	EPA 3050B	1,6020A	PD
Lead, Total	137		mg/kg	0.200	--	10	12/29/14 15:00	01/05/15 12:47	EPA 3050B	1,6020A	PD
Mercury, Total	ND		mg/kg	0.018	--	5	12/29/14 15:00	01/06/15 11:55	EPA 7474	1,7474	PD
Nickel, Total	46.2		mg/kg	0.332	--	10	12/29/14 15:00	01/05/15 12:47	EPA 3050B	1,6020A	PD
Zinc, Total	507		mg/kg	3.32	--	10	12/29/14 15:00	01/05/15 12:47	EPA 3050B	1,6020A	PD

Project Name: PNSY
Project Number: N492-000
Lab Number: L1429023
Report Date: 01/09/15

SAMPLE RESULTS

Lab ID: L1429023-06
Client ID: SC-05A-S1
Sample Location: KITTERY, MAINE
Matrix: Sediment
Percent Solids: 68%

Date Collected: 12/05/14 11:40
Date Received: 12/08/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	7.28		mg/kg	0.198	--	10	12/29/14 15:00	01/05/15 12:48	EPA 3050B	1,6020A	PD
Cadmium, Total	0.134		mg/kg	0.079	--	10	12/29/14 15:00	01/05/15 12:48	EPA 3050B	1,6020A	PD
Chromium, Total	32.5		mg/kg	0.791	--	10	12/29/14 15:00	01/05/15 12:48	EPA 3050B	1,6020A	PD
Copper, Total	98.2		mg/kg	0.791	--	10	12/29/14 15:00	01/05/15 12:48	EPA 3050B	1,6020A	PD
Lead, Total	65.6		mg/kg	0.237	--	10	12/29/14 15:00	01/05/15 12:48	EPA 3050B	1,6020A	PD
Mercury, Total	0.090		mg/kg	0.022	--	5	12/29/14 15:00	01/06/15 11:58	EPA 7474	1,7474	PD
Nickel, Total	25.1		mg/kg	0.395	--	10	12/29/14 15:00	01/05/15 12:48	EPA 3050B	1,6020A	PD
Zinc, Total	638		mg/kg	3.95	--	10	12/29/14 15:00	01/05/15 12:48	EPA 3050B	1,6020A	PD

Project Name:	PNSY	**Lab Number:**	L1429023
Project Number:	N492-000	**Report Date:**	01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-07	Date Collected:	12/08/14 09:20
Client ID:	SC-02-S1	Date Received:	12/10/14
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	60%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	12.4		mg/kg	0.245	--	10	12/29/14 15:00	01/05/15 12:52	EPA 3050B	1,6020A	PD
Cadmium, Total	0.554		mg/kg	0.098	--	10	12/29/14 15:00	01/05/15 12:52	EPA 3050B	1,6020A	PD
Chromium, Total	89.7		mg/kg	0.980	--	10	12/29/14 15:00	01/05/15 12:52	EPA 3050B	1,6020A	PD
Copper, Total	74.5		mg/kg	0.980	--	10	12/29/14 15:00	01/05/15 12:52	EPA 3050B	1,6020A	PD
Lead, Total	384		mg/kg	0.294	--	10	12/29/14 15:00	01/05/15 12:52	EPA 3050B	1,6020A	PD
Mercury, Total	5.95		mg/kg	0.126	--	25	12/29/14 15:00	01/06/15 12:13	EPA 7474	1,7474	PD
Nickel, Total	38.8		mg/kg	0.490	--	10	12/29/14 15:00	01/05/15 12:52	EPA 3050B	1,6020A	PD
Zinc, Total	215		mg/kg	4.90	--	10	12/29/14 15:00	01/05/15 12:52	EPA 3050B	1,6020A	PD

Project Name: PNSY
Project Number: N492-000
Lab Number: L1429023
Report Date: 01/09/15

SAMPLE RESULTS

Lab ID: L1429023-08
Client ID: SC-01-S1
Sample Location: KITTERY, MAINE
Matrix: Sediment
Percent Solids: 49%

Date Collected: 12/11/14 11:10
Date Received: 12/15/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	14.8		mg/kg	0.286	--	10	12/29/14 15:00	01/05/15 12:53	EPA 3050B	1,6020A	PD
Cadmium, Total	0.974		mg/kg	0.114	--	10	12/29/14 15:00	01/05/15 12:53	EPA 3050B	1,6020A	PD
Chromium, Total	79.9		mg/kg	1.14	--	10	12/29/14 15:00	01/05/15 12:53	EPA 3050B	1,6020A	PD
Copper, Total	238		mg/kg	1.14	--	10	12/29/14 15:00	01/05/15 12:53	EPA 3050B	1,6020A	PD
Lead, Total	57.0		mg/kg	0.344	--	10	12/29/14 15:00	01/05/15 12:53	EPA 3050B	1,6020A	PD
Mercury, Total	0.421		mg/kg	0.030	--	5	12/29/14 15:00	01/06/15 12:06	EPA 7474	1,7474	PD
Nickel, Total	106		mg/kg	0.573	--	10	12/29/14 15:00	01/05/15 12:53	EPA 3050B	1,6020A	PD
Zinc, Total	160		mg/kg	5.73	--	10	12/29/14 15:00	01/05/15 12:53	EPA 3050B	1,6020A	PD

Project Name:	PNSY	**Lab Number:**	L1429023
Project Number:	N492-000	**Report Date:**	01/09/15

SAMPLE RESULTS

Lab ID:	L1429023-09	Date Collected:	12/11/14 11:55
Client ID:	SC-01-S2	Date Received:	12/15/14
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	82%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	12.4		mg/kg	0.175	--	10	12/29/14 15:00	01/05/15 12:55	EPA 3050B	1,6020A	PD
Cadmium, Total	0.138		mg/kg	0.070	--	10	12/29/14 15:00	01/05/15 12:55	EPA 3050B	1,6020A	PD
Chromium, Total	30.0		mg/kg	0.701	--	10	12/29/14 15:00	01/05/15 12:55	EPA 3050B	1,6020A	PD
Copper, Total	37.5		mg/kg	0.701	--	10	12/29/14 15:00	01/05/15 12:55	EPA 3050B	1,6020A	PD
Lead, Total	10.4		mg/kg	0.210	--	10	12/29/14 15:00	01/05/15 12:55	EPA 3050B	1,6020A	PD
Mercury, Total	0.372		mg/kg	0.019	--	5	12/29/14 15:00	01/06/15 12:08	EPA 7474	1,7474	PD
Nickel, Total	32.5		mg/kg	0.350	--	10	12/29/14 15:00	01/05/15 12:55	EPA 3050B	1,6020A	PD
Zinc, Total	55.0		mg/kg	3.50	--	10	12/29/14 15:00	01/05/15 12:55	EPA 3050B	1,6020A	PD

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-09 Batch: WG752201-1										
Mercury, Total	ND		mg/kg	0.013	--	5	12/29/14 15:00	01/06/15 11:25	1,7474	PD

Prep Information

Digestion Method: EPA 7474

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-09 Batch: WG752202-1										
Arsenic, Total	ND		mg/kg	0.050	--	2	12/29/14 15:00	01/05/15 12:24	1,6020A	PD
Cadmium, Total	ND		mg/kg	0.020	--	2	12/29/14 15:00	01/05/15 12:24	1,6020A	PD
Chromium, Total	ND		mg/kg	0.200	--	2	12/29/14 15:00	01/05/15 12:24	1,6020A	PD
Copper, Total	ND		mg/kg	0.200	--	2	12/29/14 15:00	01/05/15 12:24	1,6020A	PD
Lead, Total	ND		mg/kg	0.060	--	2	12/29/14 15:00	01/05/15 12:24	1,6020A	PD
Nickel, Total	ND		mg/kg	0.100	--	2	12/29/14 15:00	01/05/15 12:24	1,6020A	PD
Zinc, Total	ND		mg/kg	1.00	--	2	12/29/14 15:00	01/05/15 12:24	1,6020A	PD

Prep Information

Digestion Method: EPA 3050B

Lab Control Sample Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-09 Batch: WG752201-2 SRM Lot Number: HPHGAF								
Mercury, Total	95		-		80-120	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-09 Batch: WG752202-2 SRM Lot Number: A2METSPIKE								
Arsenic, Total	88		-		75-125	-		20
Cadmium, Total	102		-		75-125	-		20
Chromium, Total	102		-		75-125	-		20
Copper, Total	101		-		75-125	-		20
Lead, Total	99		-		75-125	-		20
Nickel, Total	101		-		75-125	-		20
Zinc, Total	88		-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG752201-4 WG752201-5 QC Sample: L1429023-01 Client ID: SC-04-1												
Mercury, Total	0.653	1.31	1.86	92		1.74	85		80-120	7		20
Total Metals - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG752202-4 WG752202-5 QC Sample: L1429023-01 Client ID: SC-04-1												
Arsenic, Total	37.5	212	225	88		226	90		75-125	0		20
Cadmium, Total	0.618	106	87.2	82		93.5	89		75-125	7		20
Chromium, Total	207	212	497	**137**	Q	421	103		75-125	17		20
Copper, Total	1720	212	1960	113		1210	**0**	Q	75-125	**47**	Q	20
Lead, Total	1740	212	1830	**42**	Q	1690	**0**	Q	75-125	8		20
Nickel, Total	350	212	517	79		426	**36**	Q	75-125	19		20
Zinc, Total	9470	212	9740	**127**	Q	4450	**0**	Q	75-125	**75**	Q	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG752201-3 QC Sample: L1429023-01 Client ID: SC-04-1						
Mercury, Total	0.653	0.547	mg/kg	18		20
Total Metals - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG752202-3 QC Sample: L1429023-01 Client ID: SC-04-1						
Arsenic, Total	37.5	25.6	mg/kg	**38**	Q	20
Cadmium, Total	0.618	ND	mg/kg	NC		20
Chromium, Total	207	178	mg/kg	15		20
Copper, Total	1720	2090	mg/kg	19		20
Lead, Total	1740	1620	mg/kg	7		20
Nickel, Total	350	340	mg/kg	3		20
Total Metals - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG752202-3 QC Sample: L1429023-01 Client ID: SC-04-1						
Zinc, Total	9470	9160	mg/kg	3		20

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG752201-7

Parameter	% Recovery	Qual	QC Criteria
Mercury, Total	91		71-129

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG752202-7

Parameter	% Recovery	Qual	QC Criteria
Arsenic, Total	103		81-120
Cadmium, Total	106		82-118
Chromium, Total	104		79-120
Copper, Total	108		81-119
Lead, Total	102		81-118
Nickel, Total	109		82-118
Zinc, Total	105		80-120

INORGANICS
&
MISCELLANEOUS

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

SAMPLE RESULTS

Lab ID: L1429023-01
Client ID: SC-04-1
Sample Location: KITTERY, MAINE
Matrix: Sediment

Date Collected: 11/26/14 10:45
Date Received: 12/01/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.09		%	0.010	--	1	-	12/10/14 09:35	1,9060	CM
Total Organic Carbon (Rep2)	1.02		%	0.010	--	1	-	12/10/14 09:35	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	14.4		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Coarse Sand	7.00		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Medium Sand	40.6		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Fine Sand	13.6		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Total Fines	24.4		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	54.2		%	0.100	--	1	-	12/08/14 14:00	30,2540G	LC
Moisture	45.8		%	0.100	--	1	-	12/08/14 14:00	30,2540G	LC

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

SAMPLE RESULTS

Lab ID: L1429023-02
Client ID: SC-04-2
Sample Location: KITTERY, MAINE
Matrix: Sediment

Date Collected: 11/26/14 11:20
Date Received: 12/01/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.398		%	0.010	--	1	-	12/10/14 10:25	1,9060	CM
Total Organic Carbon (Rep2)	0.403		%	0.010	--	1	-	12/10/14 10:25	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	1.30		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Coarse Sand	3.40		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Medium Sand	69.1		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Fine Sand	19.1		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Total Fines	7.10		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	81.3		%	0.100	--	1	-	12/08/14 14:00	30,2540G	LC
Moisture	18.7		%	0.100	--	1	-	12/08/14 14:00	30,2540G	LC

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

SAMPLE RESULTS

Lab ID: L1429023-03
Client ID: SC-07-S1
Sample Location: KITTERY, MAINE
Matrix: Sediment

Date Collected: 12/02/14 11:05
Date Received: 12/04/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	2.30		%	0.010	--	1	-	12/10/14 10:29	1,9060	CM
Total Organic Carbon (Rep2)	1.87		%	0.010	--	1	-	12/10/14 10:29	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	32.4		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Coarse Sand	5.90		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Medium Sand	8.90		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Fine Sand	23.3		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Total Fines	29.5		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	56.4		%	0.100	--	1	-	12/08/14 14:00	30,2540G	LC
Moisture	43.6		%	0.100	--	1	-	12/08/14 14:00	30,2540G	LC

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

SAMPLE RESULTS

Lab ID: L1429023-04
Client ID: SC-06-S1
Sample Location: KITTERY, MAINE
Matrix: Sediment

Date Collected: 12/03/14 10:50
Date Received: 12/04/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.836		%	0.010	--	1	-	12/10/14 11:40	1,9060	CM
Total Organic Carbon (Rep2)	0.747		%	0.010	--	1	-	12/10/14 11:40	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	33.4		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Coarse Sand	8.60		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Medium Sand	20.5		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Fine Sand	27.7		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Total Fines	9.80		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	75.4		%	0.100	--	1	-	12/08/14 14:00	30,2540G	LC
Moisture	24.6		%	0.100	--	1	-	12/08/14 14:00	30,2540G	LC

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

SAMPLE RESULTS

Lab ID: L1429023-05
Client ID: SC-06-S2
Sample Location: KITTERY, MAINE
Matrix: Sediment

Date Collected: 12/03/14 12:10
Date Received: 12/04/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.239		%	0.010	--	1	-	12/10/14 11:54	1,9060	CM
Total Organic Carbon (Rep2)	0.279		%	0.010	--	1	-	12/10/14 11:54	1,9060	CM
Grain Size Analysis - Mansfield Lab										
% Total Gravel	27.3		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Coarse Sand	21.1		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Medium Sand	33.0		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Fine Sand	14.9		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Total Fines	3.70		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	86.4		%	0.100	--	1	-	12/08/14 14:00	30,2540G	LC
Moisture	13.6		%	0.100	--	1	-	12/08/14 14:00	30,2540G	LC

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

SAMPLE RESULTS

Lab ID: L1429023-06
Client ID: SC-05A-S1
Sample Location: KITTERY, MAINE
Matrix: Sediment

Date Collected: 12/05/14 11:40
Date Received: 12/08/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.52		%	0.010	--	1	-	12/30/14 15:28	1,9060	LC
Total Organic Carbon (Rep2)	1.63		%	0.010	--	1	-	12/30/14 15:28	1,9060	LC
Grain Size Analysis - Mansfield Lab										
% Total Gravel	14.7		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Coarse Sand	8.40		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Medium Sand	20.7		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Fine Sand	38.0		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Total Fines	18.2		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	68.0		%	0.100	--	1	-	12/10/14 09:00	30,2540G	LC
Moisture	32.0		%	0.100	--	1	-	12/10/14 09:00	30,2540G	LC

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

SAMPLE RESULTS

Lab ID: L1429023-07
Client ID: SC-02-S1
Sample Location: KITTERY, MAINE
Matrix: Sediment

Date Collected: 12/08/14 09:20
Date Received: 12/10/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	2.25		%	0.010	--	1	-	12/23/14 20:07	1,9060	LC
Total Organic Carbon (Rep2)	4.00		%	0.010	--	1	-	12/23/14 20:07	1,9060	LC
Grain Size Analysis - Mansfield Lab										
% Total Gravel	14.5		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Coarse Sand	15.3		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Medium Sand	21.6		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Fine Sand	17.1		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Total Fines	31.5		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	60.0		%	0.100	--	1	-	12/15/14 22:30	30,2540G	LC
Moisture	40.0		%	0.100	--	1	-	12/15/14 22:30	30,2540G	LC

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

SAMPLE RESULTS

Lab ID: L1429023-08
Client ID: SC-01-S1
Sample Location: KITTERY, MAINE
Matrix: Sediment

Date Collected: 12/11/14 11:10
Date Received: 12/15/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	2.38		%	0.010	--	1	-	12/23/14 20:07	1,9060	LC
Total Organic Carbon (Rep2)	1.12		%	0.010	--	1	-	12/23/14 20:07	1,9060	LC
Grain Size Analysis - Mansfield Lab										
% Total Gravel	41.5		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Coarse Sand	9.70		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Medium Sand	11.1		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Fine Sand	13.3		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Total Fines	24.4		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	48.5		%	0.100	--	1	-	12/19/14 01:00	30,2540G	LC
Moisture	51.5		%	0.100	--	1	-	12/19/14 01:00	30,2540G	LC

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

SAMPLE RESULTS

Lab ID: L1429023-09
Client ID: SC-01-S2
Sample Location: KITTERY, MAINE
Matrix: Sediment

Date Collected: 12/11/14 11:55
Date Received: 12/15/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.163		%	0.010	--	1	-	12/23/14 20:07	1,9060	LC
Total Organic Carbon (Rep2)	0.208		%	0.010	--	1	-	12/23/14 20:07	1,9060	LC
Grain Size Analysis - Mansfield Lab										
% Total Gravel	31.9		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Coarse Sand	4.90		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Medium Sand	9.00		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Fine Sand	17.4		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
% Total Fines	36.8		%	0.100	NA	1	-	12/22/14 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	82.0		%	0.100	--	1	-	12/19/14 01:00	30,2540G	LC
Moisture	18.0		%	0.100	--	1	-	12/19/14 01:00	30,2540G	LC

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 01-05 Batch: WG747378-1										
Total Organic Carbon (Rep1)	ND		%	0.010	--	1	-	12/09/14 19:15	1,9060	CM
Total Organic Carbon (Rep2)	ND		%	0.010	--	1	-	12/09/14 19:15	1,9060	CM
Total Organic Carbon - Mansfield Lab for sample(s): 07-09 Batch: WG752217-1										
Total Organic Carbon (Rep1)	ND		%	0.010	--	1	-	12/23/14 20:07	1,9060	LC
Total Organic Carbon (Rep2)	ND		%	0.010	--	1	-	12/23/14 20:07	1,9060	LC
Total Organic Carbon - Mansfield Lab for sample(s): 06 Batch: WG753218-1										
Total Organic Carbon (Rep1)	ND		%	0.010	--	1	-	12/29/14 20:38	1,9060	LC
Total Organic Carbon (Rep2)	ND		%	0.010	--	1	-	12/29/14 20:38	1,9060	LC

Matrix Spike Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG747378-6 WG747378-7 QC Sample: L1429023-01 Client ID: SC-04-1												
Total Organic Carbon (Rep1)	1.09	1.29	2.44	105		2.41	105		75-125	1		25
Total Organic Carbon (Rep2)	1.02	0.771	1.86	109		2.61	99		75-125	**34**	Q	25
Total Organic Carbon - Mansfield Lab Associated sample(s): 07-09 QC Batch ID: WG752217-4 WG752217-5 QC Sample: L1429023-08 Client ID: SC-01-S1												
Total Organic Carbon (Rep1)	2.38	1.19	2.87	**41**	Q	3.55	78		75-125	21		25
Total Organic Carbon (Rep2)	1.12	1.11	3.13	**181**	Q	3.49	**172**	Q	75-125	11		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 06 QC Batch ID: WG753218-4 WG753218-5 QC Sample: L1429930-07 Client ID: MS Sample												
Total Organic Carbon (Rep1)	1.86	1.21	2.89	85		3.01	112		75-125	4		25
Total Organic Carbon (Rep2)	1.48	1.13	2.86	122		3.10	111		75-125	8		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG746561-1 QC Sample: L1428890-03 Client ID: DUP Sample						
Solids, Total	56.7	56.8	%	0		10
Moisture	43.3	43.2	%	0		10
General Chemistry - Mansfield Lab Associated sample(s): 06 QC Batch ID: WG747244-1 QC Sample: L1429023-06 Client ID: SC-05A-S1						
Solids, Total	68.0	70.3	%	3		10
Moisture	32	29.7	%	7		10
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG747378-3 QC Sample: L1429369-01 Client ID: DUP Sample						
Total Organic Carbon (Rep1)	0.031	0.049	%	**45**	Q	25
Total Organic Carbon (Rep2)	0.048	0.032	%	**40**	Q	25
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG747378-5 QC Sample: L1429023-01 Client ID: SC-04-1						
Total Organic Carbon (Rep1)	1.09	1.06	%	3		25
Total Organic Carbon (Rep2)	1.02	1.25	%	20		25
General Chemistry - Mansfield Lab Associated sample(s): 07 QC Batch ID: WG748790-1 QC Sample: L1429023-07 Client ID: SC-02-S1						
Solids, Total	60.0	58.0	%	3		10
Moisture	40	42.0	%	5		10
General Chemistry - Mansfield Lab Associated sample(s): 08-09 QC Batch ID: WG750117-1 QC Sample: L1429023-08 Client ID: SC-01-S1						
Solids, Total	48.5	52.2	%	7		10
Moisture	51.5	47.8	%	7		10

Lab Duplicate Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Parameter	Native Sample	Duplicate Sample	Units	RPD		RPD Limits
Grain Size Analysis - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG750891-1 QC Sample: L1429023-01 Client ID: SC-04-1						
% Total Gravel	14.4	7.50	%	**63**	Q	20
% Coarse Sand	7.00	8.10	%	15		20
% Medium Sand	40.6	40.7	%	0		20
% Fine Sand	13.6	15.6	%	14		20
% Total Fines	24.4	28.1	%	14		20
Total Organic Carbon - Mansfield Lab Associated sample(s): 07-09 QC Batch ID: WG752217-3 QC Sample: L1429023-08 Client ID: SC-01-S1						
Total Organic Carbon (Rep1)	2.38	2.12	%	12		25
Total Organic Carbon (Rep2)	1.12	2.23	%	**66**	Q	25
Total Organic Carbon - Mansfield Lab Associated sample(s): 06 QC Batch ID: WG753218-3 QC Sample: L1429930-07 Client ID: DUP Sample						
Total Organic Carbon (Rep1)	1.86	1.64	%	13		25
Total Organic Carbon (Rep2)	1.48	1.70	%	14		25

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG747378-2

Parameter	% Recovery	Qual	QC Criteria
Total Organic Carbon (Rep1)	99		75-125
Total Organic Carbon (Rep2)	99		75-125

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG752217-2

Parameter	% Recovery	Qual	QC Criteria
Total Organic Carbon (Rep1)	96		75-125
Total Organic Carbon (Rep2)	91		75-125

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG753218-2

Parameter	% Recovery	Qual	QC Criteria
Total Organic Carbon (Rep1)	108		75-125
Total Organic Carbon (Rep2)	102		75-125

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
D	Absent
A	Absent
E	Absent
C	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1429023-01A	Glass 250ml/8oz unpreserved	A	N/A	3.0	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1429023-01B	Plastic 8oz unpreserved for Grai	A	N/A	3.0	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1429023-02A	Glass 250ml/8oz unpreserved	A	N/A	3.0	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)

*Values in parentheses indicate holding time in days

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1429023-02B	Plastic 8oz unpreserved for Grai	A	N/A	3.0	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1429023-03A	Glass 250ml/8oz unpreserved	B	N/A	4.9	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1429023-03B	Plastic 8oz unpreserved for Grai	B	N/A	4.9	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1429023-04A	Glass 250ml/8oz unpreserved	B	N/A	4.9	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1429023-04B	Plastic 8oz unpreserved for Grai	B	N/A	4.9	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1429023-05A	Glass 250ml/8oz unpreserved	B	N/A	4.9	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)

*Values in parentheses indicate holding time in days

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1429023-05B	Plastic 8oz unpreserved for Grai	B	N/A	4.9	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1429023-06A	Glass 250ml/8oz unpreserved	C	N/A	4.4	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1429023-06B	Plastic 8oz unpreserved for Grai	C	N/A	4.4	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1429023-07A	Glass 250ml/8oz unpreserved	D	N/A	4.1	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1429023-07B	Plastic 8oz unpreserved for Grai	D	N/A	4.1	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1429023-08A	Glass 250ml/8oz unpreserved	E	N/A	2.9	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)

*Values in parentheses indicate holding time in days

Project Name: PNSY
Project Number: N492-000

Lab Number: L1429023
Report Date: 01/09/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1429023-08B	Plastic 8oz unpreserved for Grai	E	N/A	2.9	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1429023-09A	Glass 250ml/8oz unpreserved	E	N/A	2.9	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1429023-09B	Plastic 8oz unpreserved for Grai	E	N/A	2.9	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()

*Values in parentheses indicate holding time in days

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

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.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: 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.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

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.

MSD - 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.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL 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.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

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 ten times (10x) the concentration found in the blank. For MCP-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. 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. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

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.

Report Format: Data Usability Report

Project Name: PNSY **Lab Number:** L1429023

Project Number: N492-000 **Report Date:** 01/09/15

Data Qualifiers

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

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. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. 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 RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name: PNSY **Lab Number:** L1429023
Project Number: N492-000 **Report Date:** 01/09/15

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

12 Annual Book of ASTM Standards. (American Society for Testing and Materials) ASTM International.

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

105 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997 in conjunction with NOAA Technical Memorandum NMFS-NWFSC-59: Extraction, Cleanup and GC/MS Analysis of Sediments and Tissues for Organic Contaminants, March 2004 and the Determination of Pesticides and PCBs in Water and Oil/Sediment by GC/MS: Method 680, EPA 01A0005295, November 1985.

LIMITATION OF LIABILITIES

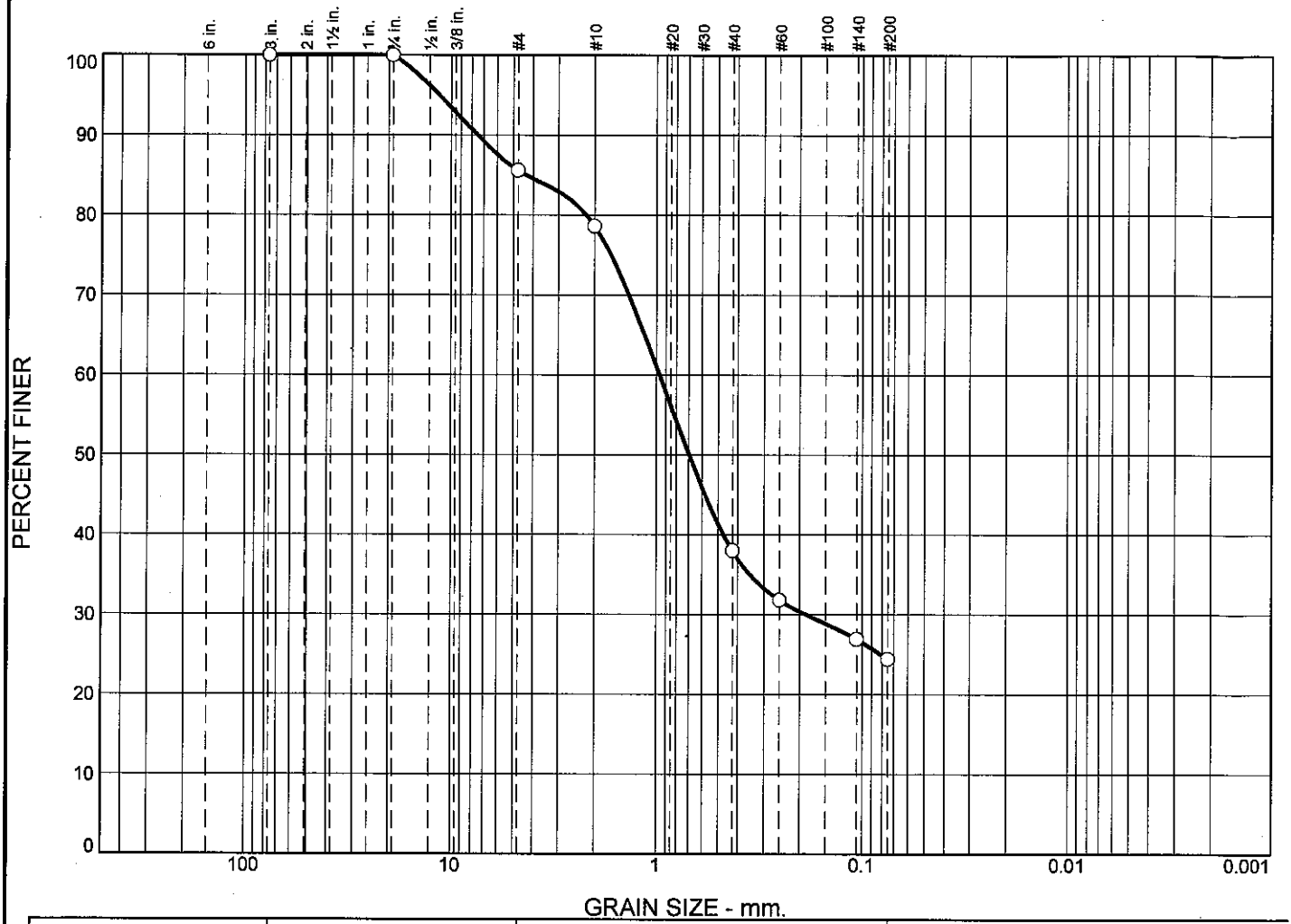
Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held 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 Analytical.

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.

ASTM D422-63

GRAIN SIZE ANALYSIS

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	14.4	7.0	40.6	13.6	24.4	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			4.3202	0.9617	0.6915	0.1868				

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source of Sample:** SC-04-1 **Sample Number:** L1429023-01

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/5/2015

Location: SC-04-1

Sample Number: L1429023-01

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 97.81
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
97.81	0.00	3	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	14.07	0.00	85.6
		#10	6.83	0.00	78.6
		#40	39.74	0.00	38.0
		#60	6.06	0.00	31.8
		#140	4.79	0.00	26.9
		#200	2.44	0.00	24.4

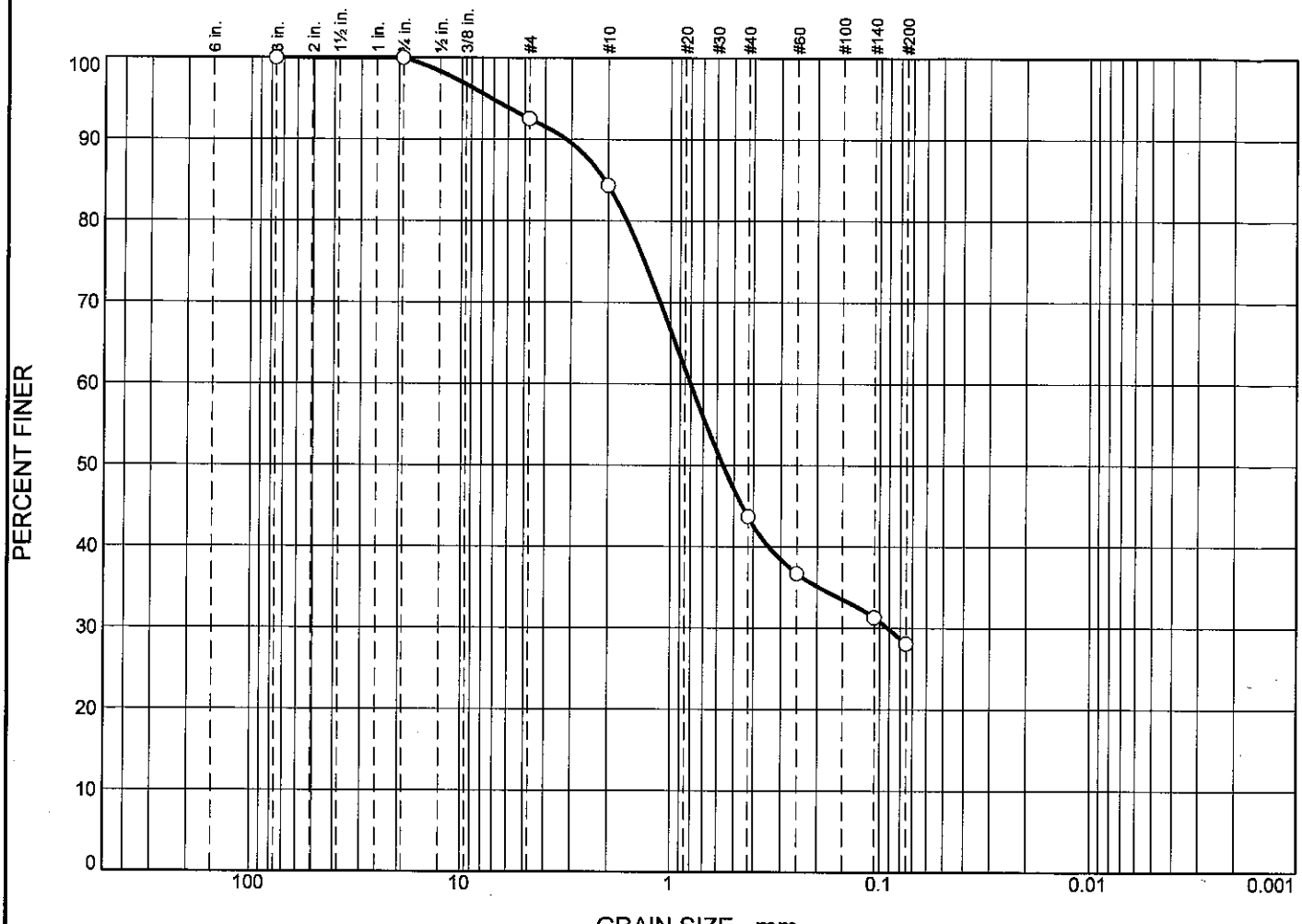
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	14.4	14.4	7.0	40.6	13.6	61.2			24.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.1868	0.6915	0.9617	2.1945	4.3202	7.4832	11.3939

Fineness Modulus
2.66

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	7.5	8.1	40.7	15.6	28.1	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			2.0734	0.7982	0.5600	0.0912				

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source of Sample:** SC-04-1 **Sample Number:** WG750891-1

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/5/2015

Location: SC-04-1

Sample Number: WG750891-1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 97.73
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
97.73	0.00	3	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	7.30	0.00	92.5
		#10	7.97	0.00	84.4
		#40	39.75	0.00	43.7
		#60	6.82	0.00	36.7
		#140	5.29	0.00	31.3
		#200	3.16	0.00	28.1

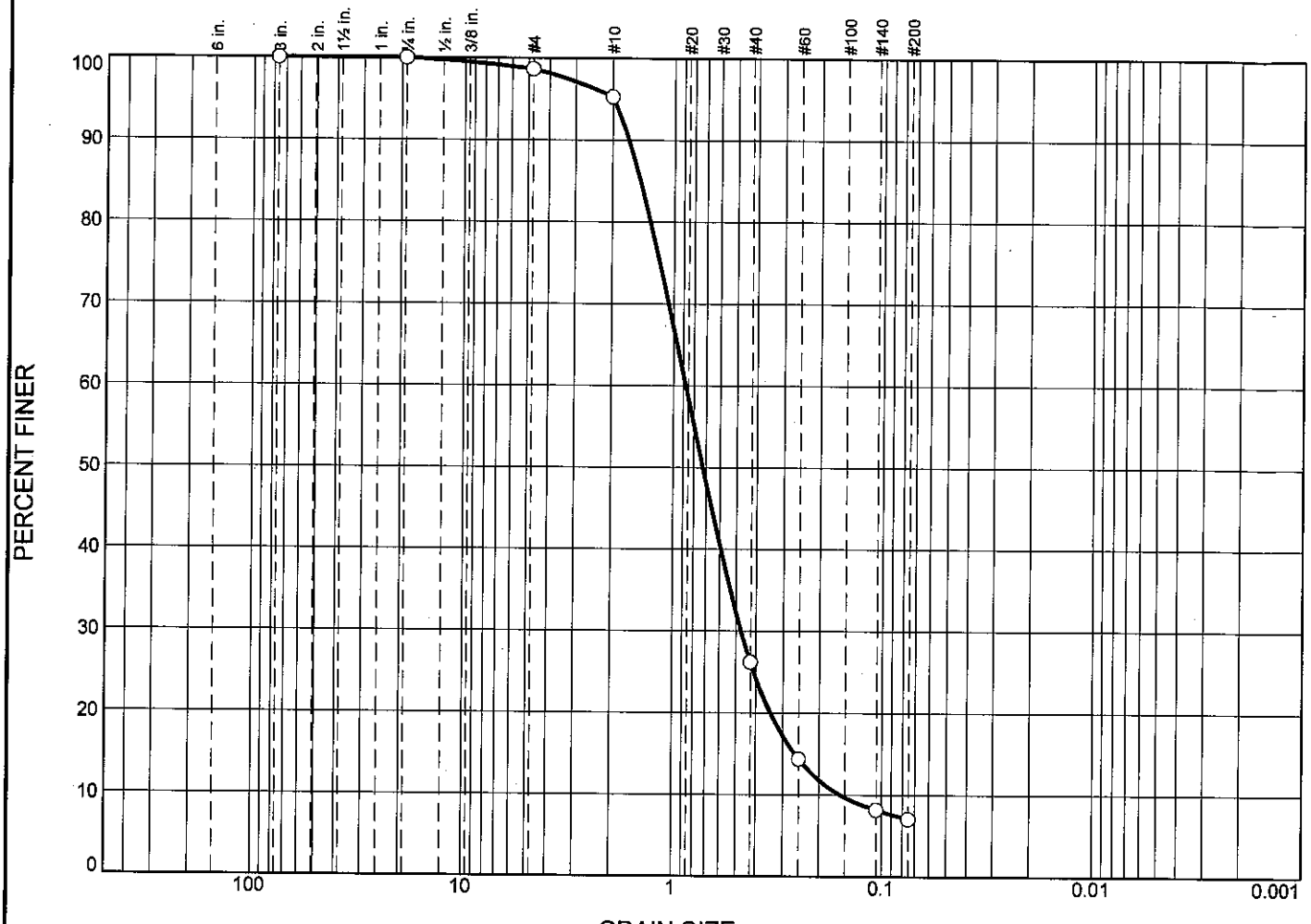
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	7.5	7.5	8.1	40.7	15.6	64.4			28.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0912	0.5600	0.7982	1.6208	2.0734	3.1730	7.1426

Fineness Modulus
2.28

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	1.3	3.4	69.1	19.1	7.1	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.4567	0.8721	0.7216	0.4713	0.2615	0.1582	1.61	5.51

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source of Sample:** SC-04-2 **Sample Number:** L1429023-02

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/5/2015

Location: SC-04-2

Sample Number: L1429023-02

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 129.50
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
129.50	0.00	3	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	1.72	0.00	98.7
		#10	4.39	0.00	95.3
		#40	89.46	0.00	26.2
		#60	15.33	0.00	14.4
		#140	8.02	0.00	8.2
		#200	1.45	0.00	7.1

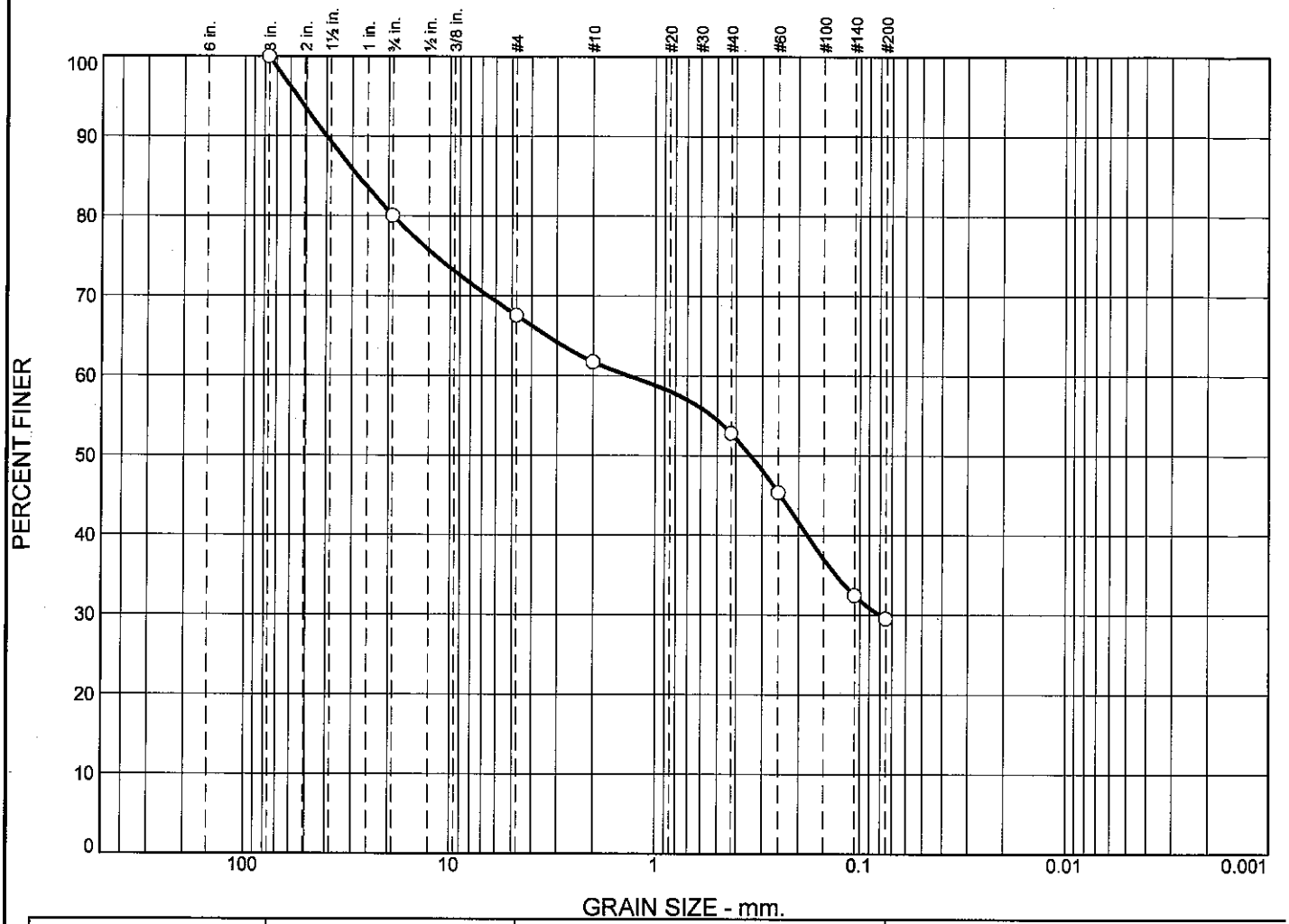
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	1.3	1.3	3.4	69.1	19.1	91.6			7.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.1582	0.2615	0.3419	0.4713	0.7216	0.8721	1.2977	1.4567	1.6635	1.9757

Fineness Modulus	C_u	C_c
2.63	5.51	1.61

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	19.9	12.5	5.9	8.9	23.3	29.5	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			28.0662	1.3478	0.3394	0.0798				

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** SC-07-S1 **Sample Number:** L1429023-03

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/5/2015

Location: SC-07-S1

Sample Number: L1429023-03

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 76.67
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
76.67	0.00	3	0.00	0.00	100.0
		0.75	15.28	0.00	80.1
		#4	9.58	0.00	67.6
		#10	4.48	0.00	61.7
		#40	6.83	0.00	52.8
		#60	5.70	0.00	45.4
		#140	9.91	0.00	32.5
		#200	2.24	0.00	29.5

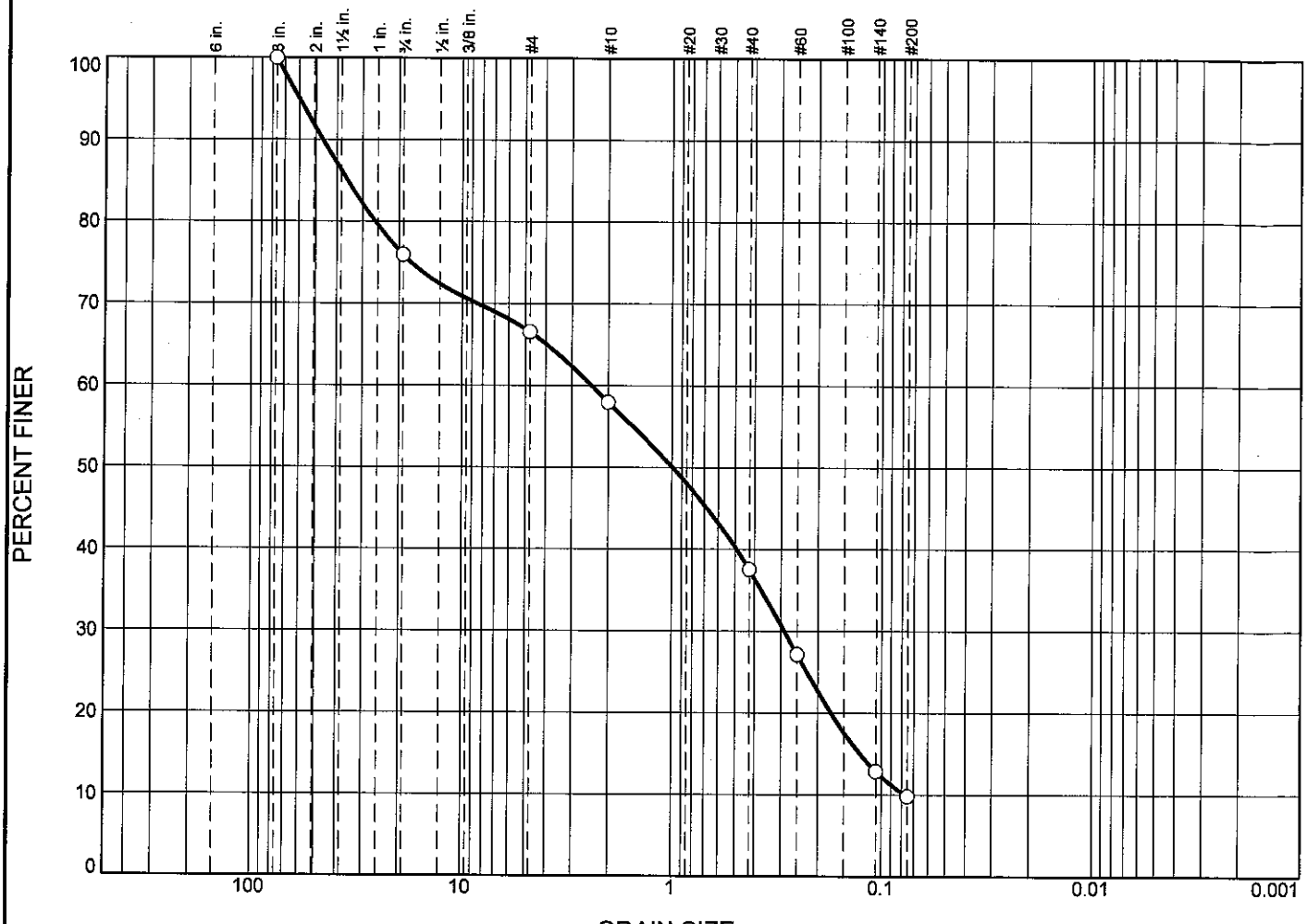
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	19.9	12.5	32.4	5.9	8.9	23.3	38.1			29.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0798	0.3394	1.3478	18.9356	28.0662	39.8374	55.3496

Fineness Modulus
3.27

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	24.1	9.3	8.6	20.5	27.7	9.8	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			35.3515	2.4077	0.9893	0.2880	0.1261	0.0768	0.45	31.34

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source of Sample:** SC-06-S1 **Sample Number:** L1429023-04

Remarks:

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Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/5/2015

Location: SC-06-S1

Sample Number: L1429023-04

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 133.67
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
133.67	0.00	3	0.00	0.00	100.0
		0.75	32.16	0.00	75.9
		#4	12.55	0.00	66.6
		#10	11.48	0.00	58.0
		#40	27.29	0.00	37.5
		#60	13.90	0.00	27.1
		#140	19.13	0.00	12.8
		#200	4.04	0.00	9.8

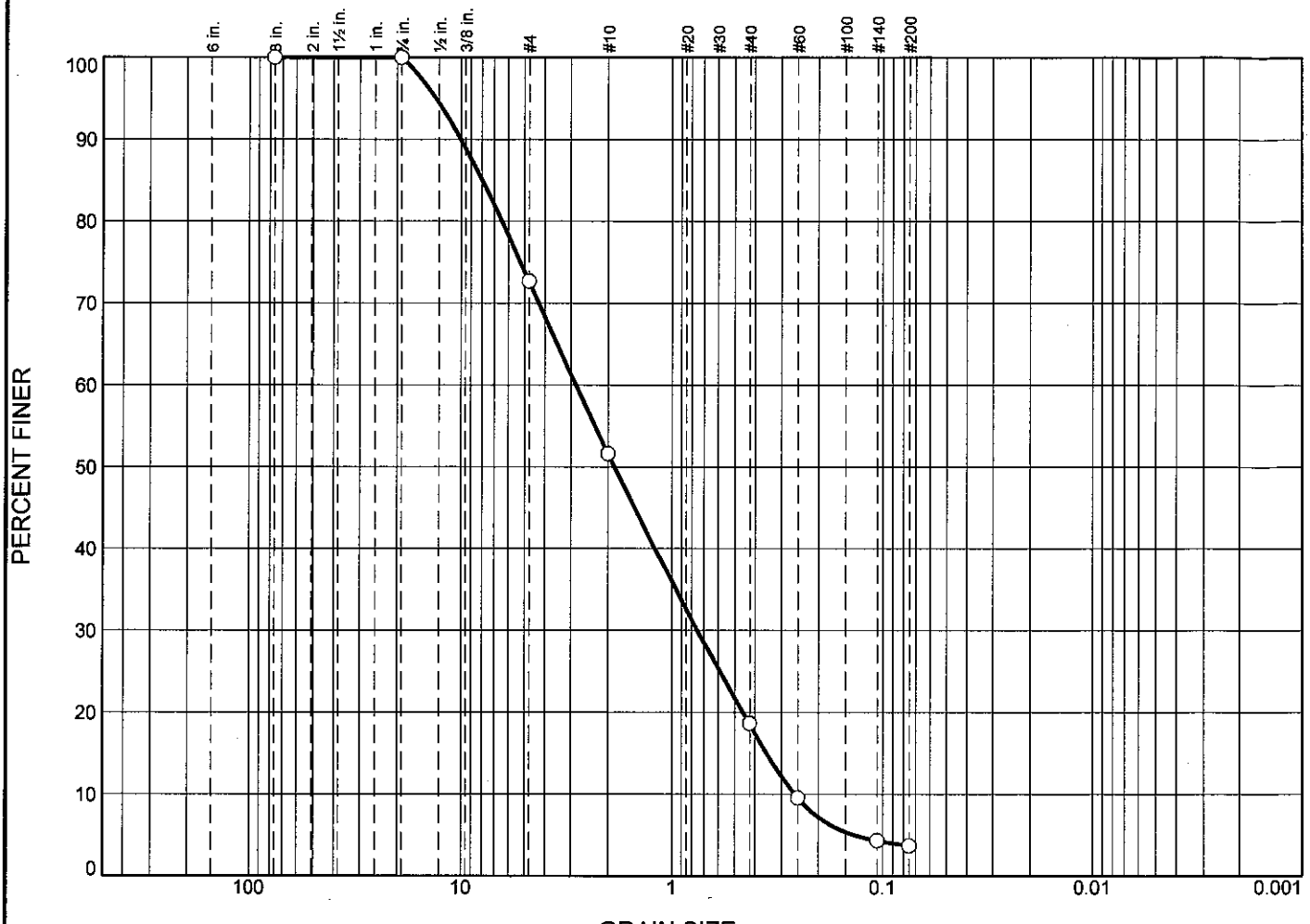
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	24.1	9.3	33.4	8.6	20.5	27.7	56.8			9.8

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0768	0.1261	0.1722	0.2880	0.9893	2.4077	26.0105	35.3515	46.3207	59.6334

Fineness Modulus	C_u	C_c
3.97	31.34	0.45

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	27.3	21.1	33.0	14.9	3.7	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			7.9389	2.8366	1.8648	0.7488	0.3509	0.2583	0.77	10.98

	Material Description	USCS	AASHTO
○		SP	

Project No. **Client:**
Project:

○ **Source of Sample:** SC-06-S2 **Sample Number:** L1429023-05

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/5/2015

Location: SC-06-S2
Sample Number: L1429023-05
USCS Classification: SP

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 107.39
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
107.39	0.00	3	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	29.33	0.00	72.7
		#10	22.61	0.00	51.6
		#40	35.43	0.00	18.6
		#60	9.75	0.00	9.6
		#140	5.63	0.00	4.3
		#200	0.64	0.00	3.7

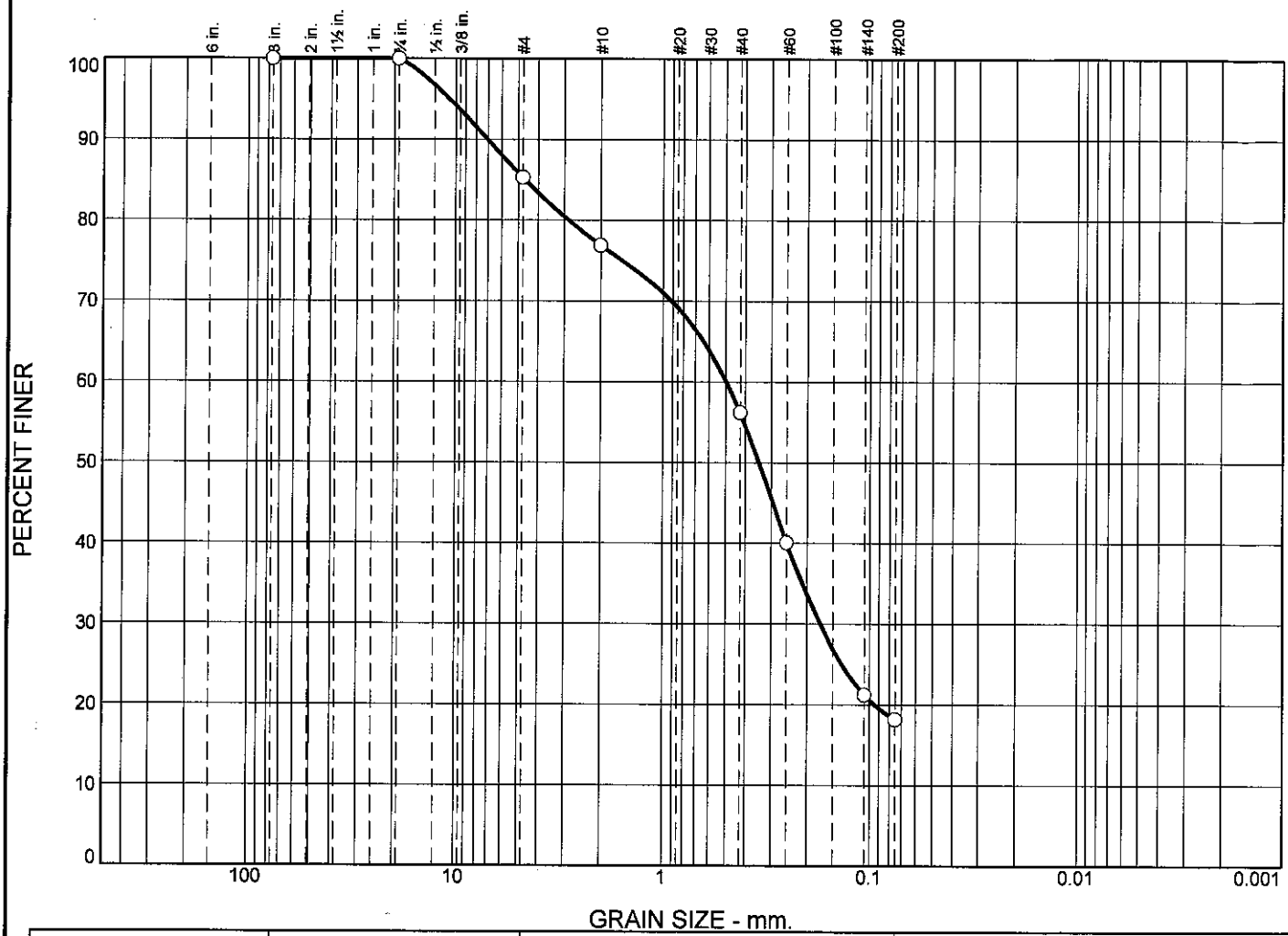
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	27.3	27.3	21.1	33.0	14.9	69.0			3.7

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.2583	0.3509	0.4556	0.7488	1.8648	2.8366	6.4065	7.9389	10.0174	13.1141

Fineness Modulus	C_u	C_c
4.00	10.98	0.77

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	14.7	8.4	20.7	38.0	18.2	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			4.6224	0.4949	0.3432	0.1722				

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source of Sample:** SC-05A-S1 **Sample Number:** L1429023-06

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/5/2015

Location: SC-05A-S1

Sample Number: L1429023-06

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 100.42
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
100.42	0.00	3	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	14.75	0.00	85.3
		#10	8.46	0.00	76.9
		#40	20.74	0.00	56.2
		#60	16.20	0.00	40.1
		#140	18.96	0.00	21.2
		#200	3.07	0.00	18.2

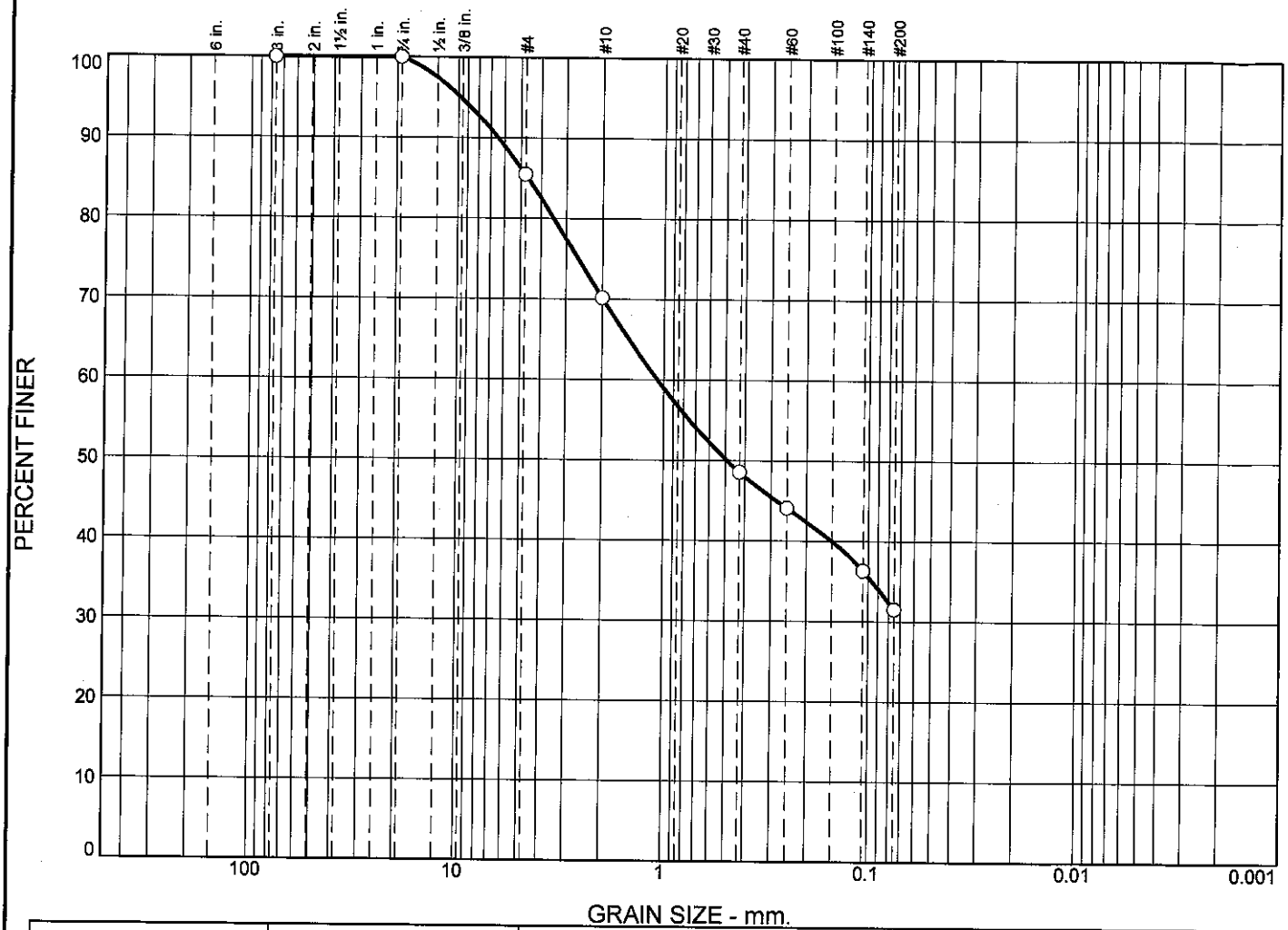
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	14.7	14.7	8.4	20.7	38.0	67.1			18.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0945	0.1722	0.3432	0.4949	2.8569	4.6224	7.0150	10.7229

Fineness Modulus
2.33

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	14.5	15.3	21.6	17.1	31.5	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			4.6126	1.0702	0.4890					

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source of Sample:** SC-02-S1 **Sample Number:** L1429023-07

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/5/2015

Location: SC-02-S1

Sample Number: L1429023-07

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 81.45
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
81.45	0.00	3	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	11.83	0.00	85.5
		#10	12.46	0.00	70.2
		#40	17.59	0.00	48.6
		#60	3.65	0.00	44.1
		#140	6.32	0.00	36.3
		#200	3.92	0.00	31.5

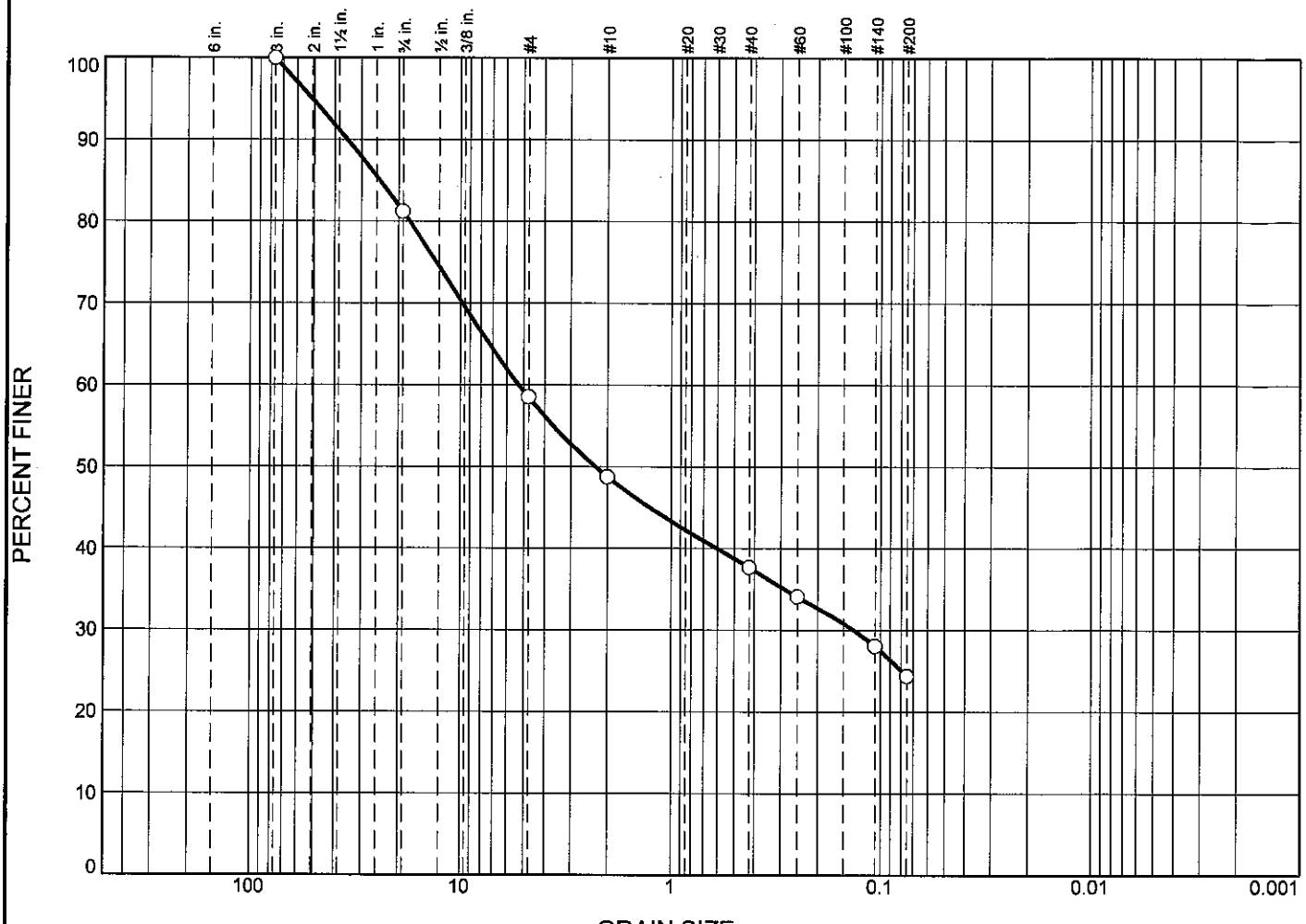
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	14.5	14.5	15.3	21.6	17.1	54.0			31.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.4890	1.0702	3.4468	4.6126	6.4287	9.7173

Fineness Modulus
2.47

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	18.8	22.7	9.7	11.1	13.3	24.4	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			24.4123	5.2576	2.2828	0.1337				

Material Description	USCS	AASHTO
○		

Project No. **Client:**
Project:

○ **Source of Sample:** SC-01-S1 **Sample Number:** L1429023-08

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/5/2015

Location: SC-01-S1

Sample Number: L1429023-08

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 72.13
Tare Wt. = 7.42
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
72.13	7.42	3	0.00	0.00	100.0
		0.75	12.15	0.00	81.2
		#4	14.68	0.00	58.5
		#10	6.32	0.00	48.8
		#40	7.17	0.00	37.7
		#60	2.33	0.00	34.1
		#140	3.92	0.00	28.0
		#200	2.37	0.00	24.4

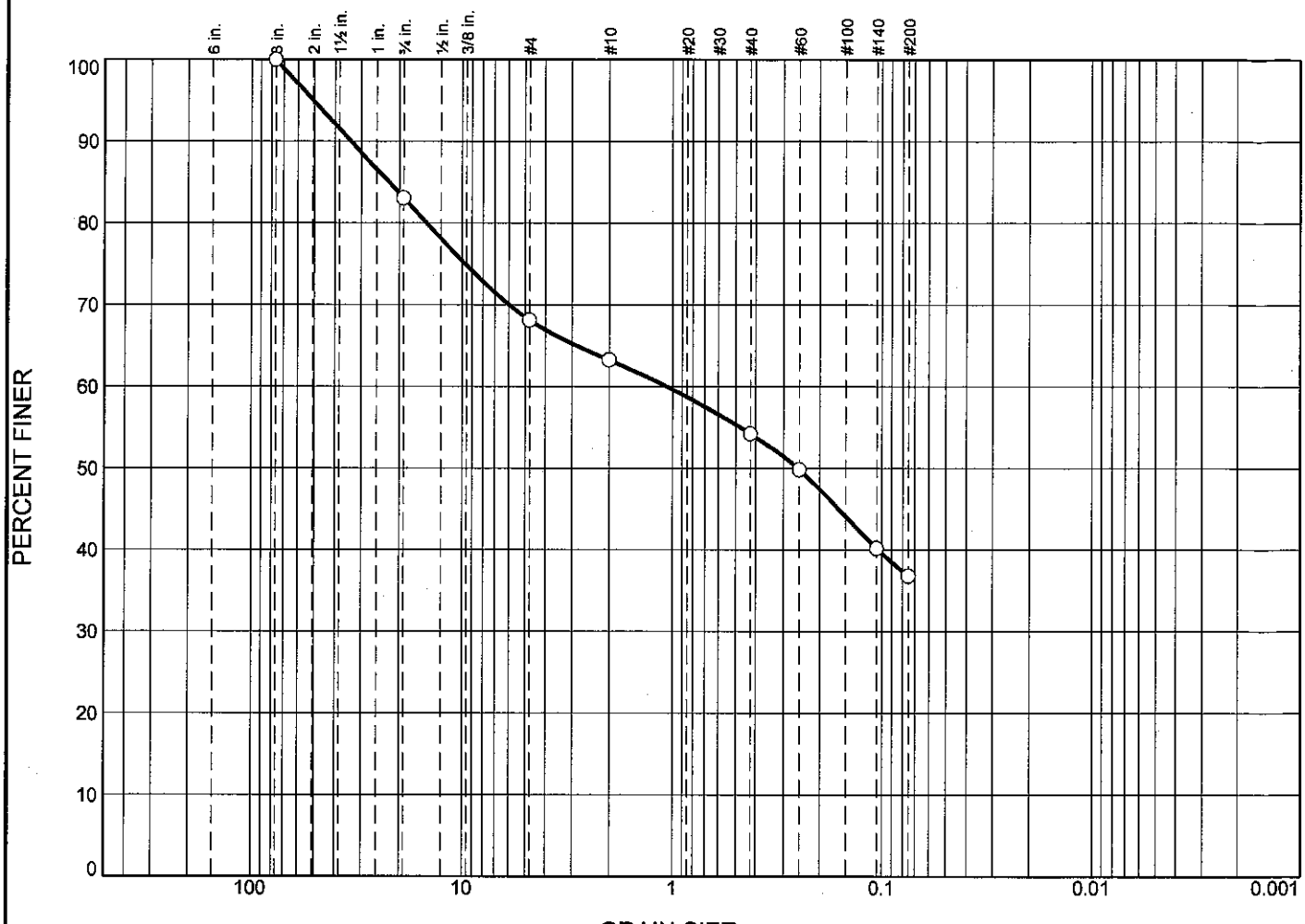
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	18.8	22.7	41.5	9.7	11.1	13.3	34.1			24.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.1337	2.2828	5.2576	17.6446	24.4123	34.8405	51.1003

Fineness Modulus
3.98

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	16.9	15.0	4.9	9.0	17.4	36.8	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			22.2793	1.0651	0.2544					

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source of Sample:** SC-01-S2 **Sample Number:** L1429023-09

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/5/2015

Location: SC-01-S2

Sample Number: L1429023-09

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 101.30
Tare Wt. = 7.46
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
101.30	7.46	3	0.00	0.00	100.0
		0.75	15.88	0.00	83.1
		#4	14.02	0.00	68.1
		#10	4.59	0.00	63.2
		#40	8.46	0.00	54.2
		#60	4.13	0.00	49.8
		#140	9.04	0.00	40.2
		#200	3.16	0.00	36.8

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	16.9	15.0	31.9	4.9	9.0	17.4	31.3			36.8

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.2544	1.0651	14.8206	22.2793	33.5265	50.5255

Fineness Modulus
3.06

Table II-1: Completeness Checklist

Quality Assurance/Quality Control Questions	Yes/No? Comments?
1. Was the report signed by the responsible applicant approved representative?	YES
2. Were the methods for sampling, chemical and biological testing described in the Sampling and Analysis Plan (SAP) and the Laboratory QA Plan (LQAP) followed?	YES
3. If not, were deviations documented?	N/A
4. Was the SAP approved by the New England District?	
5. Did the applicant use a laboratory with a LQAP on file at the New England District?	YES
6. Did the samples adequately represent the physical/chemical variability in the dredging area?	
7. Were the correct stations sampled (include the precision of the navigation method used)?	
8. Were the preservation and storage requirements in Chapter 8 of the EPA/Corps QA/QC Manual (EPA/USACE 1995) and EPA (2001d) followed?	YES
9. Were the samples properly labeled?	YES
10. Were all the requested data included?	YES
11. Were the reporting limits met?	YES
12. Were the chain-of-custody forms properly processed?	YES
13. Were the method blanks run and were the concentration below the acceptance criteria?	YES
14. Was the MDL study performed on each matrix (with this data submission) or within the last 12 months?	YES
15. Were the SRM/CRM analyses within acceptance criteria?	NO – see below
16. Were the matrix spike/matrix spike duplicates run at the required frequency and was the percent recovery/RPD within the acceptance criteria?	NO – see below
17. Were the duplicate samples analyzed and were the RPDs within the required acceptance criteria?	NO – see below
18. For each analytical fraction of organic compounds, were recoveries for the internal standard within the acceptance criteria?	YES
19. Were surrogate recoveries within the required acceptance criteria?	YES

Table II-1 (*Continued*): Completeness Checklist

Quality Assurance/Quality Control Questions	Yes/No? Comments?
20. Were corrective action forms provided for all non-conforming data?	**YES**
21. Were all the species-specific test conditions in Appendix V met?	
22. Were the test-specific age requirements met for each test species?	
23. Was the bulk physical/chemical testing performed on the sediments/composites that were biologically tested?	
24. Were the mortality acceptance criteria met for the water column and sediment toxicity tests?	
25. Were the test performance requirements in Table 11.3 of EPA (1994a) met?	

Table II-2: Quality Control Summary for Analyses of Polyaromatic Hydrocarbons (PAHs) and other base-neutrals in Sediment and Tissue Matrices

Method Reference Number: 8270C

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Initial Calibration	Must be performed prior to the analysis of any QC sample or field sample (<20 % RSD for each compound)	YES		Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)	YES		Retained at Lab and On file at USACoE-NED
Calibration Verification (Second Source)	Once, after initial calibration (80 to 120% recovery of each compound)	YES		Retained at Lab
Continuing Calibration	At the beginning of every 12 hour shift (± 15 % D)	YES		Retained at Lab
Standard Reference Materials	Within the limits provided by vendor	NO	Dibenz(a,h)anthracene (163%) in house limits	In Data Package
Method Blank	No target analytes > RL	YES		In Data Package
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One set (MS/MSD) per group of field samples. Must contain all target analytes. (Recovery Limits 50 to 120%; RPD <30%)	NO	MS phenanthrene (157%), fluoranthene (44%), pyrene (31%), benzo(k)fluoranthene (33%). MSD naphthalene (168%), phenanthrene (680%), fluoranthene (173%), pyrene (4590%), benz(a)anthracene (1100%), chrysene (6360%). RPDs, naphthalene (71%), fluorene (33%), phenanthrene (109%), fluoranthene (36%), pyrene (159%), benz(a)anthracene (145%) and chrysene (177%),	In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of	NO	RPD, performed on L1429023-01, is outside the acceptance criteria for	In Data Package

	field samples (RPD < 30%)		phenanthrene (174%), fluoranthene (118%), pyrene (61%), benz(a)anthracene (100%), chrysene (33%), benzo(b)fluoranthene (110%), benzo(k)fluoranthene (81%), benzo(a)pyrene (109%), indeno(1,2,3-cd)pyrene (113%), benzo(ghi)perylene (116%),	
Surrogate Recoveries	Calculate % recovery (30 to 150% recovery)	YES		In Data Package
Internal Standard Areas	Within 50 to 200% of internal standards in continuing calibration check	YES		Retained at Lab

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-3: Quality Control Summary for the Analyses of Pesticides in Sediment, Tissue, and Water Matrices

Method Reference Number: 8081B

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Initial Calibration	Must be performed prior to the analysis of any QC sample or field sample (<20 % RSD for each compound)	YES		Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)	YES		Retained at Lab and On file at USACoE-NED
Calibration Verification (Second Source)	Once, after initial calibration (80 to 120% recovery of each compound)	YES		Retained at Lab
Continuing Calibration	Every 20 injections (± 15 % D)	NO	WG753223-1, opening for WG747232-1, -2, -3, WG749835-1, -2, -3 ; 4,4'-DDE @16.4%D on column A WG753223-2, closing for WG747232-1, -2, -3, WG749835-1, -2, -3, opening for L142903-01D, dup dilution, L1429023-04, -05 and -09; 4,4'-DDE @16.9%D on column A and 4,4'-DDD @ 15.8%D on column A WG753223-3, closing L142903-01D, dup, L1429023-04, -05 and -09 ; aldrin @ 19.1%D on column A, 15.9%D on column B), gamma-chlordane @ 15.9%D on column A), endosulfan I @ 15.3%D on column A), dieldrin @ 18.5%D on column A), 4,4'-DDT @ 16.1%D on column A), methoxychlor @ 18.4%D on column B), 4,4'-DDE @ 20.8%D on column A), 4,4'-DDD @ 30%D on column A, 22.9%D on column B WG753223-5, closing for MS, MSD, SRM, L1429023-02D and -07D, opening for L142903-03, -06D and -08D; methoxychlor @ 18.8%D on column B WG753223-6, closing for L142903-03, -06D, -08D, opening for L142903-01, dup, L1429023-02, -06, -07	Retained at Lab

			and -08; methoxychlor @ 16.2%D on column A, 20%D on column B WG753223-7, closing for L142903-01, dup, L1429023-02, -06, -07 and -08; aldrin 16.6%D on column A, 17.7%D on olumn B), heptachlor @ 18.3%D on column B), 4,4'-DDD @ 19.4%D on column A, endrin @ 22%D on column A, 33.7%D on column B), 4,4'-DDT @ 61.2%D on column A, 65.9%D on column B; methoxychlor @ 68.9%D on column A, 70.8%D on column B)	
Standard Reference Materials	Within the limits provided by vendor	NO	Trans-nonachlor @ 704%	In Data Package
Method Blank	No target analytes > RL	YES		In Data Package
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One set (MS/MSD) per group of field samples. Must contain all target analytes. (Recovery Limits 50 to 120%; RPD <30%)	NO	MS = Heptachlor Epoxide (B) @ 132% MSD = Aldrin @124% %RPD= Aldrin @ 35%	In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)	NO	Trans-nonachlor @56% dieldrin @ 90%	In Data Package
Surrogate Recoveries	Calculate % recovery (30 to 150% recovery)	YES		In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-4: Quality Control Summary for Analyses of Polychlorinated Biphenyls (PCB Congeners) in Sediment, Tissue, and Water Matrices

Method Reference Number: 8270C

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Initial Calibration	Must be performed prior to the analysis of any QC sample or field sample (<20 % RSD for each compound)	YES		Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)	YES		Retained at Lab and On file at USACoE-NED
Calibration Verification (Second Source)	Once, after initial calibration (80 to 120% recovery of each compound)	YES		Retained at Lab
Continuing Calibration	Every 20 injections (± 15 % D)	YES		Retained at Lab
Standard Reference Materials	Within the limits provided by vendor	NO	Cl3-BZ#18(154%)and Cl4-BZ#52(154%) in house limits	In Data Package
Method Blank	No target analytes > RL	YES		In Data Package
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One set (MS/MSD) per group of field samples. Must contain all target analytes. (Recovery Limits 50 to 120%; RPD <30%)		MS cl5-bz#105 (129%) MSD cl3-bz#28 (0%) RPD'scl5-bz#105 (56%).	In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)	NO	cl4-bz#52 and cl5-bz#118. RPD could not be calculated when one or more of the results utilized in the calculation are non-detect at the parameter's reporting limit	In Data Package
Surrogate Recoveries	Calculate % recovery (30 to 150% recovery)	YES		In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-5: Quality Control Summary for Analyses of Metals in Sediments, Tissue, and Water Matrices

Method Reference Numbers: Various Reference Numbers

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Linear Range Determination for ICP	Performed Quarterly	YES		Retained at Lab
Initial Calibration for AA, Hg	Performed Daily (Correlation Coefficient ≥0.995)	YES		Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)	YES		Retained at Lab and On file at USACoE-NED
Initial Calibration Verification/ Continuing Calibration Verification	Hg: 80 to 120% recovery Other metals: 90 to 110% recovery	YES		Retained at Lab
Initial Calibration Blank/ Continuing Calibration Blank	No target analytes > Instrument Detection Limit (IDL)	NO	Results >3x IDL noted, on file at lab	Retained at Lab
Standard Reference Materials	Within the limits provided by vendor	YES		In Data Package
Method Blank	No target analytes > RL	YES		In Data Package
Sample Spike/ Sample Duplicate	One set per group of field samples. Must contain all target analytes. Recovery Limits (75 to 125%; RPD < 20% or < 35%)	NO	MS: Cr 137%; Pb 42%; Zn 127% MSD: Cu 47%; Pb 0%; Ni 36%; Zn 0% RPD: Cu 47%; Zn 75%	In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)	NO	Dup: As 38%	In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-6: Quality Control Summary for Analyses of other Organic Chemicals not listed in Sediment, Tissue, and Water Matrices

Method Reference Numbers:

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Initial Calibration	Must be performed prior to the analysis of any QC sample or field sample (<20 % RSD for each compound)			Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)			In Data Package
Calibration Verification (Second Source)	Once, after initial calibration (80 to 120% recovery of each compound)			Retained at Lab
Continuing Calibration	At the beginning of every 12 hour shift (± 15 % D)			Retained at Lab
Standard Reference Materials	Within the limits provided by vendor			In Data Package
Method Blank	No target analytes > RL			In Data Package
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One set (MS/MSD) per group of field samples. Must contain all target analytes. (Recovery Limits 50 to 120%; RPD <30%)			In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)			In Data Package
Surrogate Recoveries	Calculate % recovery (30 to 150% recovery)			In Data Package
Internal Standard Areas (if applicable)	Within 50 to 200% of internal standards in continuing calibration check			In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-7: Quality Control Summary for Analyses of Sediment Grain Size and Total Organic Carbon

Method Reference Numbers:

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Grain Size: Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 25%)	NO	% gravel -63%	In Data Package
Total Organic Carbon: Standard Reference Materials	Within the limits provided by vendor	YES		In Data Package
Total Organic Carbon: Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD <30%)	YES	Sample L1429023-08: Rep 2 - 66%	In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-8: Quality Control Summary for Biological Toxicity Testing only

Method Reference Numbers:

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Test condition requirements for each species: Temperature, Salinity, pH, D.O., Ammonia (Total, Un-ionized)	Test conditions within the requirements specified for each species			In Data Package
Test species age	Age/health within guidelines for each species (Appendix V)			In Data Package
Bulk physical/chemical analyses (If required by the Sampling plan)	Required? If so, performed? Yes or No			In Data Package
Water column toxicity test: Control mortality Control abnormality	 < 10% mean < 30% mussel/oyster; < 40% clam larvae, < 30% sea urchin larvae			In Data Package
Sediment toxicity test: Control mortality Compliance with applicable test acceptability requirements in Table 11.3 (EPA 1994a)	 < 10% mean (no chamber >20%) See EPA (1994a) Section 9; Table 11.3			In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Reference:

Regional Implementation Manual for the Evaluation of Dredged Material Proposed for Disposal in New England Waters, U.S. EPA and U.S. Army Corps of Engineers, New England District, April 2004.

Certification Information

Last revised December 16, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA 2540D: TSS
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F,**
EPA 353.2: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE_____ OF _____

ALPHA ANALYTICAL
WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193
MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab:

ALPHA Job #: L1429023

Client Information

Client: ESS GROUP, INC.
Address: 100 Fifth Ave 5th Floor Waltham MA.
Phone: 781-419-7732
Fax: —
Email: SHerz@essgroup.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: PNSY
Project Location: Kittery, ME
Project #: N492-000
Project Manager: Susan Herz
ALPHA Quote #:

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☑ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program | Criteria

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All ***CAM*** methods for inorganic analyses require MS every 20 soil samples)

1. Grain Size
2. TOT Solids + Moisture SM2540G
3. TOT. org. carbons EPA SW-846 method 9060

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PAH	Site Specific Metals	Pest/PCB	Grain Size	TOT Solids + moisture	TOT organic Carbons	Sample Specific Comments	TOTAL # BOTTLES
29023 08	SC-01-S1	12/11/14	1110	Soil	MJD	X	X	X	X	X	X		2
↓ 09	SC-01-S2	12/11/14	1155	Soil	MJD								2
	SEDIMENT SAMPLING OVER WATER											4 TOTAL TO MANSFIELD	
Container Type						A	A	A	P	P	P		
Preservative						A	A	A	A	A	A		

SAMPLE HANDLING
Filtration_____
☐ Done
☐ Not needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	12/13/14 0845	M. Adt	12/15/14 16:30
M. Adt	12/15/14 16:32	[signature] KAL	12/15/14 1630
[signature]	12/15/14 1800	[signature]	12/15/14 18:20
[signature]	12/16/14 0600	Mansfield Lab	12/16/14 06:00

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.

FORM NO: 01-01 (rev. 18-Jan-2010)

CHAIN OF CUSTODY

PAGE ____ OF ____

Date Rec'd in Lab:

ALPHA Job #: L1429023

ALPHA ANALYTICAL
8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220
320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300

Client Information

Client: ESS Group, Inc.
Address: 100 Fifth Avenue
5th Floor, Waltham, MA
Phone: 781-419-7732
Email: SHerz@essgroup.com

Project Information

Project Name: PNSY
Project Location: Kittery, Maine
Project #: N492-000
Project Manager: Susan Herz
ALPHA Quote #:

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods
☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due:

Additional Project Information:

Grain size per ASTM D422
. Total solids and moisture content SM2540G
. Total Organic Carbons EPA SW-846 method 9060

ANALYSIS: VOC: ☐ 8260 ☐ 624 ☐ 524.2; SVOC: ☐ ABN ☒ PAH; METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15; METALS: ☐ RCRA8 [redacted] ☐ PP13; EPH: ☐ Ranges & Targets ☐ Ranges Only; VPH: ☐ Ranges & Targets ☐ Ranges Only; ☒ PCB ☒ PEST; TPH: ☐ Quant Only ☐ Fingerprint; Grain size; Total solids + moisture content; Total Organic Carbons; Site Specific

SAMPLE INFO
Filtration
☐ Field
☐ Lab to do
Preservation
☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC	SVOC	METALS	METALS	EPH	VPH	PCB/PEST	TPH	Grain size	Total solids + moisture content	Total Organic Carbons	Site Specific	Sample Comments	TOTAL # BOTTLES
-07	SC-02-S1	12/8/14	0920	Sed	MJD		X		X			X		X	X	X			2

2 TOTAL

SEDIMENT SAMPLING
OVER WATER
ENVIRONMENTAL COC

TO MANSFIELD

Container Type
Preservative

Container Type
= Plastic
= Amber glass
= Vial
= Glass
= Bacteria cup
= Cube
= Other
= Encore
= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	12/10/14 0550	Deborah Grayford Haley Aldrich	12/10/14 1600
Deborah Grayford Haley Aldrich	12/10/14 1630	[signature] AAL	12/10/14 1630
[signature]	12/10/14 1804	[signature]	12/10/14 1804
[signature]	12/11/14 0400	Mansfield lab	12/11/14 0400

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

Serial_No:01091516:16

CHAIN OF CUSTODY

PAGE ____ OF ____

Date Rec'd in Lab:

ALPHA Job #: L1429023

ALPHA ANALYTICAL LABORATORIES
8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Project Information

Project Name: PNSY
Project Location: Kittery, Maine
Project #: N492-000
Project Manager: Susan Herz
ALPHA Quote #:

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☐ Same as Client info PO #:

Client Information

Client: ESS Group, Inc.
Address: 100 Fifth Avenue 5th Floor, Waltham, MA
Phone: 781-419-7732
Email: SHerz@essgroup.com

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Additional Project Information:

1. Grain size per ASTM D422
2. Total solids and moisture content SM2540G
3. Total Organic Carbons EPA SW-846 method 9060

Site Specific

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☐ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☒ PAH	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15	METALS: ☐ RCRA8 ☐ PP13	EPH: ☐ Ranges & Targets ☒ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	☒ PCB ☒ PEST	TPH: ☐ Quant Only ☐ Fingerprint	Grain size	Total solids + moisture content	Total Organic Carbons				Sample Comments	TOTAL # BOTTLES
29023 03	SC-07-S1	12/2/14	1105	Soil	MJD		X		X			X		X	X	X					2
04	SC-06-S1	12/3/14	1050	"	MJD		X		X			X		X	X	X					2
05	SC-06-S2	"	1210	"	MJD		X		X			X		X	X	X					2
					Container Type		A		A			A		P	P	P					
					Preservative		A		A			A		A	A	A					

SEDIMENT SAMPLING OVER WATER TO MANSFIELD ENVIRONMENTAL COC

(6 TOTAL)

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	12/4/14 0550	[signature]	12/4/14 1615
[signature]	12/4/14 1800	[signature]	12/4/14 18:00
[signature]	12/5/14 0400	Mansfield 60	12/5/14 0400

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

CHAIN OF CUSTODY

PAGE ____ OF ____

Serial_No:01091516:16

Date Rec'd in Lab:

ALPHA Job #: L1429023

8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300

Client Information

Client: ESS Group, Inc.
Address: 100 Fifth Avenue 5th Floor, Waltham, MA
Phone: 781-419-7732
Email: SHerz@essgroup.com

Project Information

Project Name: PNSY
Project Location: Kittery, Maine
Project #: N492-000
Project Manager: Susan Herz
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due:

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Additional Project Information:

1. Grain size per ASTM D422
2. Total solids and moisture content SM2540G
3. Total Organic Carbons EPA SW-846 method 9060

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☐ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☒ PAH	METALS: ☐ MCP 13	METALS: ☐ MCP 14 ☐ RCP 15 ☒ RCRA5 ☐ RCRA8 ☐ PP13	EPH: ☐ Ranges & Targets ☐ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	☒ PCB ☒ PEST	TPH: ☐ Quant Only ☐ Fingerprint	Grain size	Total solids + moisture content	Total Organic Carbons				Sample Comments	TOTAL # BOTTLES
2902301	SC-04-1	11/26/14	1045	Soil	MJD		X		X			X		X	X	X					2
↓ 02	SC-04-2	"	1120	"	MJD		X		X			X		X	X	X					2

SEDIMENT SAMPLING
OVER WATER
ENVIRONMENTAL COC

4 TOTAL

TO MANSFIELD

Container Type															
Preservative															

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	11/29/14 0900	M. Cutter	12/1/14 162
M. Cutter [signature]	12/1/14 162	[signature] AAL	12/1/14 1630
[signature]	12/1/14 1805	[signature]	12/1/14 1805
[signature]	12/2/14 0400	Mansfield Lab	12/2/14 0400

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FORM NO: 01-01 (rev. 12-Mar-2012)

Serial_No:01091516:16

CHAIN OF CUSTODY

PAGE ____ OF ____

Date Rec'd in Lab:

ALPHA Job #: L1429023

ALPHA ANALYTICAL LABORATORIES
8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Project Information

Project Name: PNSY
Project Location: Kittery, Maine
Project #: N492-000
Project Manager: Susan Herz
ALPHA Quote #:

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☐ Same as Client info PO #:

Client Information

Client: ESS Group, Inc.
Address: 100 Fifth Avenue 5th Floor, Waltham, MA
Phone: 781-419-7732
Email: SHerz@essgroup.com

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
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☐ Other State /Fed Program _____ Criteria _____

Additional Project Information:

1. Grain size per ASTM D422
2. Total solids and moisture content SM2540G
3. Total Organic Carbons EPA SW-846 method 9060

Site Specific

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☐ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☒ PAH	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15	METALS: ☐ RCRA8 ☒ RCRA8	EPH: ☐ Ranges & Targets ☒ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	☒ PCB ☒ PEST	TPH: ☐ Quant Only ☐ Fingerprint	Grain size	Total solids + moisture content	Total Organic Carbons				Sample Comments	TOTAL # BOTTLES
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↓ 04	SC-06-S1	12/3/14	1050	"	MJD		X		X			X		X	X	X					2
05	SC-06-S2	"	1210	"	MJD		X		X			X		X	X	X					2

SEDIMENT SAMPLING
OVER WATER TO MANSFIELD
ENVIRONMENTAL COC

(6 TOTAL)

Container Type		A		A			A		P	P	P			
Preservative		A		A			A		A	A	A			

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	12/4/14 0550	[signature]	12/4/14 1615
[signature]	12/4/14 1800	[signature]	12/4/14 18:00
[signature]	12/5/14 0400	Mansfield 60	12/5/14 0400

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FORM NO: 01-01 (rev. 12-Mar-2012)

CHAIN OF CUSTODY

PAGE ____ OF ____

Serial_No:01091516:16

Date Rec'd in Lab:

ALPHA Job #: L1429023

8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300

Client Information

Client: ESS Group, Inc.
Address: 100 Fifth Avenue 5th Floor, Waltham, MA
Phone: 781-419-7732
Email: SHerz@essgroup.com

Project Information

Project Name: PNSY
Project Location: Kittery, Maine
Project #: N492-000
Project Manager: Susan Herz
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due:

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Additional Project Information:

1. Grain size per ASTM D422
2. Total solids and moisture content SM2540G
3. Total Organic Carbons EPA SW-846 method 9060

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☐ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☒ PAH	METALS: ☐ MCP 13	METALS: ☐ MCP 14 ☐ RCP 15 ☒ RCRA5 ☐ RCRA8 ☐ PP13	EPH: ☐ Ranges & Targets ☐ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	☒ PCB ☒ PEST	TPH: ☐ Quant Only ☐ Fingerprint	Grain size	Total solids + moisture content	Total Organic Carbons				Sample Comments	TOTAL # BOTTLES
2902301	SC-04-1	11/26/14	1045	Soil	MJD		X		X			X		X	X	X					2
↓ 02	SC-04-2	"	1120	"	MJD		X		X			X		X	X	X					2

SEDIMENT SAMPLING
OVER WATER
ENVIRONMENTAL COC

4 TOTAL

TO MANSFIELD

Container Type																			
Preservative																			

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	11/29/14 0900	M. Cutter	12/1/14 162
M. Cutter [signature]	12/1/14 162	[signature] AAL	12/1/14 1630
[signature]	12/1/14 1805	[signature]	12/1/14 1805
[signature]	12/2/14 0400	Mansfield Lab	12/2/14 0400

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

ANALYTICAL REPORT

Lab Number:	L1501520
Client:	ESS Group, Inc. 100 Fifth Avenue 5th Floor Waltham, MA 02451
ATTN:	Susan Herz
Phone:	(781) 419-7732
Project Name:	PNSY
Project Number:	N492-000
Report Date:	02/12/15

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), ME (MA00030), PA (68-02089), VA (460194), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), USFWS (Permit #LE2069641), USDA (Permit #P330-11-00109), 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: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1501520-01	SC-03-S1	SEDIMENT	KITTERY, ME	01/21/15 11:00	01/22/15
L1501520-02	SC-03-S2	SEDIMENT	KITTERY, ME	01/21/15 11:00	01/22/15

Project Name: PNSY **Lab Number:** L1501520
Project Number: N492-000 **Report Date:** 02/12/15

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. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: PNSY **Lab Number:** L1501520
Project Number: N492-000 **Report Date:** 02/12/15

Case Narrative (continued)

Semivolatile Organics

The WG760457-2 LCS recovery, associated with L1501520-01 and -02, is outside the acceptance criteria for Benzo(k)fluoranthene (42%). In addition, the WG760457-2/-3 LCS/LCSD RPDs are above the acceptance criteria for Benzo(b)fluoranthene (42%) and Benzo(k)fluoranthene (32%).

The WG760457-6/-7 MS/MSD recoveries, performed on L1501520-01, are outside the acceptance criteria for several compounds. In addition, the MS/MSD RPDs are above the acceptance criteria for Pyrene (31%) and Chrysene (32%).

The WG760457-5 Laboratory Duplicate RPD, performed on L1501520-01, is outside the acceptance criteria for several compounds. The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

Pesticides

The pesticide analysis was performed utilizing dual column confirmation with the higher of the two values reported. If the relative percent difference (RPD) was above the acceptance criteria the compound is reported with a "P" qualifier. Technical judgment was employed in the case of an observed interference. In the case that interference was observed on one column, the lower value is reported and qualified with an "I".

The WG760459-5 Laboratory Duplicate RPD, performed on L1501520-01, is outside the acceptance criteria for 4,4'-DDD (45%-Column A, 32%-Column B).

The standard reference material (SRM) W760459-4 had the compound trans-Nonachlor recovered above the acceptance criteria at 478% for column A and 180% for column B. All other monitored compounds were recovered within acceptance criteria.

The standard reference material (SRM) WG760459-4 had the surrogate BZ 198 recovered above the method acceptance criteria at 316% for column B due to matrix interference. All other surrogates were within

Case Narrative (continued)

acceptance criteria; therefore no further action was taken.

Metals

The WG758610-4/-5 MS/MSD recoveries for Copper (515%/0%) and Zinc (524%/62%), performed on L1501520-01, do not apply because the sample concentrations are greater than four times the spike amount added.

The WG758610-4/-5 MS/MSD recoveries, performed on L1501520-01, are outside the acceptance criteria for Chromium (130%/71%), Nickel (562%/55%), and Lead (68%/219%); however, the associated LCS recoveries are within criteria. No further action was taken. In addition, the MS/MSD RPDs are above the acceptance criteria for Chromium (37%), Copper (120%), Lead (59%), Nickel (135%), and Zinc (41%).

The WG758610-3 Laboratory Duplicate RPD, performed on L1501520-01, is outside the acceptance criteria for Arsenic (30%), Chromium (26%), Copper (97%), Lead (34%), and Nickel (62%). The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

The WG758612-3 Laboratory Duplicate RPD, performed on L1501520-01, is outside the acceptance criteria for Mercury (61%). The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

Total Organic Carbon

The WG759995-4/-5 MS/MSD RPDs, performed on L1501520-01, are above the acceptance criteria for Total Organic Carbon-Rep 2 (29%).

The WG759995-3 Laboratory Duplicate RPD, performed on L1501520-01, is outside the acceptance criteria for Total Organic Carbon-Rep 1 (30%) and Total Organic Carbon-Rep 2 (29%). The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

Project Name: PNSY **Lab Number:** L1501520
Project Number: N492-000 **Report Date:** 02/12/15

Case Narrative (continued)

Grain Size Analysis

The WG758545-1 Laboratory Duplicate RPD, performed on L1501520-01, is outside the acceptance criteria for %Total Gravel (102%), %Medium Sand (22%), %Fine Sand (36%) and %Total Fines (45%). The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

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: Cynthia McQueen

Title: Technical Director/Representative Date: 02/12/15

ORGANICS

SEMIVOLATILES

Project Name: PNSY **Lab Number:** L1501520

Project Number: N492-000 **Report Date:** 02/12/15

SAMPLE RESULTS

Lab ID:	L1501520-01	Date Collected:	01/21/15 11:00
Client ID:	SC-03-S1	Date Received:	01/22/15
Sample Location:	KITTERY, ME	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	02/04/15 10:12
Analytical Date:	02/05/15 18:55	Cleanup Method:	EPA 3630
Analyst:	JT	Cleanup Date:	02/05/15
Percent Solids:	77%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	114		ug/kg	11.1	--	1
Acenaphthylene	18.2		ug/kg	11.1	--	1
Acenaphthene	120		ug/kg	11.1	--	1
Fluorene	90.8		ug/kg	11.1	--	1
Phenanthrene	597		ug/kg	11.1	--	1
Anthracene	143		ug/kg	11.1	--	1
Fluoranthene	1610		ug/kg	11.1	--	1
Pyrene	1230		ug/kg	11.1	--	1
Benz(a)anthracene	382		ug/kg	11.1	--	1
Chrysene	395		ug/kg	11.1	--	1
Benzo(b)fluoranthene	298		ug/kg	11.1	--	1
Benzo(k)fluoranthene	179		ug/kg	11.1	--	1
Benzo(a)pyrene	208		ug/kg	11.1	--	1
Indeno(1,2,3-cd)Pyrene	128		ug/kg	11.1	--	1
Dibenz(a,h)anthracene	30.3		ug/kg	11.1	--	1
Benzo(ghi)perylene	113		ug/kg	11.1	--	1
Cl2-BZ#8	ND		ug/kg	1.11	--	1
Cl3-BZ#18	2.00		ug/kg	1.11	--	1
Cl3-BZ#28	2.58		ug/kg	1.11	--	1
Cl4-BZ#44	40.0		ug/kg	1.11	--	1
Cl4-BZ#49	14.5		ug/kg	1.11	--	1
Cl4-BZ#52	91.7		ug/kg	1.11	--	1
Cl4-BZ#66	18.4		ug/kg	1.11	--	1
Cl5-BZ#87	60.6		ug/kg	1.11	--	1
Cl5-BZ#101	138		ug/kg	1.11	--	1
Cl5-BZ#105	29.2		ug/kg	1.11	--	1
Cl5-BZ#118	63.8		ug/kg	1.11	--	1
Cl6-BZ#128	10.1		ug/kg	1.11	--	1
Cl6-BZ#138	43.0		ug/kg	1.11	--	1
Cl6-BZ#153	24.5		ug/kg	1.11	--	1

Project Name: PNSY **Lab Number:** L1501520

Project Number: N492-000 **Report Date:** 02/12/15

SAMPLE RESULTS

Lab ID: L1501520-01 Date Collected: 01/21/15 11:00

Client ID: SC-03-S1 Date Received: 01/22/15

Sample Location: KITTERY, ME Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	3.75		ug/kg	1.11	--	1
Cl7-BZ#180	5.50		ug/kg	1.11	--	1
Cl7-BZ#183	1.57		ug/kg	1.11	--	1
Cl7-BZ#184	ND		ug/kg	1.11	--	1
Cl7-BZ#187	3.20		ug/kg	1.11	--	1
Cl8-BZ#195	ND		ug/kg	1.11	--	1
Cl9-BZ#206	2.75		ug/kg	1.11	--	1
Cl10-BZ#209	1.29		ug/kg	1.11	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	67		30-150
Pyrene-d10	66		30-150
Benzo(b)fluoranthene-d12	67		30-150
DBOB	84		30-150
BZ 198	75		30-150

Project Name: PNSY **Lab Number:** L1501520

Project Number: N492-000 **Report Date:** 02/12/15

SAMPLE RESULTS

Lab ID:	L1501520-02	Date Collected:	01/21/15 11:00
Client ID:	SC-03-S2	Date Received:	01/22/15
Sample Location:	KITTERY, ME	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	105,8270D-SIM/680(M)	Extraction Date:	02/04/15 10:12
Analytical Date:	02/05/15 20:56	Cleanup Method:	EPA 3630
Analyst:	JT	Cleanup Date:	02/05/15
Percent Solids:	73%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Naphthalene	161		ug/kg	13.0	--	1
Acenaphthylene	22.0		ug/kg	13.0	--	1
Acenaphthene	522		ug/kg	13.0	--	1
Fluorene	462		ug/kg	13.0	--	1
Phenanthrene	1540		ug/kg	13.0	--	1
Anthracene	262		ug/kg	13.0	--	1
Fluoranthene	3570		ug/kg	13.0	--	1
Pyrene	3470		ug/kg	13.0	--	1
Benz(a)anthracene	670		ug/kg	13.0	--	1
Chrysene	2030		ug/kg	13.0	--	1
Benzo(b)fluoranthene	470		ug/kg	13.0	--	1
Benzo(k)fluoranthene	319		ug/kg	13.0	--	1
Benzo(a)pyrene	297		ug/kg	13.0	--	1
Indeno(1,2,3-cd)Pyrene	186		ug/kg	13.0	--	1
Dibenz(a,h)anthracene	40.4		ug/kg	13.0	--	1
Benzo(ghi)perylene	160		ug/kg	13.0	--	1
Cl2-BZ#8	ND		ug/kg	1.30	--	1
Cl3-BZ#18	2.30		ug/kg	1.30	--	1
Cl3-BZ#28	ND		ug/kg	1.30	--	1
Cl4-BZ#44	5.13		ug/kg	1.30	--	1
Cl4-BZ#49	2.75		ug/kg	1.30	--	1
Cl4-BZ#52	9.48		ug/kg	1.30	--	1
Cl4-BZ#66	3.03		ug/kg	1.30	--	1
Cl5-BZ#87	4.06		ug/kg	1.30	--	1
Cl5-BZ#101	8.90		ug/kg	1.30	--	1
Cl5-BZ#105	3.27		ug/kg	1.30	--	1
Cl5-BZ#118	6.86		ug/kg	1.30	--	1
Cl6-BZ#128	1.44		ug/kg	1.30	--	1
Cl6-BZ#138	7.75		ug/kg	1.30	--	1
Cl6-BZ#153	5.76		ug/kg	1.30	--	1

Project Name: PNSY **Lab Number:** L1501520

Project Number: N492-000 **Report Date:** 02/12/15

SAMPLE RESULTS

Lab ID: L1501520-02 Date Collected: 01/21/15 11:00

Client ID: SC-03-S2 Date Received: 01/22/15

Sample Location: KITTERY, ME Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab						
Cl7-BZ#170	4.19		ug/kg	1.30	--	1
Cl7-BZ#180	3.92		ug/kg	1.30	--	1
Cl7-BZ#183	ND		ug/kg	1.30	--	1
Cl7-BZ#184	ND		ug/kg	1.30	--	1
Cl7-BZ#187	2.54		ug/kg	1.30	--	1
Cl8-BZ#195	ND		ug/kg	1.30	--	1
Cl9-BZ#206	3.97		ug/kg	1.30	--	1
Cl10-BZ#209	1.85		ug/kg	1.30	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	81		30-150
Pyrene-d10	81		30-150
Benzo(b)fluoranthene-d12	82		30-150
DBOB	101		30-150
BZ 198	90		30-150

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 02/05/15 17:15
Analyst: JT

Extraction Method: EPA 3570
Extraction Date: 02/04/15 10:12
Cleanup Method: EPA 3630
Cleanup Date: 02/05/15

Parameter	Result	Qualifier	Units	RL	MDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 01-02 Batch: WG760457-1					
Naphthalene	ND		ug/kg	10.0	--
Acenaphthylene	ND		ug/kg	10.0	--
Acenaphthene	ND		ug/kg	10.0	--
Fluorene	ND		ug/kg	10.0	--
Phenanthrene	ND		ug/kg	10.0	--
Anthracene	ND		ug/kg	10.0	--
Fluoranthene	ND		ug/kg	10.0	--
Pyrene	ND		ug/kg	10.0	--
Benz(a)anthracene	ND		ug/kg	10.0	--
Chrysene	ND		ug/kg	10.0	--
Benzo(b)fluoranthene	ND		ug/kg	10.0	--
Benzo(k)fluoranthene	ND		ug/kg	10.0	--
Benzo(a)pyrene	ND		ug/kg	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	10.0	--
Dibenz(a,h)anthracene	ND		ug/kg	10.0	--
Benzo(ghi)perylene	ND		ug/kg	10.0	--
Cl2-BZ#8	ND		ug/kg	1.00	--
Cl3-BZ#18	ND		ug/kg	1.00	--
Cl3-BZ#28	ND		ug/kg	1.00	--
Cl4-BZ#44	ND		ug/kg	1.00	--
Cl4-BZ#49	ND		ug/kg	1.00	--
Cl4-BZ#52	ND		ug/kg	1.00	--
Cl4-BZ#66	ND		ug/kg	1.00	--
Cl5-BZ#87	ND		ug/kg	1.00	--
Cl5-BZ#101	ND		ug/kg	1.00	--
Cl5-BZ#105	ND		ug/kg	1.00	--
Cl5-BZ#118	ND		ug/kg	1.00	--
Cl6-BZ#128	ND		ug/kg	1.00	--
Cl6-BZ#138	ND		ug/kg	1.00	--

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 02/05/15 17:15
Analyst: JT

Extraction Method: EPA 3570
Extraction Date: 02/04/15 10:12
Cleanup Method: EPA 3630
Cleanup Date: 02/05/15

Parameter	Result	Qualifier	Units	RL	MDL
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab for sample(s): 01-02 Batch: WG760457-1					
Cl6-BZ#153	ND		ug/kg	1.00	--
Cl7-BZ#170	ND		ug/kg	1.00	--
Cl7-BZ#180	ND		ug/kg	1.00	--
Cl7-BZ#183	ND		ug/kg	1.00	--
Cl7-BZ#184	ND		ug/kg	1.00	--
Cl7-BZ#187	ND		ug/kg	1.00	--
Cl8-BZ#195	ND		ug/kg	1.00	--
Cl9-BZ#206	ND		ug/kg	1.00	--
Cl10-BZ#209	ND		ug/kg	1.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	88		30-150
Pyrene-d10	84		30-150
Benzo(b)fluoranthene-d12	85		30-150
DBOB	98		30-150
BZ 198	95		30-150

Lab Control Sample Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-02 Batch: WG760457-2 WG760457-3								
Naphthalene	72		64		50-120	12		30
Acenaphthylene	71		63		50-120	12		30
Acenaphthene	69		61		50-120	12		30
Fluorene	69		62		50-120	11		30
Phenanthrene	71		60		50-120	17		30
Anthracene	59		54		50-120	9		30
Fluoranthene	67		58		50-120	14		30
Pyrene	61		54		50-120	12		30
Benz(a)anthracene	77		62		50-120	22		30
Chrysene	57		54		50-120	5		30
Benzo(b)fluoranthene	96		63		50-120	**42**	Q	30
Benzo(k)fluoranthene	**42**	Q	58		50-120	**32**	Q	30
Benzo(a)pyrene	64		58		50-120	10		30
Indeno(1,2,3-cd)Pyrene	75		63		50-120	17		30
Dibenz(a,h)anthracene	69		61		50-120	12		30
Benzo(ghi)perylene	67		60		50-120	11		30
Cl2-BZ#8	80		71		50-120	12		30
Cl3-BZ#18	78		69		50-120	12		30
Cl3-BZ#28	80		71		50-120	12		30
Cl4-BZ#44	84		74		50-120	13		30
Cl4-BZ#49	68		69		50-120	1		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-02 Batch: WG760457-2 WG760457-3								
Cl4-BZ#52	96		73		50-120	27		30
Cl4-BZ#66	87		75		50-120	15		30
Cl5-BZ#87	84		73		50-120	14		30
Cl5-BZ#101	84		73		50-120	14		30
Cl5-BZ#105	83		76		50-120	9		30
Cl5-BZ#118	83		72		50-120	14		30
Cl6-BZ#128	84		72		50-120	15		30
Cl6-BZ#138	85		74		50-120	14		30
Cl6-BZ#153	86		74		50-120	15		30
Cl7-BZ#170	81		72		50-120	12		30
Cl7-BZ#180	83		72		50-120	14		30
Cl7-BZ#183	77		73		50-120	5		30
Cl7-BZ#184	83		71		50-120	16		30
Cl7-BZ#187	91		73		50-120	22		30
Cl8-BZ#195	88		75		50-120	16		30
Cl9-BZ#206	85		73		50-120	15		30
Cl10-BZ#209	83		71		50-120	16		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: PNSY

Project Number: N492-000

Lab Number: L1501520

Report Date: 02/12/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-02 Batch: WG760457-2 WG760457-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Methylnaphthalene-d10	80		69		30-150
Pyrene-d10	77		68		30-150
Benzo(b)fluoranthene-d12	81		69		30-150
DBOB	95		80		30-150
BZ 198	93		79		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG760457-6 WG760457-7 QC Sample: L1501520-01 Client ID: SC-03-S1												
Naphthalene	114	543	608	91		635	96		50-120	4		30
Acenaphthylene	18.2	543	446	79		463	82		50-120	4		30
Acenaphthene	120	543	614	91		687	104		50-120	11		30
Fluorene	90.8	543	539	83		596	93		50-120	10		30
Phenanthrene	597	543	1360	**141**	Q	1590	**183**	Q	50-120	16		30
Anthracene	143	543	578	80		662	95		50-120	14		30
Fluoranthene	1610	543	3100	**274**	Q	3640	**373**	Q	50-120	16		30
Pyrene	1230	543	2360	**208**	Q	3230	**368**	Q	50-120	**31**	Q	30
Benz(a)anthracene	382	543	1200	**151**	Q	1500	**206**	Q	50-120	22		30
Chrysene	395	543	1120	**134**	Q	1540	**211**	Q	50-120	**32**	Q	30
Benzo(b)fluoranthene	298	543	1100	**148**	Q	1460	**214**	Q	50-120	28		30
Benzo(k)fluoranthene	179	543	788	112		680	92		50-120	15		30
Benzo(a)pyrene	208	543	891	**126**	Q	894	**126**	Q	50-120	0		30
Indeno(1,2,3-cd)Pyrene	128	543	742	113		788	**121**	Q	50-120	6		30
Dibenz(a,h)anthracene	30.3	543	500	87		508	88		50-120	2		30
Benzo(ghi)perylene	113	543	666	102		685	105		50-120	3		30
Cl2-BZ#8	ND	108	91.2	84		96.4	89		50-120	6		30
Cl3-BZ#18	2.00	108	90.2	81		95.1	86		50-120	5		30
Cl3-BZ#28	2.58	108	94.3	85		102	91		50-120	8		30
Cl4-BZ#44	40.0	108	104	59		109	63		50-120	5		30
Cl4-BZ#49	14.5	108	89.5	69		96.1	75		50-120	7		30

Matrix Spike Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG760457-6 WG760457-7 QC Sample: L1501520-01 Client ID: SC-03-S1												
Cl4-BZ#52	91.7	108	116	**22**	Q	126	**32**	Q	50-120	8		30
Cl4-BZ#66	18.4	108	93.7	69		103	78		50-120	9		30
Cl5-BZ#87	60.6	108	99.6	**36**	Q	106	**42**	Q	50-120	6		30
Cl5-BZ#101	138	108	124	**0**	Q	133	**0**	Q	50-120	7		30
Cl5-BZ#105	29.2	108	102	67		108	72		50-120	6		30
Cl5-BZ#118	63.8	108	113	**45**	Q	120	52		50-120	6		30
Cl6-BZ#128	10.1	108	96.4	80		100	83		50-120	4		30
Cl6-BZ#138	43.0	108	117	68		123	74		50-120	5		30
Cl6-BZ#153	24.5	108	105	74		111	80		50-120	6		30
Cl7-BZ#170	3.75	108	98.1	87		102	90		50-120	4		30
Cl7-BZ#180	5.50	108	97.6	85		103	90		50-120	5		30
Cl7-BZ#183	1.57	108	90.4	82		93.2	84		50-120	3		30
Cl7-BZ#184	ND	108	89.6	83		93.7	86		50-120	4		30
Cl7-BZ#187	3.20	108	99.4	89		103	92		50-120	4		30
Cl8-BZ#195	ND	108	95.2	88		102	94		50-120	7		30
Cl9-BZ#206	2.75	108	98.8	89		102	91		50-120	3		30
Cl10-BZ#209	1.29	108	93.3	85		97.8	89		50-120	5		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	82		83		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG760457-6 WG760457-7 QC Sample: L1501520-01 Client ID: SC-03-S1												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
BZ 198	92		102		30-150
Benzo(b)fluoranthene-d12	82		84		30-150
DBOB	104		105		30-150
Pyrene-d10	81		83		30-150

Lab Duplicate Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG760457-5 QC Sample: L1501520-01 Client ID: SC-03-S1						
Naphthalene	114	708	ug/kg	**145**	Q	30
Acenaphthylene	18.2	46.9	ug/kg	**88**	Q	30
Acenaphthene	120	500	ug/kg	**123**	Q	30
Fluorene	90.8	356	ug/kg	**119**	Q	30
Phenanthrene	597	2140	ug/kg	**113**	Q	30
Anthracene	143	422	ug/kg	**99**	Q	30
Fluoranthene	1610	4660	ug/kg	**97**	Q	30
Pyrene	1230	3090	ug/kg	**86**	Q	30
Benz(a)anthracene	382	2310	ug/kg	**143**	Q	30
Chrysene	395	1610	ug/kg	**121**	Q	30
Benzo(b)fluoranthene	298	2080	ug/kg	**150**	Q	30
Benzo(k)fluoranthene	179	871	ug/kg	**132**	Q	30
Benzo(a)pyrene	208	1290	ug/kg	**144**	Q	30
Indeno(1,2,3-cd)Pyrene	128	759	ug/kg	**142**	Q	30
Dibenz(a,h)anthracene	30.3	146	ug/kg	**131**	Q	30
Benzo(ghi)perylene	113	611	ug/kg	**138**	Q	30
Cl2-BZ#8	ND	ND	ug/kg	NC		30
Cl3-BZ#18	2.00	3.93	ug/kg	**65**	Q	30
Cl3-BZ#28	2.58	1.43	ug/kg	**57**	Q	30

Lab Duplicate Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

Parameter	Native Sample	Duplicate Sample	Units	RPD		RPD Limits
RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG760457-5 QC Sample: L1501520-01 Client ID: SC-03-S1						
Cl4-BZ#44	40.0	11.4	ug/kg	**111**	Q	30
Cl4-BZ#49	14.5	6.17	ug/kg	**81**	Q	30
Cl4-BZ#52	91.7	24.3	ug/kg	**116**	Q	30
Cl4-BZ#66	18.4	7.20	ug/kg	**88**	Q	30
Cl5-BZ#87	60.6	20.5	ug/kg	**99**	Q	30
Cl5-BZ#101	138	46.0	ug/kg	**100**	Q	30
Cl5-BZ#105	29.2	19.8	ug/kg	**38**	Q	30
Cl5-BZ#118	63.8	39.9	ug/kg	**46**	Q	30
Cl6-BZ#128	10.1	20.1	ug/kg	**66**	Q	30
Cl6-BZ#138	43.0	64.4	ug/kg	**40**	Q	30
Cl6-BZ#153	24.5	37.5	ug/kg	**42**	Q	30
Cl7-BZ#170	3.75	10.6	ug/kg	**95**	Q	30
Cl7-BZ#180	5.50	13.9	ug/kg	**87**	Q	30
Cl7-BZ#183	1.57	3.57	ug/kg	**78**	Q	30
Cl7-BZ#184	ND	ND	ug/kg	NC		30
Cl7-BZ#187	3.20	5.73	ug/kg	**57**	Q	30
Cl8-BZ#195	ND	ND	ug/kg	NC		30
Cl9-BZ#206	2.75	8.31	ug/kg	**101**	Q	30
Cl10-BZ#209	1.29	37.6	ug/kg	**187**	Q	30

Lab Duplicate Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits

RIM PAHs/PCB Congeners by GC/MS - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG760457-5 QC Sample: L1501520-01 Client ID: SC-03-S1

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	67		87		30-150
Pyrene-d10	66		84		30-150
Benzo(b)fluoranthene-d12	67		86		30-150
DBOB	84		106		30-150
BZ 198	75		102		30-150

Project Name: PNSY **Lab Number:** L1501520
Project Number: N492-000 **Report Date:** 02/12/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG760457-4

Parameter	% Recovery	Qual	QC Criteria
Phenanthrene	60		40-140
Fluoranthene	62		40-140
Pyrene	50		40-140
Benz(a)anthracene	58		40-140
Chrysene	62		40-140
Benzo(b)fluoranthene	67		40-140
Benzo(k)fluoranthene	82		40-140
Benzo(a)pyrene	45		40-140
Indeno(1,2,3-cd)Pyrene	59		40-140
Dibenz(a,h)anthracene	104		40-140
Benzo(ghi)perylene	55		40-140
Cl2-BZ#8	72		40-140
Cl3-BZ#18	82		40-140
Cl3-BZ#28	42		40-140
Cl4-BZ#44	78		40-140
Cl4-BZ#49	58		40-140
Cl4-BZ#52	111		40-140
Cl4-BZ#66	61		40-140
Cl5-BZ#87	72		40-140
Cl5-BZ#101	74		40-140
Cl5-BZ#105	75		40-140
Cl5-BZ#118	73		40-140
Cl6-BZ#128	134		40-140
Cl6-BZ#138	83		40-140
Cl6-BZ#153	60		40-140
Cl7-BZ#170	120		40-140
Cl7-BZ#180	69		40-140
Cl7-BZ#183	65		40-140
Cl7-BZ#187	80		40-140
Cl9-BZ#206	92		40-140
Cl10-BZ#209	75		40-140
2-Methylnaphthalene-d10 (Surrogate)	68		30-150
Pyrene-d10 (Surrogate)	70		30-150
Benzo(b)fluoranthene-d12 (Surrogate)	68		30-150
DBOB (Surrogate)	91		30-150
BZ 198 (Surrogate)	79		30-150

PESTICIDES

Project Name: PNSY
Project Number: N492-000
Lab Number: L1501520
Report Date: 02/12/15

SAMPLE RESULTS

Lab ID:	L1501520-01	Date Collected:	01/21/15 11:00
Client ID:	SC-03-S1	Date Received:	01/22/15
Sample Location:	KITTERY, ME	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	02/04/15 10:12
Analytical Date:	02/06/15 01:38	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	02/05/15
Percent Solids:	77%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.11	--	1	A
gamma-BHC	ND		ug/kg	0.554	--	1	A
Heptachlor	ND		ug/kg	0.554	--	1	A
Aldrin	ND		ug/kg	0.554	--	1	A
Heptachlor epoxide	ND		ug/kg	1.11	--	1	B
Oxychlordane	ND		ug/kg	1.11	--	1	B
trans-Chlordane	ND		ug/kg	0.554	--	1	A
Endosulfan I	ND		ug/kg	0.554	--	1	A
cis-Chlordane	ND		ug/kg	0.554	--	1	A
trans-Nonachlor	ND		ug/kg	0.554	--	1	A
4,4'-DDE	ND		ug/kg	0.554	--	1	A
Dieldrin	ND		ug/kg	0.554	--	1	A
Endrin	ND		ug/kg	0.554	--	1	A
Endosulfan II	ND		ug/kg	0.554	--	1	A
4,4'-DDD	1.50		ug/kg	0.554	--	1	A
cis-Nonachlor	ND		ug/kg	0.554	--	1	A
4,4'-DDT	3.27	IP	ug/kg	0.554	--	1	A
Methoxychlor	ND		ug/kg	5.54	--	1	A
Toxaphene	ND		ug/kg	27.8	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	77		30-150	A
BZ 198	90		30-150	A
DBOB	65		30-150	B
BZ 198	86		30-150	B

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

SAMPLE RESULTS

Lab ID:	L1501520-02	Date Collected:	01/21/15 11:00
Client ID:	SC-03-S2	Date Received:	01/22/15
Sample Location:	KITTERY, ME	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8081B	Extraction Date:	02/04/15 10:12
Analytical Date:	02/06/15 03:47	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	02/05/15
Percent Solids:	73%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
RIM Organochlorine Pesticides - Mansfield Lab							
Hexachlorobenzene	ND		ug/kg	1.30	--	1	A
gamma-BHC	ND		ug/kg	0.652	--	1	A
Heptachlor	ND		ug/kg	0.652	--	1	A
Aldrin	ND		ug/kg	0.652	--	1	A
Heptachlor epoxide	ND		ug/kg	1.30	--	1	B
Oxychlordane	ND		ug/kg	1.30	--	1	B
trans-Chlordane	ND		ug/kg	0.652	--	1	A
Endosulfan I	ND		ug/kg	0.652	--	1	A
cis-Chlordane	ND		ug/kg	0.652	--	1	A
trans-Nonachlor	ND		ug/kg	0.652	--	1	A
4,4'-DDE	1.45		ug/kg	0.652	--	1	A
Dieldrin	ND		ug/kg	0.652	--	1	A
Endrin	ND		ug/kg	0.652	--	1	A
Endosulfan II	ND		ug/kg	0.652	--	1	A
4,4'-DDD	3.43		ug/kg	0.652	--	1	B
cis-Nonachlor	ND		ug/kg	0.652	--	1	A
4,4'-DDT	0.929	IP	ug/kg	0.652	--	1	A
Methoxychlor	ND		ug/kg	6.52	--	1	A
Toxaphene	ND		ug/kg	32.7	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DBOB	66		30-150	A
BZ 198	77		30-150	A
DBOB	66		30-150	B
BZ 198	88		30-150	B

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 02/05/15 17:31
Analyst: SF

Extraction Method: EPA 3570
Extraction Date: 02/04/15 10:12
Cleanup Method: EPA 3630
Cleanup Date: 02/05/15

Parameter	Result	Qualifier	Units	RL	MDL	Column
RIM Organochlorine Pesticides - Mansfield Lab for sample(s): 01-02 Batch: WG760459-1						
Hexachlorobenzene	ND		ug/kg	1.00	--	A
gamma-BHC	ND		ug/kg	0.500	--	A
Heptachlor	ND		ug/kg	0.500	--	A
Aldrin	ND		ug/kg	0.500	--	A
trans-Chlordane	ND		ug/kg	0.500	--	A
Endosulfan I	ND		ug/kg	0.500	--	A
cis-Chlordane	ND		ug/kg	0.500	--	A
trans-Nonachlor	ND		ug/kg	0.500	--	A
4,4'-DDE	ND		ug/kg	0.500	--	A
Dieldrin	ND		ug/kg	0.500	--	A
Endrin	ND		ug/kg	0.500	--	A
4,4'-DDD	ND		ug/kg	0.500	--	A
cis-Nonachlor	ND		ug/kg	0.500	--	A
4,4'-DDT	ND		ug/kg	0.500	--	A
Methoxychlor	ND		ug/kg	5.00	--	A
Toxaphene	ND		ug/kg	25.1	--	A
Heptachlor epoxide	ND		ug/kg	1.00	--	B
Oxychlordane	ND		ug/kg	1.00	--	B
Endosulfan II	ND		ug/kg	0.500	--	B

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DBOB	70		30-150	A
BZ 198	88		30-150	A
DBOB	69		30-150	B
BZ 198	91		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-02 Batch: WG760459-2 WG760459-3									
Hexachlorobenzene	63		77		50-120	20		30	A
gamma-BHC	68		82		50-120	19		30	A
Heptachlor	72		87		50-120	19		30	A
Aldrin	69		85		50-120	21		30	A
trans-Chlordane	76		91		50-120	18		30	A
Endosulfan I	77		90		50-120	16		30	A
cis-Chlordane	75		90		50-120	18		30	A
trans-Nonachlor	78		93		50-120	18		30	A
4,4'-DDE	87		104		50-120	18		30	A
Dieldrin	81		95		50-120	16		30	A
Endrin	75		88		50-120	16		30	A
4,4'-DDD	85		100		50-120	16		30	A
cis-Nonachlor	76		89		50-120	16		30	A
4,4'-DDT	76		89		50-120	16		30	A
Methoxychlor	76		90		50-120	17		30	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: PNSY

Project Number: N492-000

Lab Number: L1501520

Report Date: 02/12/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-02 Batch: WG760459-2 WG760459-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DBOB	61		79		30-150	A
BZ 198	85		100		30-150	A
DBOB	60		76		30-150	B
BZ 198	86		102		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: PNSY

Project Number: N492-000

Lab Number: L1501520

Report Date: 02/12/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-02 Batch: WG760459-2 WG760459-3									
Heptachlor epoxide	71		84		50-120	17		30	B
Oxychlordane	74		88		50-120	17		30	B
Endosulfan II	74		86		50-120	15		30	B

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DBOB	61		79		30-150	A
BZ 198	85		100		30-150	A
DBOB	60		76		30-150	B
BZ 198	86		102		30-150	B

Matrix Spike Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits	Column
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG760459-6 WG760459-7 QC Sample: L1501520-01 Client ID: SC-03-S1													
Hexachlorobenzene	ND	108	72.0	66		77.6	71		50-120	7		30	A
gamma-BHC	ND	108	81.7	75		82.2	76		50-120	1		30	B
Heptachlor	ND	108	86.3	80		93.0	86		50-120	7		30	A
Aldrin	ND	108	88.6	82		96.6	89		50-120	9		30	A
Heptachlor epoxide	ND	108	82.4	76		84.1	77		50-120	2		30	B
Oxychlordane	ND	108	88.5	82		90.6	83		50-120	2		30	B
trans-Chlordane	ND	108	96.9	89		106	98		50-120	9		30	A
Endosulfan I	ND	108	91.4	84		99.8	92		50-120	9		30	A
cis-Chlordane	ND	108	90.1	83		97.9	90		50-120	8		30	A
trans-Nonachlor	ND	108	86.5	80		93.7	86		50-120	8		30	A
4,4'-DDE	ND	108	111	102		120	110		50-120	8		30	A
Dieldrin	ND	108	88.8	82		98.0	90		50-120	10		30	A
Endrin	ND	108	97.7	90		107	98		50-120	9		30	A
Endosulfan II	ND	108	83.9IP	77		85.9IP	79		50-120	2		30	B
4,4'-DDD	1.50	108	106	96		117	106		50-120	10		30	A
cis-Nonachlor	ND	108	91.1I	84		97.8	90		50-120	7		30	A
4,4'-DDT	3.27	108	95.8IP	85		103IP	92		50-120	7		30	A
Methoxychlor	ND	108	98.0	90		106	98		50-120	8		30	A

Matrix Spike Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG760459-6 WG760459-7 QC Sample: L1501520-01 Client ID: SC-03-S1												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria	Column
BZ 198	88		91		30-150	A
DBOB	71		76		30-150	A
BZ 198	92		91		30-150	B
DBOB	64		65		30-150	B

Lab Duplicate Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits	
RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG760459-5 QC Sample: L1501520-01 Client ID: SC-03-S1							
Hexachlorobenzene	ND	ND	ug/kg	NC		30	A
gamma-BHC	ND	ND	ug/kg	NC		30	A
Heptachlor	ND	ND	ug/kg	NC		30	A
Aldrin	ND	ND	ug/kg	NC		30	A
Heptachlor epoxide	ND	ND	ug/kg	NC		30	B
Oxychlordane	ND	ND	ug/kg	NC		30	B
trans-Chlordane	ND	ND	ug/kg	NC		30	A
Endosulfan I	ND	ND	ug/kg	NC		30	A
cis-Chlordane	ND	ND	ug/kg	NC		30	A
trans-Nonachlor	ND	ND	ug/kg	NC		30	A
4,4'-DDE	ND	3.42P	ug/kg	NC		30	A
Dieldrin	ND	ND	ug/kg	NC		30	A
Endrin	ND	ND	ug/kg	NC		30	A
Endosulfan II	ND	ND	ug/kg	NC		30	A
4,4'-DDD	1.50	2.38	ug/kg	**45**	Q	30	A
cis-Nonachlor	ND	ND	ug/kg	NC		30	A
4,4'-DDT	3.27	4.09IP	ug/kg	22		30	A
Methoxychlor	ND	ND	ug/kg	NC		30	A
Toxaphene	ND	ND	ug/kg	NC		30	A

Lab Duplicate Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits

RIM Organochlorine Pesticides - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG760459-5 QC Sample: L1501520-01 Client ID: SC-03-S1

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria	Column
DBOB	77		73		30-150	A
BZ 198	90		87		30-150	A
DBOB	65		60		30-150	B
BZ 198	86		85		30-150	B

Project Name: PNSY **Lab Number:** L1501520

Project Number: N492-000 **Report Date:** 02/12/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG760459-4

Parameter	% Recovery	Qual	QC Criteria
Hexachlorobenzene	66		40-140
cis-Chlordane	111		40-140
trans-Nonachlor	478	Q	40-140
DBOB (Surrogate)	70		30-150
DBOB (Surrogate)	99		30-150
BZ 198 (Surrogate)	115		30-150
BZ 198 (Surrogate)	316	Q	30-150

METALS

Project Name:	PNSY	**Lab Number:**	L1501520
Project Number:	N492-000	**Report Date:**	02/12/15

SAMPLE RESULTS

Lab ID:	L1501520-01	Date Collected:	01/21/15 11:00
Client ID:	SC-03-S1	Date Received:	01/22/15
Sample Location:	KITTERY, ME	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	77%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	12.1		mg/kg	0.196	--	10	01/26/15 14:05	02/04/15 14:27	EPA 3050B	1,6020A	PD
Cadmium, Total	0.763		mg/kg	0.078	--	10	01/26/15 14:05	02/04/15 14:27	EPA 3050B	1,6020A	PD
Chromium, Total	99.3		mg/kg	0.782	--	10	01/26/15 14:05	02/04/15 14:27	EPA 3050B	1,6020A	PD
Copper, Total	764		mg/kg	0.782	--	10	01/26/15 14:05	02/04/15 14:27	EPA 3050B	1,6020A	PD
Lead, Total	185		mg/kg	0.235	--	10	01/26/15 14:05	02/04/15 14:27	EPA 3050B	1,6020A	PD
Mercury, Total	0.844		mg/kg	0.018	--	5	01/26/15 14:08	02/03/15 14:27	EPA 7474	1,7474	PD
Nickel, Total	108		mg/kg	0.391	--	10	01/26/15 14:05	02/04/15 14:27	EPA 3050B	1,6020A	PD
Zinc, Total	1340		mg/kg	3.91	--	10	01/26/15 14:05	02/04/15 14:27	EPA 3050B	1,6020A	PD

Project Name: PNSY
Project Number: N492-000
Lab Number: L1501520
Report Date: 02/12/15

SAMPLE RESULTS

Lab ID: L1501520-02
Client ID: SC-03-S2
Sample Location: KITTERY, ME
Matrix: Sediment
Percent Solids: 73%

Date Collected: 01/21/15 11:00
Date Received: 01/22/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	11.3		mg/kg	0.181	--	10	01/26/15 14:05	02/04/15 14:36	EPA 3050B	1,6020A	PD
Cadmium, Total	0.289		mg/kg	0.072	--	10	01/26/15 14:05	02/04/15 14:36	EPA 3050B	1,6020A	PD
Chromium, Total	72.4		mg/kg	0.723	--	10	01/26/15 14:05	02/04/15 14:36	EPA 3050B	1,6020A	PD
Copper, Total	445		mg/kg	0.723	--	10	01/26/15 14:05	02/04/15 14:36	EPA 3050B	1,6020A	PD
Lead, Total	638		mg/kg	0.217	--	10	01/26/15 14:05	02/04/15 14:36	EPA 3050B	1,6020A	PD
Mercury, Total	0.586		mg/kg	0.019	--	5	01/26/15 14:08	02/03/15 14:40	EPA 7474	1,7474	PD
Nickel, Total	107		mg/kg	0.361	--	10	01/26/15 14:05	02/04/15 14:36	EPA 3050B	1,6020A	PD
Zinc, Total	2480		mg/kg	18.1	--	50	01/26/15 14:05	02/04/15 14:39	EPA 3050B	1,6020A	PD

Project Name: PNSY **Lab Number:** L1501520

Project Number: N492-000 **Report Date:** 02/12/15

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG758610-1										
Arsenic, Total	ND		mg/kg	0.050	--	2	01/26/15 14:05	02/04/15 14:25	1,6020A	PD
Cadmium, Total	ND		mg/kg	0.020	--	2	01/26/15 14:05	02/04/15 14:25	1,6020A	PD
Chromium, Total	ND		mg/kg	0.200	--	2	01/26/15 14:05	02/04/15 14:25	1,6020A	PD
Copper, Total	ND		mg/kg	0.200	--	2	01/26/15 14:05	02/04/15 14:25	1,6020A	PD
Lead, Total	ND		mg/kg	0.060	--	2	01/26/15 14:05	02/04/15 14:25	1,6020A	PD
Nickel, Total	ND		mg/kg	0.100	--	2	01/26/15 14:05	02/04/15 14:25	1,6020A	PD
Zinc, Total	ND		mg/kg	1.00	--	2	01/26/15 14:05	02/04/15 14:25	1,6020A	PD

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG758612-1										
Mercury, Total	ND		mg/kg	0.013	--	5	01/26/15 14:08	02/03/15 14:22	1,7474	PD

Prep Information

Digestion Method: EPA 7474

Lab Control Sample Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG758610-2 SRM Lot Number: A2METSPIKE								
Arsenic, Total	96		-		75-125	-		20
Cadmium, Total	99		-		75-125	-		20
Chromium, Total	102		-		75-125	-		20
Copper, Total	100		-		75-125	-		20
Lead, Total	97		-		75-125	-		20
Nickel, Total	99		-		75-125	-		20
Zinc, Total	95		-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG758612-2 SRM Lot Number: HPHGAF								
Mercury, Total	111		-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG758610-4 WG758610-5 QC Sample: L1501520-01 Client ID: SC-03-S1												
Arsenic, Total	12.1	162	153	87		150	85		75-125	2		20
Cadmium, Total	0.763	81.2	66.8	81		70.6	86		75-125	6		20
Chromium, Total	99.3	162	311	**130**	Q	214	**71**	Q	75-125	**37**	Q	20
Copper, Total	764	162	1600	**515**	Q	402	**0**	Q	75-125	**120**	Q	20
Lead, Total	185	162	295	**68**	Q	540	**219**	Q	75-125	**59**	Q	20
Nickel, Total	108	162	1020	**562**	Q	197	**55**	Q	75-125	**135**	Q	20
Zinc, Total	1340	162	2190	**524**	Q	1440	**62**	Q	75-125	**41**	Q	20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG758612-4 WG758612-5 QC Sample: L1501520-01 Client ID: SC-03-S1												
Mercury, Total	0.844	0.882	1.86	115		1.79	98		80-120	4		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG758610-3 QC Sample: L1501520-01 Client ID: SC-03-S1						
Arsenic, Total	12.1	8.96	mg/kg	**30**	Q	20
Cadmium, Total	0.763	0.625	mg/kg	20		20
Chromium, Total	99.3	76.2	mg/kg	**26**	Q	20
Copper, Total	764	265	mg/kg	**97**	Q	20
Lead, Total	185	262	mg/kg	**34**	Q	20
Nickel, Total	108	56.9	mg/kg	**62**	Q	20
Zinc, Total	1340	1330	mg/kg	1		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG758612-3 QC Sample: L1501520-01 Client ID: SC-03-S1						
Mercury, Total	0.844	1.58	mg/kg	**61**	Q	20

Project Name: PNSY **Lab Number:** L1501520

Project Number: N492-000 **Report Date:** 02/12/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG758610-7

Parameter	% Recovery	Qual	QC Criteria
Arsenic, Total	97		81-120
Cadmium, Total	95		82-118
Chromium, Total	95		79-120
Copper, Total	96		81-119
Lead, Total	92		81-118
Nickel, Total	97		82-118
Zinc, Total	96		80-120

Project Name: PNSY **Lab Number:** L1501520

Project Number: N492-000 **Report Date:** 02/12/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG758612-7

Parameter	% Recovery	Qual	QC Criteria
Mercury, Total	93		71-129

INORGANICS
&
MISCELLANEOUS

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

SAMPLE RESULTS

Lab ID: L1501520-01
Client ID: SC-03-S1
Sample Location: KITTERY, ME
Matrix: Sediment

Date Collected: 01/21/15 11:00
Date Received: 01/22/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.868		%	0.010	--	1	-	01/30/15 13:52	1,9060	LC
Total Organic Carbon (Rep2)	0.734		%	0.010	--	1	-	01/30/15 13:52	1,9060	LC
Grain Size Analysis - Mansfield Lab										
% Total Gravel	10.9		%	0.100	NA	1	-	01/26/15 00:00	12,D422	SE
% Coarse Sand	8.20		%	0.100	NA	1	-	01/26/15 00:00	12,D422	SE
% Medium Sand	31.1		%	0.100	NA	1	-	01/26/15 00:00	12,D422	SE
% Fine Sand	41.9		%	0.100	NA	1	-	01/26/15 00:00	12,D422	SE
% Total Fines	7.90		%	0.100	NA	1	-	01/26/15 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	77.0		%	0.100	--	1	-	01/26/15 14:00	30,2540G	LC
Moisture	23.0		%	0.100	--	1	-	01/26/15 14:00	30,2540G	LC

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

SAMPLE RESULTS

Lab ID: L1501520-02
Client ID: SC-03-S2
Sample Location: KITTERY, ME
Matrix: Sediment

Date Collected: 01/21/15 11:00
Date Received: 01/22/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.414		%	0.010	--	1	-	01/30/15 14:42	1,9060	LC
Total Organic Carbon (Rep2)	0.479		%	0.010	--	1	-	01/30/15 14:42	1,9060	LC
Grain Size Analysis - Mansfield Lab										
% Total Gravel	29.9		%	0.100	NA	1	-	01/26/15 00:00	12,D422	SE
% Coarse Sand	10.7		%	0.100	NA	1	-	01/26/15 00:00	12,D422	SE
% Medium Sand	35.3		%	0.100	NA	1	-	01/26/15 00:00	12,D422	SE
% Fine Sand	20.7		%	0.100	NA	1	-	01/26/15 00:00	12,D422	SE
% Total Fines	3.40		%	0.100	NA	1	-	01/26/15 00:00	12,D422	SE
General Chemistry - Mansfield Lab										
Solids, Total	73.2		%	0.100	--	1	-	01/26/15 14:00	30,2540G	LC
Moisture	26.8		%	0.100	--	1	-	01/26/15 14:00	30,2540G	LC

Project Name: PNSY **Lab Number:** L1501520

Project Number: N492-000 **Report Date:** 02/12/15

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 01-02 Batch: WG759995-1										
Total Organic Carbon (Rep1)	ND		%	0.010	--	1	-	01/30/15 11:50	1,9060	LC
Total Organic Carbon (Rep2)	ND		%	0.010	--	1	-	01/30/15 11:50	1,9060	LC

Matrix Spike Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG759995-4 WG759995-5 QC Sample: L1501520-01 Client ID: SC-03-S1												
Total Organic Carbon (Rep1)	0.868	1.18	2.06	101		2.50	94		75-125	19		25
Total Organic Carbon (Rep2)	0.734	1.04	1.85	108		2.49	125		75-125	**29**	Q	25

Lab Duplicate Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Grain Size Analysis - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG758545-1 QC Sample: L1501520-01 Client ID: SC-03-S1						
% Total Gravel	10.9	33.6	%	**102**	Q	20
% Coarse Sand	8.20	7.30	%	12		20
% Medium Sand	31.1	24.9	%	**22**	Q	20
% Fine Sand	41.9	29.2	%	**36**	Q	20
% Total Fines	7.90	5.00	%	**45**	Q	20
General Chemistry - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG758605-1 QC Sample: L1501520-01 Client ID: SC-03-S1						
Solids, Total	77.0	74.9	%	3		10
Moisture	23	25.1	%	9		10
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG759995-3 QC Sample: L1501520-01 Client ID: SC-03-S1						
Total Organic Carbon (Rep1)	0.868	1.18	%	**30**	Q	25
Total Organic Carbon (Rep2)	0.734	0.979	%	**29**	Q	25

Project Name: PNSY **Lab Number:** L1501520

Project Number: N492-000 **Report Date:** 02/12/15

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG759995-2

Parameter	% Recovery	Qual	QC Criteria
Total Organic Carbon (Rep1)	87		75-125
Total Organic Carbon (Rep2)	98		75-125

Project Name: PNSY
Project Number: N492-000

Lab Number: L1501520
Report Date: 02/12/15

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1501520-01A	Glass 250ml/8oz unpreserved	A	N/A	2.4	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1501520-01B	Plastic 8oz unpreserved for Grai	A	N/A	2.4	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()
L1501520-02A	Glass 250ml/8oz unpreserved	A	N/A	2.4	Y	Absent	A2-PB-6020T(180),A2-RIM-PAH/PCBCONG(14),A2-MOISTURE-2540(7),A2-NI-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-PREP-3050:2T(180),A2-TOC-9060-2REPS(28),A2-CU-6020T(180),A2-RIM-PEST-8081(14)
L1501520-02B	Plastic 8oz unpreserved for Grai	A	N/A	2.4	Y	Absent	A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND()

*Values in parentheses indicate holding time in days

Project Name:	PNSY	**Lab Number:**	L1501520
Project Number:	N492-000	**Report Date:**	02/12/15

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
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.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: 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.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
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.
MSD	- 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.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL 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.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

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 ten times (10x) the concentration found in the blank. For MCP-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. 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. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
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.

Report Format: Data Usability Report

Project Name: PNSY **Lab Number:** L1501520

Project Number: N492-000 **Report Date:** 02/12/15

Data Qualifiers

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

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. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. 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 RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name: PNSY **Lab Number:** L1501520
Project Number: N492-000 **Report Date:** 02/12/15

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

12 Annual Book of ASTM Standards. (American Society for Testing and Materials) ASTM International.

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

105 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997 in conjunction with NOAA Technical Memorandum NMFS-NWFSC-59: Extraction, Cleanup and GC/MS Analysis of Sediments and Tissues for Organic Contaminants, March 2004 and the Determination of Pesticides and PCBs in Water and Oil/Sediment by GC/MS: Method 680, EPA 01A0005295, November 1985.

LIMITATION OF LIABILITIES

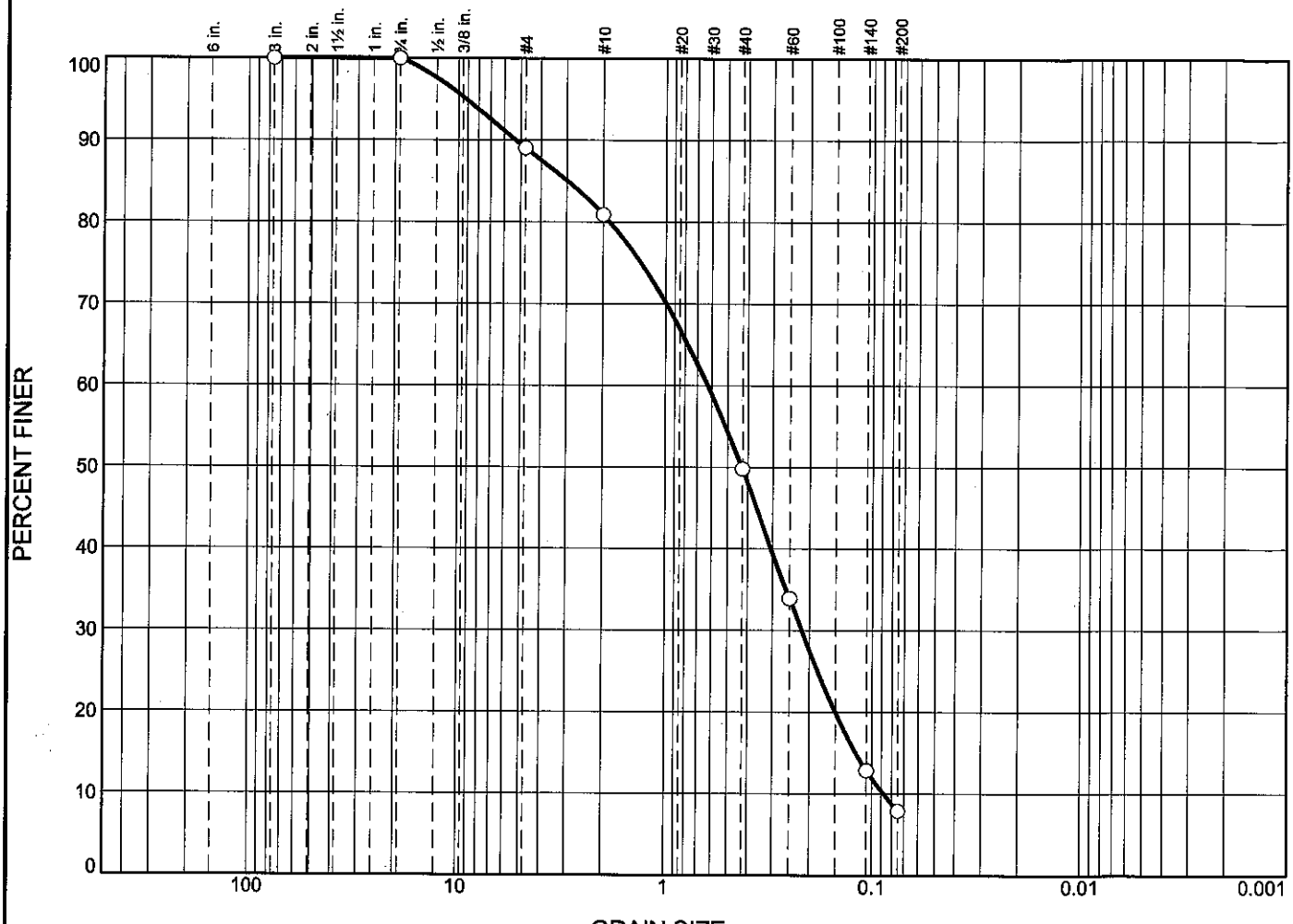
Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held 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 Analytical.

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.

ASTM D422-63

GRAIN SIZE ANALYSIS

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	10.9	8.2	31.1	41.9	7.9	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			2.9750	0.6258	0.4279	0.2186	0.1191	0.0878	0.87	7.13

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** SC-03-S1 **Sample Number:** L1501520-01

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/26/2015

Location: SC-03-S1

Sample Number: L1501520-01

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 68.95
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
68.95	0.00	3	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	7.55	0.00	89.1
		#10	5.62	0.00	80.9
		#40	21.44	0.00	49.8
		#60	10.95	0.00	33.9
		#140	14.52	0.00	12.9
		#200	3.41	0.00	7.9

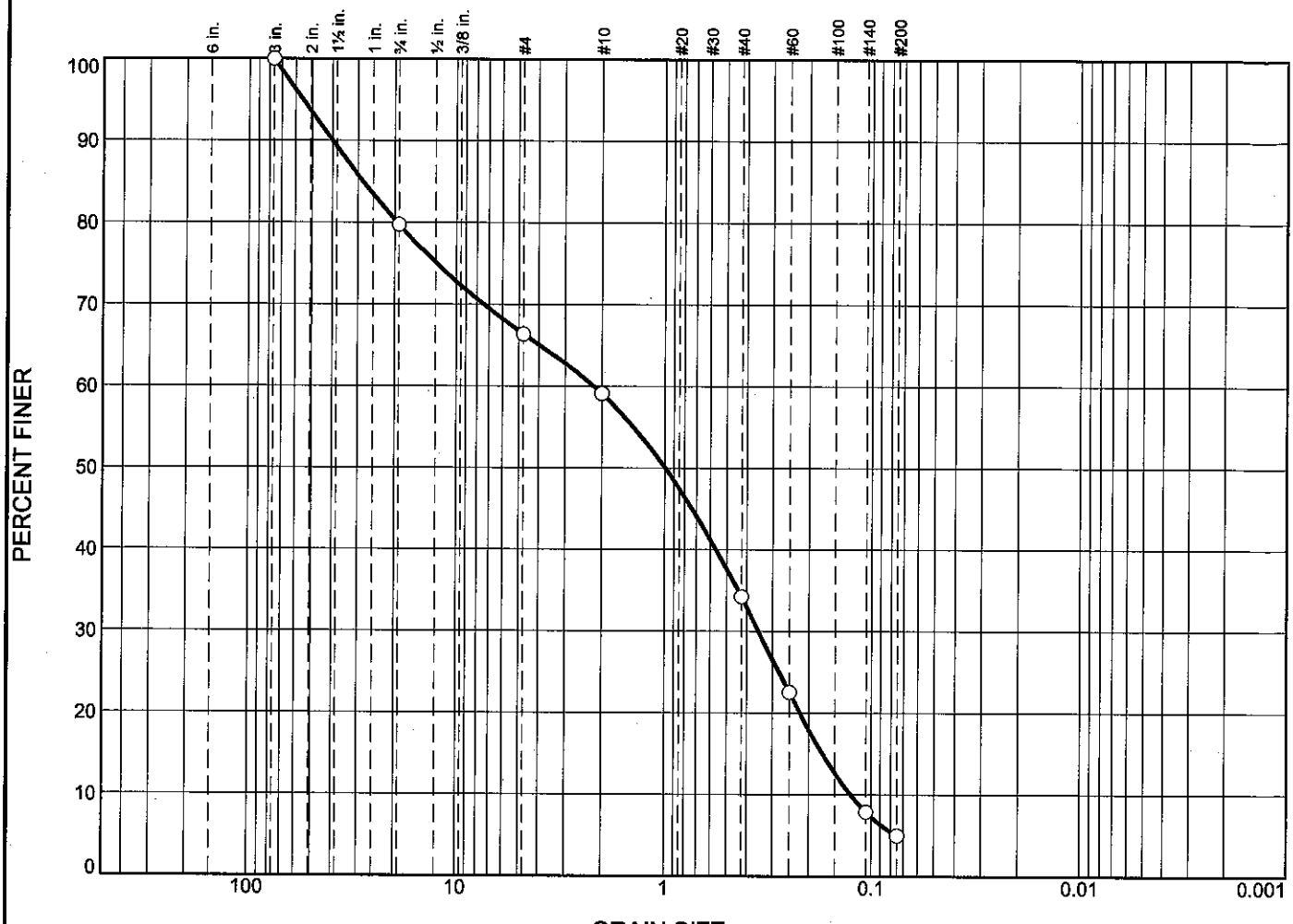
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	10.9	10.9	8.2	31.1	41.9	81.2			7.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0878	0.1191	0.1499	0.2186	0.4279	0.6258	1.8591	2.9750	5.2862	9.1810

Fineness Modulus	C_u	C_c
2.41	7.13	0.87

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	20.3	13.3	7.3	24.9	29.2	5.0	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			28.3730	2.1850	0.9938	0.3501	0.1715	0.1257	0.45	17.39

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** SC-03-S1 **Sample Number:** WG758545-1

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/26/2015

Location: SC-03-S1

Sample Number: WG758545-1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 72.51
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
72.51	0.00	3	0.00	0.00	100.0
		0.75	14.69	0.00	79.7
		#4	9.69	0.00	66.4
		#10	5.27	0.00	59.1
		#40	18.03	0.00	34.2
		#60	8.48	0.00	22.5
		#140	10.61	0.00	7.9
		#200	2.12	0.00	5.0

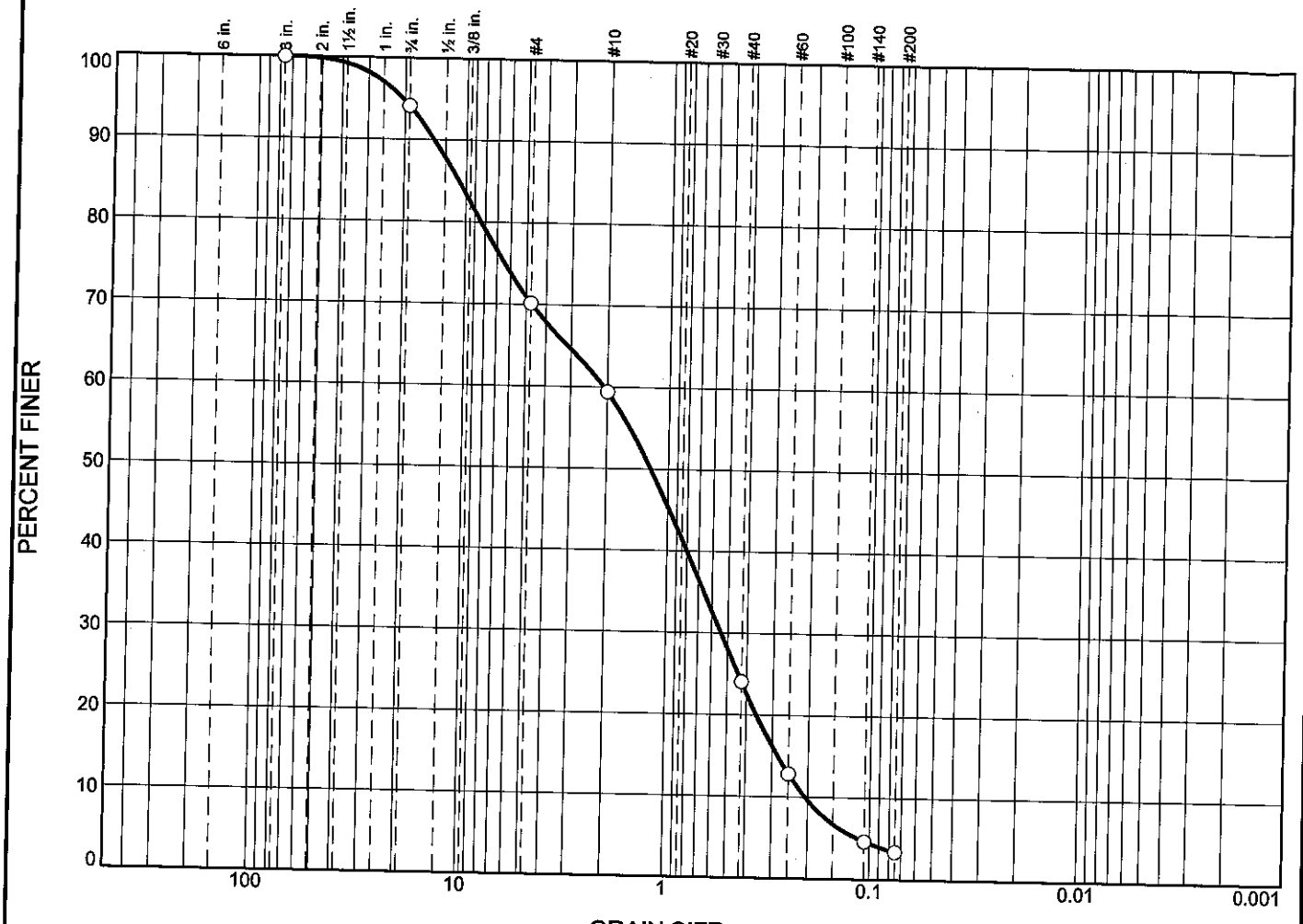
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	20.3	13.3	33.6	7.3	24.9	29.2	61.4			5.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.1257	0.1715	0.2216	0.3501	0.9938	2.1850	19.4541	28.3730	40.0078	55.4284

Fineness Modulus	C_u	C_c
3.99	17.39	0.45

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	5.9	24.0	10.7	35.3	20.7	3.4	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			10.8828	2.0799	1.2192	0.5398	0.2819	0.2063	0.68	10.08

	Material Description	USCS	AASHTO
○		SP	

Project No. **Client:**
Project:

○ **Source of Sample:** SC-03-S2 **Sample Number:** L1501520-02

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/26/2015

Location: SC-03-S2
Sample Number: L1501520-02
USCS Classification: SP

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 209.19
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
209.19	0.00	3	0.00	0.00	100.0
		0.75	12.27	0.00	94.1
		#4	50.22	0.00	70.1
		#10	22.41	0.00	59.4
		#40	73.93	0.00	24.1
		#60	23.50	0.00	12.8
		#140	17.13	0.00	4.7
		#200	2.61	0.00	3.4

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	5.9	24.0	29.9	10.7	35.3	20.7	66.7			3.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.2063	0.2819	0.3574	0.5398	1.2192	2.0799	8.3816	10.8828	14.3919	20.4875

Fineness Modulus	C_u	C_c
3.87	10.08	0.68

Table II-1: Completeness Checklist

Quality Assurance/Quality Control Questions	Yes/No? Comments?
1. Was the report signed by the responsible applicant approved representative?	Yes
2. Were the methods for sampling, chemical and biological testing described in the Sampling and Analysis Plan (SAP) and the Laboratory QA Plan (LQAP) followed?	Yes
3. If not, were deviations documented?	
4. Was the SAP approved by the New England District?	
5. Did the applicant use a laboratory with a LQAP on file at the New England District?	Yes
6. Did the samples adequately represent the physical/chemical variability in the dredging area?	
7. Were the correct stations sampled (include the precision of the navigation method used)?	
8. Were the preservation and storage requirements in Chapter 8 of the EPA/Corps QA/QC Manual (EPA/USACE 1995) and EPA (2001d) followed?	Yes
9. Were the samples properly labeled?	Yes
10. Were all the requested data included?	Yes
11. Were the reporting limits met?	Yes
12. Were the chain-of-custody forms properly processed?	Yes
13. Were the method blanks run and were the concentration below the acceptance criteria?	Yes
14. Was the MDL study performed on each matrix (with this data submission) or within the last 12 months?	Yes
15. Were the SRM/CRM analyses within acceptance criteria?	No – See narrative
16. Were the matrix spike/matrix spike duplicates run at the required frequency and was the percent recovery/RPD within the acceptance criteria?	No – See narrative
17. Were the duplicate samples analyzed and were the RPDs within the required acceptance criteria?	No – See narrative
18. For each analytical fraction of organic compounds, were recoveries for the internal standard within the acceptance criteria?	Yes
19. Were surrogate recoveries within the required acceptance criteria?	No - See Narrative

Table II-1 (*Continued*): Completeness Checklist

Quality Assurance/Quality Control Questions	Yes/No? Comments?
20. Were corrective action forms provided for all non-conforming data?	
21. Were all the species-specific test conditions in Appendix V met?	
22. Were the test-specific age requirements met for each test species?	
23. Was the bulk physical/chemical testing performed on the sediments/composites that were biologically tested?	
24. Were the mortality acceptance criteria met for the water column and sediment toxicity tests?	
25. Were the test performance requirements in Table 11.3 of EPA (1994a) met?	

Table II-2: Quality Control Summary for Analyses of Polyaromatic Hydrocarbons (PAHs) and other base-neutrals in Sediment and Tissue Matrices

Method Reference Number: 8270C

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Initial Calibration	Must be performed prior to the analysis of any QC sample or field sample (<20 % RSD for each compound)	Yes		Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)	Yes		Retained at Lab and On file at USACoE-NED
Calibration Verification (Second Source)	Once, after initial calibration (80 to 120% recovery of each compound)	Yes		Retained at Lab
Continuing Calibration	At the beginning of every 12 hour shift (± 15 % D)	Yes		Retained at Lab
Standard Reference Materials	Within the limits provided by vendor	Yes	In house limits	In Data Package
Method Blank	No target analytes > RL	Yes		In Data Package
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One set (MS/MSD) per group of field samples. Must contain all target analytes. (Recovery Limits 50 to 120%; RPD <30%)	No	MS: phenanthrene (141%), fluoranthene (274%), pyrene (208%), benz(a)anthracene (151%), chrysene (134%), benzo(b)fluoranthene (148%), benzo(a)pyrene (126%) MSD: phenanthrene (183%), fluoranthene (373%), pyrene (368%), benz(a)anthracene (206%), chrysene (211%), benzo(b)fluoranthene (214%), benzo(a)pyrene (126%), indeno(1,2,3-cd)pyrene (121%) %RPD: (31%), chrysene (32%)	In Data Package
Analytical Replicates	Analyze one sample in	NO	naphthalene (145%), acenaphthylene	In Data Package

	duplicate for each group of field samples (RPD < 30%)		(88%), acenaphthene (123%), fluorene (119%), phenanthrene (113%), anthracene (99%), fluoranthene (97%), pyrene (86%), benz(a)anthracene (143%), chrysene (121%), benzo(b)fluoranthene (150%), benzo(k)fluoranthene (132%), benzo(a)pyrene (144%), indeno(1,2,3-cd)pyrene (142%), dibenz(a,h)anthracene (131%), benzo(ghi)perylene (138%)	
Surrogate Recoveries	Calculate % recovery (30 to 150% recovery)	Yes		In Data Package
Internal Standard Areas	Within 50 to 200% of internal standards in continuing calibration check	Yes		Retained at Lab

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-3: Quality Control Summary for the Analyses of Pesticides in Sediment, Tissue, and Water Matrices

Method Reference Number: 8081B

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Initial Calibration	Must be performed prior to the analysis of any QC sample or field sample (<20 % RSD for each compound)	No	4,4'-DDT-Quadratic Fit-column A	Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)	Yes		Retained at Lab and On file at USACoE-NED
Calibration Verification (Second Source)	Once, after initial calibration (80 to 120% recovery of each compound)	Yes		Retained at Lab
Continuing Calibration	Every 20 injections (± 15 % D)	Yes		Retained at Lab
Standard Reference Materials	Within the limits provided by vendor	No	Transnonachlor-478% Column A	In Data Package
Method Blank	No target analytes > RL	Yes		In Data Package
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One set (MS/MSD) per group of field samples. Must contain all target analytes. (Recovery Limits 50 to 120%; RPD <30%)	Yes		In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)	No	4,4'DDD -45% Column A 4,4'DDE - NC Column A 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.	In Data Package
Surrogate Recoveries	Calculate % recovery (30 to 150% recovery)	No	WG760459-4: SRM: BZ 198: 316% - Column B	In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-4: Quality Control Summary for Analyses of Polychlorinated Biphenyls (PCB Congeners) in Sediment, Tissue, and Water Matrices

Method Reference Number: 8270C

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Initial Calibration	Must be performed prior to the analysis of any QC sample or field sample (<20 % RSD for each compound)	Yes		Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)	Yes		Retained at Lab and On file at USACoE-NED
Calibration Verification (Second Source)	Once, after initial calibration (80 to 120% recovery of each compound)	Yes		Retained at Lab
Continuing Calibration	Every 20 injections (± 15 % D)	Yes		Retained at Lab
Standard Reference Materials	Within the limits provided by vendor	Yes		In Data Package
Method Blank	No target analytes > RL	Yes		In Data Package
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One set (MS/MSD) per group of field samples. Must contain all target analytes. (Recovery Limits 50 to 120%; RPD <30%)	No	MS: cl4-bz#52 (22%), cl5-bz#87 (36%), cl5-bz#101 (0%), cl5-bz#118 (45%) MSD: cl4-bz#52 (32%), cl5-bz#87 (42%), cl5-bz#101 (0%)	In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)	No	, cl3-bz#18 (65%), cl3-bz#28 (57%), cl4-bz#44 (111%), cl4-bz#49 (81%), cl4-bz#52 (116%), cl4-bz#66 (88%), cl5-bz#87 (99%), cl5-bz#101 (100%), cl5-bz#105 (38%), cl5-bz#118 (46%), cl6-bz#128 (66%), cl6-bz#138 (40%), cl6-bz#153 (42%), cl7-bz#170 (95%), cl7-bz#180 (87%), cl7-bz#183 (78%), cl7-bz#187 (57%), cl9-bz#206 (101%), cl10-	In Data Package

			bz#209 (187%).	
Surrogate Recoveries	Calculate % recovery (30 to 150% recovery)	Yes		In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-5: Quality Control Summary for Analyses of Metals in Sediments, Tissue, and Water Matrices

Method Reference Numbers: Various Reference Numbers

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Linear Range Determination for ICP	Performed Quarterly	Yes		Retained at Lab
Initial Calibration for AA, Hg	Performed Daily (Correlation Coefficient ≥0.995)	Yes		Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)	Yes		Retained at Lab and On file at USACoE-NED
Initial Calibration Verification/ Continuing Calibration Verification	Hg: 80 to 120% recovery Other metals: 90 to 110% recovery	Yes		Retained at Lab
Initial Calibration Blank/ Continuing Calibration Blank	No target analytes > Instrument Detection Limit (IDL)	No	Results >3x IDL noted, on file at lab	Retained at Lab
Standard Reference Materials	Within the limits provided by vendor	Yes		In Data Package
Method Blank	No target analytes > RL	Yes		In Data Package
Sample Spike/ Sample Duplicate	One set per group of field samples. Must contain all target analytes. Recovery Limits (75 to 125%; RPD < 20% or < 35%)	No	MS – Cr 130%; Cu 515%; Pb 68%; Ni 562%; Zn 524% MSD - Cr 71%; Cu 0%; Pb 219%; Ni 55%; Zn 62% RPD - Cr 37%; Cu 120%; Pb 59%; Ni 135%; Zn 41%	In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)	No	Hg 61%; As 30%; Cu 97%; Pb 34%; Ni 62%	In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-6: Quality Control Summary for Analyses of other Organic Chemicals not listed in Sediment, Tissue, and Water Matrices

Method Reference Numbers:

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Initial Calibration	Must be performed prior to the analysis of any QC sample or field sample (<20 % RSD for each compound)			Retained at Lab
Calculation of Method Detection Limits (MDLs)	For each matrix, analyzed once per 12 month period (see Section 5.2 for MDL procedure)			In Data Package
Calibration Verification (Second Source)	Once, after initial calibration (80 to 120% recovery of each compound)			Retained at Lab
Continuing Calibration	At the beginning of every 12 hour shift (± 15 % D)			Retained at Lab
Standard Reference Materials	Within the limits provided by vendor			In Data Package
Method Blank	No target analytes > RL			In Data Package
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One set (MS/MSD) per group of field samples. Must contain all target analytes. (Recovery Limits 50 to 120%; RPD <30%)			In Data Package
Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 30%)			In Data Package
Surrogate Recoveries	Calculate % recovery (30 to 150% recovery)			In Data Package
Internal Standard Areas (if applicable)	Within 50 to 200% of internal standards in continuing calibration check			In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-7: Quality Control Summary for Analyses of Sediment Grain Size and Total Organic Carbon

Method Reference Numbers:

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Grain Size: Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD < 25%)	No	% Total Gravel = 102% % Fine Sand = 36% % Total Fines = 45%	In Data Package
Total Organic Carbon: Standard Reference Materials	Within the limits provided by vendor	Yes		In Data Package
Total Organic Carbon: Analytical Replicates	Analyze one sample in duplicate for each group of field samples (RPD <30%)	No	Rep1 @ 30%	In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Table II-8: Quality Control Summary for Biological Toxicity Testing only

Method Reference Numbers:

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? Yes/No	List results outside criteria (Cross-reference results table in data report)	Location of Results (Retained at Lab or in Data Package)
Test condition requirements for each species: Temperature, Salinity, pH, D.O., Ammonia (Total, Un-ionized)	Test conditions within the requirements specified for each species			In Data Package
Test species age	Age/health within guidelines for each species (Appendix V)			In Data Package
Bulk physical/chemical analyses (If required by the Sampling plan)	Required? If so, performed? Yes or No			In Data Package
Water column toxicity test: Control mortality Control abnormality	 < 10% mean < 30% mussel/oyster; < 40% clam larvae, < 30% sea urchin larvae			In Data Package
Sediment toxicity test: Control mortality Compliance with applicable test acceptability requirements in Table 11.3 (EPA 1994a)	 < 10% mean (no chamber >20%) See EPA (1994a) Section 9; Table 11.3			In Data Package

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Reference:

Regional Implementation Manual for the Evaluation of Dredged Material Proposed for Disposal in New England Waters, U.S. EPA and U.S. Army Corps of Engineers, New England District, April 2004.

Certification Information

Last revised December 16, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA 2540D: TSS
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F,**
EPA 353.2: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE ____ OF ____

Date Rec'd In Lab:

ALPHA Job #: L1501520

8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300

Client Information

Client: ESS Group, Inc.
Address: 100 Fifth Avenue
5th Floor, Waltham, MA
Phone: 781-419-7732
Email: SHerz@essgroup.com

Project Information

Project Name: PNSY
Project Location: Kittery, Maine
Project #: N492-000
Project Manager: Susan Herz
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due:

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Additional Project Information:

1. Grain size per ASTM D422
2. Total solids and moisture content SM2540G
3. Total Organic Carbons EPA SW-846 method 9060

ANALYSIS: VOC: ☐ 8260 ☐ 624 ☐ 524.2; SVOC: ☐ ABN ☒ PAH; METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15; METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13; EPH: ☐ Ranges & Targets ☐ Ranges Only; VPH: ☐ Ranges & Targets ☐ Ranges Only; ☒ PCB ☒ PEST; TPH: ☐ Quant Only ☐ Fingerprint; Grain size; Total solids + moisture content; Total Organic Carbons

SAMPLE INFO: Filtration ☐ Field ☐ Lab to do; Preservation ☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC	SVOC	METALS	METALS	EPH	VPH	PCB	TPH	Grain size	Total solids + moisture content	Total Organic Carbons				Sample Comments	TOTAL # BOTTLES
1	SC-03-S1	1/21/15	1100	Soil	MJD		X		X			X		X	X	X					2
2	SC-03-S2	1/21/15	1200	Soil	MJD		X		X			X		X	X	X					2

SEDIMENT SAMPLING
OVER WATER
ENVIRONMENTAL COC

TO MANSFIELD

4 TOTAL

Container Type																			
Preservative																			

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
Matt Dodson H+A	1/22/15 1500	[illegible] H+A	1/22/15 1500
Redmond Crafford H+A	1/22/15 1630	[illegible] AAC	1/22/15 16:30
[illegible] AAC	1/22/15 17:15	[illegible]	1/22/15 17:15
[illegible]	1/23/15 0100	Mansfield Co	1/23/15 0100

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

ANALYTICAL REPORT

Lab Number:	L1519473
Client:	ESS Group, Inc. 100 Fifth Avenue 5th Floor Waltham, MA 02451
ATTN:	Stephanie Wilson
Phone:	(781) 419-7710
Project Name:	PNSY
Project Number:	N492-003
Report Date:	09/02/15

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), ME (MA00030), PA (68-02089), VA (460194), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), USFWS (Permit #LE2069641), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

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

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1519473-01	SC-08	SEDIMENT	KITTERY, ME	08/12/15 15:15	08/13/15
L1519473-02	SC-09	SEDIMENT	KITTERY, ME	08/12/15 14:45	08/13/15
L1519473-03	SC-10-S1	SEDIMENT	KITTERY, ME	08/12/15 14:23	08/13/15
L1519473-04	SC-11	SEDIMENT	KITTERY, ME	08/12/15 13:50	08/13/15

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

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. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. 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. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: PNSY **Lab Number:** L1519473
Project Number: N492-003 **Report Date:** 09/02/15

Case Narrative (continued)

Report Submission

The Dioxin/Furan analysis was performed by SGS of Wilmington, NC. The SGS report is included as an addendum to the Alpha report.

Semivolatile Organics by SIM

Samples L1519473-01 and -04 were re-analyzed at dilution in order to quantify the samples within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

Metals

The WG814449-4 MS recovery for Lead (0%), performed on sample L1519473-01, does not apply because the sample concentration is greater than four times the spike amount added.

The WG814449-4 MS recovery, performed on sample L1519473-01, is outside of the acceptance criteria for Arsenic (61%) and Cadmium (62%); however, the associated LCS recovery is within overall method allowances. No further action was required.

The WG814454-4 MS recovery, performed on sample L1519473-01, is outside of the acceptance criteria for Mercury (172%); however, the associated LCS recovery is within criteria. No further action was taken.

The WG814454-3 Laboratory Duplicate RPD, performed on sample L1519473-01, is outside the acceptance criteria for Mercury (59%). The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

Chromium, Hexavalent

The WG817662-5 Insoluble MS recovery (0%), performed on sample L1519473-02, is below the acceptance criteria. The Soluble MS recovery (0%) was also below criteria. This has been attributed to matrix interference.

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

Case Narrative (continued)

A post-spike was performed with an acceptable recovery of 110%.

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: Elizabeth Porta

Title: Technical Director/Representative

Date: 09/02/15

ORGANICS

SEMIVOLATILES

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

SAMPLE RESULTS

Lab ID:	L1519473-01	Date Collected:	08/12/15 15:15
Client ID:	SC-08	Date Received:	08/13/15
Sample Location:	KITTERY, ME	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270D-SIM	Extraction Date:	08/20/15 14:20
Analytical Date:	08/25/15 20:50	Cleanup Method:	EPA 3630
Analyst:	JT	Cleanup Date:	08/21/15
Percent Solids:	70%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Mansfield Lab						
Naphthalene	61.5		ug/kg	5.68	--	1
Acenaphthylene	81.5		ug/kg	5.68	--	1
Acenaphthene	368.		ug/kg	5.68	--	1
Fluorene	610.		ug/kg	5.68	--	1
Phenanthrene	7090	E	ug/kg	5.68	--	1
Anthracene	893.		ug/kg	5.68	--	1
Fluoranthene	12600	E	ug/kg	5.68	--	1
Pyrene	9630	E	ug/kg	5.68	--	1
Benz(a)anthracene	3630		ug/kg	5.68	--	1
Chrysene	2920		ug/kg	5.68	--	1
Benzo(b)fluoranthene	1880		ug/kg	5.68	--	1
Benzo(k)fluoranthene	1540		ug/kg	5.68	--	1
Benzo(a)pyrene	1200		ug/kg	5.68	--	1
Indeno(1,2,3-cd)pyrene	577.		ug/kg	5.68	--	1
Dibenz(a,h)anthracene	136.		ug/kg	5.68	--	1
Benzo(g,h,i)perylene	420.		ug/kg	5.68	--	1
2-Methylnaphthalene	35.0		ug/kg	5.68	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	66		30-130
Pyrene-d10	90		30-130
Benzo(b)fluoranthene-d12	83		30-130

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

SAMPLE RESULTS

Lab ID:	L1519473-01	D	Date Collected:	08/12/15 15:15
Client ID:	SC-08		Date Received:	08/13/15
Sample Location:	KITTERY, ME		Field Prep:	Not Specified
Matrix:	Sediment		Extraction Method:	EPA 3570
Analytical Method:	1,8270D-SIM		Extraction Date:	08/20/15 14:20
Analytical Date:	08/26/15 14:24		Cleanup Method:	EPA 3630
Analyst:	JT		Cleanup Date:	08/21/15
Percent Solids:	70%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Mansfield Lab						
Phenanthrene	6290		ug/kg	56.8	--	10
Fluoranthene	11800		ug/kg	56.8	--	10
Pyrene	8840		ug/kg	56.8	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	63		30-130
Pyrene-d10	81		30-130
Benzo(b)fluoranthene-d12	79		30-130

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

SAMPLE RESULTS

Lab ID:	L1519473-02	Date Collected:	08/12/15 14:45
Client ID:	SC-09	Date Received:	08/13/15
Sample Location:	KITTERY, ME	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270D-SIM	Extraction Date:	08/20/15 14:20
Analytical Date:	08/26/15 14:54	Cleanup Method:	EPA 3630
Analyst:	JT	Cleanup Date:	08/21/15
Percent Solids:	60%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Mansfield Lab						
Naphthalene	79.0		ug/kg	6.22	--	1
Acenaphthylene	48.0		ug/kg	6.22	--	1
Acenaphthene	33.9		ug/kg	6.22	--	1
Fluorene	35.5		ug/kg	6.22	--	1
Phenanthrene	262.		ug/kg	6.22	--	1
Anthracene	109.		ug/kg	6.22	--	1
Fluoranthene	1330		ug/kg	6.22	--	1
Pyrene	2930		ug/kg	6.22	--	1
Benz(a)anthracene	571.		ug/kg	6.22	--	1
Chrysene	719.		ug/kg	6.22	--	1
Benzo(b)fluoranthene	477.		ug/kg	6.22	--	1
Benzo(k)fluoranthene	354.		ug/kg	6.22	--	1
Benzo(a)pyrene	316.		ug/kg	6.22	--	1
Indeno(1,2,3-cd)pyrene	212.		ug/kg	6.22	--	1
Dibenz(a,h)anthracene	50.4		ug/kg	6.22	--	1
Benzo(g,h,i)perylene	200.		ug/kg	6.22	--	1
2-Methylnaphthalene	20.0		ug/kg	6.22	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	72		30-130
Pyrene-d10	92		30-130
Benzo(b)fluoranthene-d12	86		30-130

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

SAMPLE RESULTS

Lab ID:	L1519473-03	Date Collected:	08/12/15 14:23
Client ID:	SC-10-S1	Date Received:	08/13/15
Sample Location:	KITTERY, ME	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270D-SIM	Extraction Date:	08/20/15 14:20
Analytical Date:	08/26/15 15:24	Cleanup Method:	EPA 3630
Analyst:	JT	Cleanup Date:	08/21/15
Percent Solids:	82%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Mansfield Lab						
Naphthalene	19.7		ug/kg	4.83	--	1
Acenaphthylene	136.		ug/kg	4.83	--	1
Acenaphthene	38.3		ug/kg	4.83	--	1
Fluorene	94.2		ug/kg	4.83	--	1
Phenanthrene	757.		ug/kg	4.83	--	1
Anthracene	271.		ug/kg	4.83	--	1
Fluoranthene	1440		ug/kg	4.83	--	1
Pyrene	1830		ug/kg	4.83	--	1
Benz(a)anthracene	640.		ug/kg	4.83	--	1
Chrysene	1030		ug/kg	4.83	--	1
Benzo(b)fluoranthene	520.		ug/kg	4.83	--	1
Benzo(k)fluoranthene	431.		ug/kg	4.83	--	1
Benzo(a)pyrene	484.		ug/kg	4.83	--	1
Indeno(1,2,3-cd)pyrene	327.		ug/kg	4.83	--	1
Dibenz(a,h)anthracene	70.8		ug/kg	4.83	--	1
Benzo(g,h,i)perylene	305.		ug/kg	4.83	--	1
2-Methylnaphthalene	15.8		ug/kg	4.83	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	68		30-130
Pyrene-d10	95		30-130
Benzo(b)fluoranthene-d12	87		30-130

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

SAMPLE RESULTS

Lab ID:	L1519473-04	Date Collected:	08/12/15 13:50
Client ID:	SC-11	Date Received:	08/13/15
Sample Location:	KITTERY, ME	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8270D-SIM	Extraction Date:	08/20/15 14:20
Analytical Date:	08/26/15 16:25	Cleanup Method:	EPA 3630
Analyst:	JT	Cleanup Date:	08/21/15
Percent Solids:	49%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Mansfield Lab						
Naphthalene	81.4		ug/kg	7.81	--	1
Acenaphthylene	137.		ug/kg	7.81	--	1
Acenaphthene	750.		ug/kg	7.81	--	1
Fluorene	347.		ug/kg	7.81	--	1
Phenanthrene	2040		ug/kg	7.81	--	1
Anthracene	669.		ug/kg	7.81	--	1
Fluoranthene	8480	E	ug/kg	7.81	--	1
Pyrene	4990		ug/kg	7.81	--	1
Benz(a)anthracene	1760		ug/kg	7.81	--	1
Chrysene	1780		ug/kg	7.81	--	1
Benzo(b)fluoranthene	1230		ug/kg	7.81	--	1
Benzo(k)fluoranthene	975.		ug/kg	7.81	--	1
Benzo(a)pyrene	1060		ug/kg	7.81	--	1
Indeno(1,2,3-cd)pyrene	572.		ug/kg	7.81	--	1
Dibenz(a,h)anthracene	126.		ug/kg	7.81	--	1
Benzo(g,h,i)perylene	460.		ug/kg	7.81	--	1
2-Methylnaphthalene	65.1		ug/kg	7.81	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	74		30-130
Pyrene-d10	93		30-130
Benzo(b)fluoranthene-d12	88		30-130

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

SAMPLE RESULTS

Lab ID:	L1519473-04	D	Date Collected:	08/12/15 13:50
Client ID:	SC-11		Date Received:	08/13/15
Sample Location:	KITTERY, ME		Field Prep:	Not Specified
Matrix:	Sediment		Extraction Method:	EPA 3570
Analytical Method:	1,8270D-SIM		Extraction Date:	08/20/15 14:20
Analytical Date:	08/26/15 15:54		Cleanup Method:	EPA 3630
Analyst:	JT		Cleanup Date:	08/21/15
Percent Solids:	49%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Mansfield Lab						
Fluoranthene	7380		ug/kg	15.6	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	70		30-130
Pyrene-d10	83		30-130
Benzo(b)fluoranthene-d12	82		30-130

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 08/25/15 19:19
Analyst: JT

Extraction Method: EPA 3570
Extraction Date: 08/20/15 14:20
Cleanup Method: EPA 3630
Cleanup Date: 08/21/15

Parameter	Result	Qualifier	Units	RL	MDL
PAHs by GC/MS-SIM - Mansfield Lab for sample(s): 01-04 Batch: WG813975-1					
Naphthalene	ND		ug/kg	4.00	--
Acenaphthylene	ND		ug/kg	4.00	--
Acenaphthene	ND		ug/kg	4.00	--
Fluorene	ND		ug/kg	4.00	--
Phenanthrene	ND		ug/kg	4.00	--
Anthracene	ND		ug/kg	4.00	--
Fluoranthene	ND		ug/kg	4.00	--
Pyrene	ND		ug/kg	4.00	--
Benz(a)anthracene	ND		ug/kg	4.00	--
Chrysene	ND		ug/kg	4.00	--
Benzo(b)fluoranthene	ND		ug/kg	4.00	--
Benzo(k)fluoranthene	ND		ug/kg	4.00	--
Benzo(a)pyrene	ND		ug/kg	4.00	--
Indeno(1,2,3-cd)pyrene	ND		ug/kg	4.00	--
Dibenz(a,h)anthracene	ND		ug/kg	4.00	--
Benzo(g,h,i)perylene	ND		ug/kg	4.00	--
2-Methylnaphthalene	ND		ug/kg	4.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	78		30-130
Pyrene-d10	96		30-130
Benzo(b)fluoranthene-d12	100		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

PAHs by GC/MS-SIM - Mansfield Lab Associated sample(s): 01-04 Batch: WG813975-2 WG813975-3

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Naphthalene	68		70		40-140	3		30
Acenaphthylene	76		74		40-140	3		30
Acenaphthene	75		72		40-140	4		30
Fluorene	82		79		40-140	4		30
Phenanthrene	88		82		40-140	7		30
Anthracene	88		86		40-140	2		30
Fluoranthene	94		89		40-140	5		30
Pyrene	88		85		40-140	3		30
Benz(a)anthracene	94		90		40-140	4		30
Chrysene	92		88		40-140	4		30
Benzo(b)fluoranthene	96		92		40-140	4		30
Benzo(k)fluoranthene	106		100		40-140	6		30
Benzo(e)Pyrene	102		98		40-140	4		30
Benzo(a)pyrene	96		92		40-140	4		30
Indeno(1,2,3-cd)pyrene	100		96		40-140	4		30
Dibenz(a,h)anthracene	96		92		40-140	4		30
Benzo(g,h,i)perylene	95		91		40-140	4		30
2-Methylnaphthalene	73		74		40-140	1		30
1-Methylnaphthalene	73		73		40-140	0		30
Dibenzothiophene	84		80		40-140	5		30
2-Chloronaphthalene	70		69		40-140	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: PNSY

Project Number: N492-003

Lab Number: L1519473

Report Date: 09/02/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs by GC/MS-SIM - Mansfield Lab Associated sample(s): 01-04 Batch: WG813975-2 WG813975-3								
Biphenyl	72		71		40-140	1		30
2,6-Dimethylnaphthalene	74		72		40-140	3		30
1-Methylphenanthrene	93		89		40-140	4		30
Perylene	92		89		40-140	3		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Methylnaphthalene-d10	72		77		30-130
Pyrene-d10	93		96		30-130
Benzo(b)fluoranthene-d12	100		100		30-130

PCBS

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

SAMPLE RESULTS

Lab ID:	L1519473-01	Date Collected:	08/12/15 15:15
Client ID:	SC-08	Date Received:	08/13/15
Sample Location:	KITTERY, ME	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082A	Extraction Date:	08/20/15 14:20
Analytical Date:	08/21/15 15:58	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	08/21/15
Percent Solids:	70%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Mansfield Lab							
Aroclor 1016	ND		ug/kg	11.4	--	1	A
Aroclor 1221	ND		ug/kg	11.4	--	1	A
Aroclor 1232	ND		ug/kg	11.4	--	1	A
Aroclor 1242	ND		ug/kg	11.4	--	1	A
Aroclor 1248	ND		ug/kg	11.4	--	1	A
Aroclor 1254	92.6		ug/kg	11.4	--	1	A
Aroclor 1260	88.2		ug/kg	11.4	--	1	A
Aroclor 1262	ND		ug/kg	11.4	--	1	A
Aroclor 1268	ND		ug/kg	11.4	--	1	A
PCBs, Total	181.		ug/kg	11.4	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
Tetrachloro-meta-Xylene	76		30-150	A
DCB - Surrogate	78		30-150	A
Tetrachloro-meta-Xylene	72		30-150	B
DCB - Surrogate	73		30-150	B

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

SAMPLE RESULTS

Lab ID:	L1519473-02	Date Collected:	08/12/15 14:45
Client ID:	SC-09	Date Received:	08/13/15
Sample Location:	KITTERY, ME	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082A	Extraction Date:	08/20/15 14:20
Analytical Date:	08/27/15 13:13	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	08/21/15
Percent Solids:	60%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Mansfield Lab							
Aroclor 1016	ND		ug/kg	12.5	--	1	A
Aroclor 1221	ND		ug/kg	12.5	--	1	A
Aroclor 1232	ND		ug/kg	12.5	--	1	A
Aroclor 1242	ND		ug/kg	12.5	--	1	A
Aroclor 1248	ND		ug/kg	12.5	--	1	A
Aroclor 1254	124.		ug/kg	12.5	--	1	A
Aroclor 1260	84.2		ug/kg	12.5	--	1	A
Aroclor 1262	ND		ug/kg	12.5	--	1	A
Aroclor 1268	ND		ug/kg	12.5	--	1	A
PCBs, Total	208.		ug/kg	12.5	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
Tetrachloro-meta-Xylene	72		30-150	A
DCB - Surrogate	77		30-150	A
Tetrachloro-meta-Xylene	71		30-150	B
DCB - Surrogate	73		30-150	B

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

SAMPLE RESULTS

Lab ID:	L1519473-03	Date Collected:	08/12/15 14:23
Client ID:	SC-10-S1	Date Received:	08/13/15
Sample Location:	KITTERY, ME	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082A	Extraction Date:	08/20/15 14:20
Analytical Date:	08/27/15 13:46	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	08/21/15
Percent Solids:	82%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Mansfield Lab							
Aroclor 1016	ND		ug/kg	9.69	--	1	A
Aroclor 1221	ND		ug/kg	9.69	--	1	A
Aroclor 1232	ND		ug/kg	9.69	--	1	A
Aroclor 1242	ND		ug/kg	9.69	--	1	A
Aroclor 1248	ND		ug/kg	9.69	--	1	A
Aroclor 1254	38.8		ug/kg	9.69	--	1	A
Aroclor 1260	25.4		ug/kg	9.69	--	1	B
Aroclor 1262	ND		ug/kg	9.69	--	1	A
Aroclor 1268	ND		ug/kg	9.69	--	1	A
PCBs, Total	64.2		ug/kg	9.69	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
Tetrachloro-meta-Xylene	71		30-150	A
DCB - Surrogate	70		30-150	A
Tetrachloro-meta-Xylene	70		30-150	B
DCB - Surrogate	66		30-150	B

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

SAMPLE RESULTS

Lab ID:	L1519473-04	Date Collected:	08/12/15 13:50
Client ID:	SC-11	Date Received:	08/13/15
Sample Location:	KITTERY, ME	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082A	Extraction Date:	08/20/15 14:20
Analytical Date:	08/27/15 14:19	Cleanup Method:	EPA 3630
Analyst:	SF	Cleanup Date:	08/21/15
Percent Solids:	49%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Mansfield Lab							
Aroclor 1016	ND		ug/kg	15.3	--	1	A
Aroclor 1221	ND		ug/kg	15.3	--	1	A
Aroclor 1232	ND		ug/kg	15.3	--	1	A
Aroclor 1242	ND		ug/kg	15.3	--	1	A
Aroclor 1248	ND		ug/kg	15.3	--	1	A
Aroclor 1254	93.0		ug/kg	15.3	--	1	B
Aroclor 1260	82.5		ug/kg	15.3	--	1	B
Aroclor 1262	ND		ug/kg	15.3	--	1	A
Aroclor 1268	ND		ug/kg	15.3	--	1	A
PCBs, Total	176.		ug/kg	15.3	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
Tetrachloro-meta-Xylene	72		30-150	A
DCB - Surrogate	71		30-150	A
Tetrachloro-meta-Xylene	71		30-150	B
DCB - Surrogate	67		30-150	B

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 08/21/15 14:20
Analyst: SF

Extraction Method: EPA 3570
Extraction Date: 08/20/15 14:20
Cleanup Method: EPA 3630
Cleanup Date: 08/21/15

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Mansfield Lab for sample(s): 01-04 Batch: WG813976-1						
Aroclor 1016	ND		ug/kg	8.00	--	A
Aroclor 1221	ND		ug/kg	8.00	--	A
Aroclor 1232	ND		ug/kg	8.00	--	A
Aroclor 1242	ND		ug/kg	8.00	--	A
Aroclor 1248	ND		ug/kg	8.00	--	A
Aroclor 1254	ND		ug/kg	8.00	--	A
Aroclor 1260	ND		ug/kg	8.00	--	A
Aroclor 1262	ND		ug/kg	8.00	--	A
Aroclor 1268	ND		ug/kg	8.00	--	A
PCBs, Total	ND		ug/kg	8.00	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
Tetrachloro-meta-Xylene	78		30-150	A
DCB - Surrogate	72		30-150	A
Tetrachloro-meta-Xylene	79		30-150	B
DCB - Surrogate	72		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Mansfield Lab Associated sample(s): 01-04 Batch: WG813976-2 WG813976-3									
Aroclor 1016	69		72		40-140	4		50	A
Aroclor 1260	74		80		40-140	8		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
Tetrachloro-meta-Xylene	83		84		30-150	A
DCB - Surrogate	81		86		30-150	A
Tetrachloro-meta-Xylene	85		84		30-150	B
DCB - Surrogate	80		82		30-150	B

METALS

Project Name:	PNSY	**Lab Number:**	L1519473
Project Number:	N492-003	**Report Date:**	09/02/15

SAMPLE RESULTS

Lab ID:	L1519473-01	Date Collected:	08/12/15 15:15
Client ID:	SC-08	Date Received:	08/13/15
Sample Location:	KITTERY, ME	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	70%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	7.07		mg/kg	0.216	--	10	08/21/15 13:56	08/31/15 12:11	EPA 3050B	1,6020A	DB
Cadmium, Total	2.87		mg/kg	0.432	--	50	08/21/15 13:56	08/31/15 12:26	EPA 3050B	1,6020A	DB
Chromium, Total	203		mg/kg	0.864	--	10	08/21/15 13:56	08/31/15 12:11	EPA 3050B	1,6020A	DB
Lead, Total	7050		mg/kg	1.30	--	50	08/21/15 13:56	08/31/15 12:26	EPA 3050B	1,6020A	DB
Mercury, Total	0.327		mg/kg	0.087	--	25	08/21/15 14:28	09/01/15 12:05	EPA 7474	1,7474	LC

Project Name:	PNSY	**Lab Number:**	L1519473
Project Number:	N492-003	**Report Date:**	09/02/15

SAMPLE RESULTS

Lab ID:	L1519473-02	Date Collected:	08/12/15 14:45
Client ID:	SC-09	Date Received:	08/13/15
Sample Location:	KITTERY, ME	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	60%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	43.7		mg/kg	0.232	--	10	08/21/15 13:56	08/31/15 12:17	EPA 3050B	1,6020A	DB
Cadmium, Total	1.42		mg/kg	0.464	--	50	08/21/15 13:56	08/31/15 12:30	EPA 3050B	1,6020A	DB
Chromium, Total	310		mg/kg	0.928	--	10	08/21/15 13:56	08/31/15 12:17	EPA 3050B	1,6020A	DB
Lead, Total	5290		mg/kg	1.39	--	50	08/21/15 13:56	08/31/15 12:30	EPA 3050B	1,6020A	DB
Mercury, Total	0.796		mg/kg	0.104	--	25	08/21/15 14:28	09/01/15 12:15	EPA 7474	1,7474	LC

Project Name:	PNSY	**Lab Number:**	L1519473
Project Number:	N492-003	**Report Date:**	09/02/15

SAMPLE RESULTS

Lab ID:	L1519473-03	Date Collected:	08/12/15 14:23
Client ID:	SC-10-S1	Date Received:	08/13/15
Sample Location:	KITTERY, ME	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	82%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	52.0		mg/kg	0.166	--	10	08/21/15 13:56	08/31/15 12:19	EPA 3050B	1,6020A	DB
Cadmium, Total	1.23		mg/kg	0.333	--	50	08/21/15 13:56	08/31/15 12:31	EPA 3050B	1,6020A	DB
Chromium, Total	321		mg/kg	0.665	--	10	08/21/15 13:56	08/31/15 12:19	EPA 3050B	1,6020A	DB
Lead, Total	5210		mg/kg	0.998	--	50	08/21/15 13:56	08/31/15 12:31	EPA 3050B	1,6020A	DB
Mercury, Total	1.00		mg/kg	0.081	--	25	08/21/15 14:28	09/01/15 12:18	EPA 7474	1,7474	LC

Project Name:	PNSY	**Lab Number:**	L1519473
Project Number:	N492-003	**Report Date:**	09/02/15

SAMPLE RESULTS

Lab ID:	L1519473-04	Date Collected:	08/12/15 13:50
Client ID:	SC-11	Date Received:	08/13/15
Sample Location:	KITTERY, ME	Field Prep:	Not Specified
Matrix:	Sediment		
Percent Solids:	49%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	14.8		mg/kg	0.052	--	2	08/21/15 13:56	08/31/15 11:59	EPA 3050B	1,6020A	DB
Cadmium, Total	1.03		mg/kg	0.021	--	2	08/21/15 13:56	08/31/15 11:59	EPA 3050B	1,6020A	DB
Chromium, Total	225		mg/kg	0.206	--	2	08/21/15 13:56	08/31/15 11:59	EPA 3050B	1,6020A	DB
Lead, Total	338		mg/kg	0.062	--	2	08/21/15 13:56	08/31/15 11:59	EPA 3050B	1,6020A	DB
Mercury, Total	0.596		mg/kg	0.118	--	25	08/21/15 14:28	09/01/15 12:20	EPA 7474	1,7474	LC

Project Name: PNSY **Lab Number:** L1519473

Project Number: N492-003 **Report Date:** 09/02/15

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG814449-1										
Arsenic, Total	ND		mg/kg	0.050	--	2	08/21/15 13:56	08/31/15 11:49	1,6020A	DB
Cadmium, Total	ND		mg/kg	0.020	--	2	08/21/15 13:56	08/31/15 11:49	1,6020A	DB
Chromium, Total	ND		mg/kg	0.200	--	2	08/21/15 13:56	08/31/15 11:49	1,6020A	DB
Lead, Total	ND		mg/kg	0.060	--	2	08/21/15 13:56	08/31/15 11:49	1,6020A	DB

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG814454-1										
Mercury, Total	ND		mg/kg	0.013	--	5	08/21/15 14:28	09/01/15 12:00	1,7474	LC

Prep Information

Digestion Method: EPA 7474

Lab Control Sample Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG814449-2 SRM Lot Number: A2METSPIKE								
Arsenic, Total	90		-		75-125	-		20
Cadmium, Total	92		-		75-125	-		20
Chromium, Total	82		-		75-125	-		20
Lead, Total	94		-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG814454-2 SRM Lot Number: HPHGAF								
Mercury, Total	88		-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG814449-4 QC Sample: L1519473-01 Client ID: SC-08												
Arsenic, Total	7.07	180	117	**61**	Q	-	-		75-125	-		20
Cadmium, Total	2.87	90.2	56.2	**62**	Q	-	-		75-125	-		20
Chromium, Total	203	180	411	115		-	-		75-125	-		20
Lead, Total	7050	180	6260	**0**	Q	-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG814454-4 QC Sample: L1519473-01 Client ID: SC-08												
Mercury, Total	0.327	0.915	1.90	**172**	Q	-	-		80-120	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG814449-3 QC Sample: L1519473-01 Client ID: SC-08						
Arsenic, Total	7.07	7.88	mg/kg	11		20
Chromium, Total	203	170	mg/kg	18		20
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG814449-3 QC Sample: L1519473-01 Client ID: SC-08						
Cadmium, Total	2.87	3.20	mg/kg	11		20
Lead, Total	7050	6960	mg/kg	1		20
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG814454-3 QC Sample: L1519473-01 Client ID: SC-08						
Mercury, Total	0.327	0.598	mg/kg	**59**	Q	20

INORGANICS
&
MISCELLANEOUS

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

SAMPLE RESULTS

Lab ID: L1519473-01
Client ID: SC-08
Sample Location: KITTERY, ME
Matrix: Sediment

Date Collected: 08/12/15 15:15
Date Received: 08/13/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Hexavalent	ND		mg/kg	1.1	--	1	09/01/15 18:35	09/02/15 00:19	1,7196A	RP
General Chemistry - Mansfield Lab										
Solids, Total	69.7		%	0.100	--	1	-	08/21/15 11:51	30,2540G	JN

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

SAMPLE RESULTS

Lab ID: L1519473-02
Client ID: SC-09
Sample Location: KITTERY, ME
Matrix: Sediment

Date Collected: 08/12/15 14:45
Date Received: 08/13/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Hexavalent	ND		mg/kg	1.3	--	1	09/01/15 18:35	09/02/15 00:31	1,7196A	RP
General Chemistry - Mansfield Lab										
Solids, Total	60.2		%	0.100	--	1	-	08/21/15 11:51	30,2540G	JN

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

SAMPLE RESULTS

Lab ID: L1519473-03
Client ID: SC-10-S1
Sample Location: KITTERY, ME
Matrix: Sediment

Date Collected: 08/12/15 14:23
Date Received: 08/13/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Hexavalent	ND		mg/kg	0.98	--	1	09/01/15 18:35	09/02/15 00:20	1,7196A	RP
General Chemistry - Mansfield Lab										
Solids, Total	81.7		%	0.100	--	1	-	08/21/15 11:51	30,2540G	JN

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

SAMPLE RESULTS

Lab ID: L1519473-04
Client ID: SC-11
Sample Location: KITTERY, ME
Matrix: Sediment

Date Collected: 08/12/15 13:50
Date Received: 08/13/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Hexavalent	ND		mg/kg	1.6	--	1	09/01/15 18:35	09/02/15 00:21	1,7196A	RP
General Chemistry - Mansfield Lab										
Solids, Total	49.0		%	0.100	--	1	-	08/21/15 11:51	30,2540G	JN

Project Name: PNSY **Lab Number:** L1519473

Project Number: N492-003 **Report Date:** 09/02/15

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG817662-1										
Chromium, Hexavalent	ND		mg/kg	0.80	--	1	09/01/15 18:35	09/02/15 00:18	1,7196A	RP

Lab Control Sample Analysis

Batch Quality Control

Project Name: PNSY

Project Number: N492-003

Lab Number: L1519473

Report Date: 09/02/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG817662-2								
Chromium, Hexavalent	62		-		49-150	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG817662-5 QC Sample: L1519473-02 Client ID: SC-09												
Chromium, Hexavalent	ND	1880	ND	**0**	Q	-	-		75-125	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG814345-1 QC Sample: L1519473-01 Client ID: SC-08						
Solids, Total	69.7	70.0	%	0		10
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG817662-4 QC Sample: L1519473-02 Client ID: SC-09						
Chromium, Hexavalent	ND	ND	mg/kg	NC		20

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1519473-01A	Glass 500ml/16oz unpreserved	A	N/A	2.4	Y	Absent	A2-PB-6020T(180),A2-HG-7474T(28),A2-PCB-8082(14),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-PAH-8270SIM(14),A2-CD-6020T(180),HOLD-METAL(180)
L1519473-01B	Glass 250ml/8oz unpreserved	A	N/A	2.4	Y	Absent	A2-PB-6020T(180),A2-HG-7474T(28),A2-PCB-8082(14),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-PAH-8270SIM(14),A2-CD-6020T(180),HOLD-METAL(180)
L1519473-01C	Glass 250ml/8oz unpreserved	A	N/A	2.4	Y	Absent	HEXCR-7196(30)
L1519473-01D	Amber 120ml unpreserved	A	N/A	2.4	Y	Absent	SUB-DIOXIN-1613B(365)
L1519473-02A	Glass 500ml/16oz unpreserved	A	N/A	2.4	Y	Absent	A2-PB-6020T(180),A2-HG-7474T(28),A2-PCB-8082(14),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-PAH-8270SIM(14),A2-CD-6020T(180),HOLD-METAL(180)
L1519473-02B	Glass 250ml/8oz unpreserved	A	N/A	2.4	Y	Absent	A2-PB-6020T(180),A2-HG-7474T(28),A2-PCB-8082(14),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-PAH-8270SIM(14),A2-CD-6020T(180),HOLD-METAL(180)
L1519473-02C	Glass 250ml/8oz unpreserved	A	N/A	2.4	Y	Absent	HEXCR-7196(30)
L1519473-02D	Amber 120ml unpreserved	A	N/A	2.4	Y	Absent	SUB-DIOXIN-1613B(365)
L1519473-03A	Glass 500ml/16oz unpreserved	A	N/A	2.4	Y	Absent	A2-PB-6020T(180),A2-HG-7474T(28),A2-PCB-8082(14),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-PAH-8270SIM(14),A2-CD-6020T(180),HOLD-METAL(180)

*Values in parentheses indicate holding time in days

Project Name: PNSY
Project Number: N492-003

Lab Number: L1519473
Report Date: 09/02/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1519473-03B	Glass 250ml/8oz unpreserved	A	N/A	2.4	Y	Absent	A2-PB-6020T(180),A2-HG-7474T(28),A2-PCB-8082(14),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-PAH-8270SIM(14),A2-CD-6020T(180),HOLD-METAL(180)
L1519473-03C	Glass 250ml/8oz unpreserved	A	N/A	2.4	Y	Absent	HEXCR-7196(30)
L1519473-03D	Amber 120ml unpreserved	A	N/A	2.4	Y	Absent	SUB-DIOXIN-1613B(365)
L1519473-04A	Glass 500ml/16oz unpreserved	A	N/A	2.4	Y	Absent	A2-PB-6020T(180),A2-HG-7474T(28),A2-PCB-8082(14),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-PAH-8270SIM(14),A2-CD-6020T(180),HOLD-METAL(180)
L1519473-04B	Glass 250ml/8oz unpreserved	A	N/A	2.4	Y	Absent	A2-PB-6020T(180),A2-HG-7474T(28),A2-PCB-8082(14),A2-CR-6020T(180),A2-TS(7),A2-AS-6020T(180),A2-PAH-8270SIM(14),A2-CD-6020T(180),HOLD-METAL(180)
L1519473-04C	Glass 250ml/8oz unpreserved	A	N/A	2.4	Y	Absent	HEXCR-7196(30)
L1519473-04D	Amber 120ml unpreserved	A	N/A	2.4	Y	Absent	SUB-DIOXIN-1613B(365)

Container Comments

L1519473-01B

L1519473-02B

L1519473-03B

L1519473-04B

*Values in parentheses indicate holding time in days

Project Name:	PNSY	**Lab Number:**	L1519473
Project Number:	N492-003	**Report Date:**	09/02/15

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

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.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: 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.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

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.

MSD - 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.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL 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.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

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 ten times (10x) the concentration found in the blank. For MCP-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. 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. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

Report Format: Data Usability Report

Project Name:	PNSY	**Lab Number:**	L1519473
Project Number:	N492-003	**Report Date:**	09/02/15

Data Qualifiers

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.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

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. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. 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 RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name: PNSY **Lab Number:** L1519473
Project Number: N492-003 **Report Date:** 09/02/15

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

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 Analytical 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 Analytical.

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.

Certification Information

Last revised December 16, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA 2540D: TSS
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F,**
EPA 353.2: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 8/13/15

ALPHA Job #: L1519473

ALPHA Analytical
8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Client Information

Client: ESS Group, Inc.
Address: 100 5th Ave, 5th Flr. Waltham, MA 02451
Phone: 781-419-7710
Email: SWilson@essgroup.com

Project Information

Project Name: PNSY
Project Location: ~~Portsmouth~~ Kittery, ME
Project #: N492-003
Project Manager: S. Wilson
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due:

Report Information - Data Deliverables

☒ ADEx ☒ EMAIL

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☒ Other State /Fed Program Maine Criteria Residential RAGs

Additional Project Information:

* Place sample material ON HOLD pending results for Metal Analysis. TCLP analysis may be requested if metal concentrations show high levels.

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☐ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☒ PAH (8270D-SIM)	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15	METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13	EPH: ☐ Ranges & Targets ☐ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	☒ PCB ☐ PEST	TPH: ☐ Quant Only ☐ Fingerprint	Hex Chromium (7196A)	Dissolved Filtered (7196B)	Total As, Total Cd, Total Cr	Total Pb (6020B)	Total Hg (7471A)	Sample Comments	TOTAL # BOTTLES
1973-01	SC-08	8/13/15	1515	SE	MP		X					X		X	X	X	X	X		
02	SC-09	↓	1445	↓	↓		X					X		X	X	X	X	X		
03	SC-10-S1	↓	1423	↓	↓		X					X		X	X	X	X	X		
04	SC-11	↓	1350	↓	↓		X					X		X	X	X	X	X		
	Container Type						A					A		A	A	A	A	A		
	Preservative						A					A		A	A	A	A	A		

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
M. Rittner	8/13/15 1045	[illegible] AAL	8/13/15 10:45
Pat Cada	8/13/15 1750	[illegible]	8/13/15 1750
[illegible]	8/14/15 0600	[illegible]	8/14/15 0600

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO 01-01 (rev. 12-Mar-2012)

SUBUPS: SGS-NC

CHAIN OF CUSTODY

PAGE OF

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab:

ALPHA Job #: L1519473

Project Information

Project Name:

Project Location: ME

Project #:

Project Manager: Elizabeth Porta

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☐ EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

Client Information

Client: Alpha Analytical Lab

Address: 8 Walkup Drive

Westborough, Ma 01581

Phone: 508-898-9220

Fax:

Email: subreports@alphalab.com

☐ These samples have been Previously analyzed by Alpha

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

Please reference Alpha Job #L1519473 on this report.

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	DIOXINS 1613B												Sample Specific Comments	TOTAL # BOTTLES
	SC-08	8/12/15	15:15	SED		☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		1
	SC-09	8/12/15	14:45	SED		☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		1
	SC-10-S1	8/12/15	14:23	SED		☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		1
	SC-11	8/12/15	13:50	SED		☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		1
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		

Container Type	Glass	-	-	-	-	-	-	-	-	-	-	-
Preservative	N/A	-	-	-	-	-	-	-	-	-	-	-

.EASE ANSWER QUESTIONS ABOVE!

S YOUR PROJECT
IA MCP *or* CT RCP?

(M NO: 01-01(I)
30-JUL-07)

Relinquished By:	Date/Time	Received By:	Date/Time
Courier Fedex	8-13-15 21:10		

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 Payment Terms.

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 8/13/15

ALPHA Job #: L1519473

8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300

Client Information

Client: ESS Group, Inc.
Address: 100 5th Ave, 5th Flr.
Waltham, MA 02451
Phone: 781-419-7710
Email: SWilson@essgroup.com

Project Information

Project Name: PNSY
Project Location: ~~Portsmouth~~ Kittery, ME
Project #: N492-003
Project Manager: S. Wilson
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due:

Report Information - Data Deliverables

☒ ADEx ☒ EMAIL

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☒ Other State /Fed Program Maine Criteria Residential RAGs

Additional Project Information:

* Place sample material ON HOLD pending results for Metal Analysis. TCLP analysis may be requested if metal concentrations show high levels.

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☐ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☒ PAH (8270D-SIM)	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15	METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13	EPH: ☐ Ranges & Targets ☐ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	☒ PCB ☐ PEST	TPH: ☐ Quant Only ☐ Fingerprint	Hex Chromium (7196A)	Dioxin/Furan (1613B)	Total As, Total Cd, Total Cr	Total Pb (6020B)	Total Hg (7474)	Sample Comments	TOTAL # BOTTLES
19473-01	SC-08	8/12/15	1515	SE	MP		X				X		X	X	X	X	X			
02	SC-09	↓	1445	↓	↓		X				X		X	X	X	X	X			
03	SC-10-S1	↓	1423	↓	↓		X				X		X	X	X	X	X			
04	SC-11	↓	1350	↓	↓		X				X		X	X	X	X	X			
	Container Type						A				A		A	A	A	A	A			
	Preservative						A				A		A	A	A	A	A			

SAMPLE INFO
Filtration
☐ Field
☐ Lab to do
Preservation
☐ Lab to do

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
M. Rutter	8/13/15 1045	[illegible] AAL	8/13/15 10:45
Pat Welch	8/13/15 1750	[illegible]	8/13/15 1750

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

FINAL LAB REPORT

L1519473

A8077

27-Aug-2015

Prepared by

SGS NORTH AMERICA

Prepared for

Alpha Analytical

Liz Porta

8 Walkup Drive
Westborough, MA 01581
Phone: 508.844.4124
Email: eporta@alphalab.com

This report is approved by

Amy Boehm

Senior Project Manager

This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm. Attention is drawn to the limitation of liability,indemnification and jurisdiction issues defined therein.

SGS remains committed to serving you in the most effective manner. Should you have any questions or need additional information and technical support, please do not hesitate to contact us.

The management and staff of SGS welcomes customer feedback, both positive and negative, as we continually improve our services. Please visit our web site at www.sgs.com/ultratrace and click on the 'Email Us' link or go to our survey here. Thank you for choosing SGS.

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Results reported relate only to the items tested.

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	L1519473
SGS Project #	A8077
Analytical Protocol(s)	1613 PCDD/F
No. Samples Submitted	4
Additional QC Sample(s)	0
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	1
Date Received	18-Aug-15
Condition Received	Good
Temperature upon Receipt (ºC)	5.1
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

QC ANNOTATIONS:

1. Please see Appendices attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value.
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value “H” is assigned. If the obtained value is less than half the specified value “h” is assigned.
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect.
NR or R	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes “Single Ion Mode” and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.

APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL).
U	The analyte was not detected in the sample at the estimated detection limit (EDL).
E	The reported concentration is an estimate. The value exceeds the upper calibration range (upper point of the calibration curve).
D	Dilution Data. Result was obtained from the analysis of a dilution.
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener.
NR	Analyte is not reportable because of problems in sample preparation or analysis.
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis.
EMPC	Estimated maximum possible concentration. Indicates that a peak is identified but did not meet the method specified ion-abundance ratio.

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

SGS CERTIFICATIONS

Arkansas	88-0682
California (ELAP)	Interim ELAP Cert #2914
CLIA	34D1013708
Connecticut	PH-0258
USDA Soil Permit	P330-14-00135
DoD	2726.01
Florida (Primary NELAP)	E87634
ISO 17025/IEC	2726.01
Louisiana	4115
Maine	#2014020
Massachusetts	M-NC919
Minnesota (Primary NELAP For Method 23)	Lab #037-999-459 Cert #688823
New Jersey	NC100
New York	11685
North Carolina DWR	481
North Dakota	R-197
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	Lab #99029 Cert #99029002
Texas	T104704260-13-5
US Coast Guard	16714/159.317/SGS
Virginia	Lab #460214 Cert #3006
Washington	C913
West Virginia	293

Rev. 04-Sep-2014

Sample ID: SC-08 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	Alpha Analytical	Matrix:	Solid	Lab Project ID:	A8077	Date Received:	18-Aug-2015
Project ID:	L1519473	Weight/Volume:	10.18 g	Lab Sample ID	A8077_13508_DF_001	Date Extracted:	19-Aug-2015
Date Collected:	12-Aug-2015	% Solid:	65.9 %	QC Batch No:	13508	Date Analyzed:	26-Aug-2015
		Split:	-	Dilution:	-	Time Analyzed:	03:32:09

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	0.432			J	ES 2378-TCDD	89.2	
12378-PeCDD	1.28			J	ES 12378-PeCDD	94.7	
123478-HxCDD	2.61				ES 123478-HxCDD	91.1	
123678-HxCDD	11.8				ES 123678-HxCDD	85	
123789-HxCDD	5.41				ES 123789-HxCDD	84.8	
1234678-HpCDD	268				ES 1234678-HpCDD	92	
OCDD	1,910				ES OCDD	94.6	
2378-TCDF	2.93				ES 2378-TCDF	82.7	
12378-PeCDF	1.25			J	ES 12378-PeCDF	96.5	
23478-PeCDF	3.28				ES 23478-PeCDF	90	
123478-HxCDF	3.87				ES 123478-HxCDF	94.2	
123678-HxCDF	2.48				ES 123678-HxCDF	95.4	
234678-HxCDF	3.99				ES 234678-HxCDF	93.4	
123789-HxCDF	ND	0.0774			ES 123789-HxCDF	89.7	
1234678-HpCDF	61.5				ES 1234678-HpCDF	103	
1234789-HpCDF	3.56				ES 1234789-HpCDF	101	
OCDF	147				ES OCDF	97.6	
Totals					**Standard**	**CS/AS Recoveries**	
					CS 37Cl-2378-TCDD	89.2	
Total TCDD	16.8		17.5		CS 12347-PeCDD	104	
Total PeCDD	25		25		CS 12346-PeCDF	98.2	
Total HxCDD	143		143		CS 123469-HxCDF	101	
Total HpCDD	611		611		CS 1234689-HpCDF	103	
					AS 1368-TCDD	90.8	
Total TCDF	35.2		36.1		AS 1368-TCDF	92.9	
Total PeCDF	34		34.1				
Total HxCDF	67.7		68.2				
Total HpCDF	164		164				
Total PCDD/Fs	**3,150**		**3,150**				
ITEF TEQs							
TEQ: ND=0	11.5		11.5				
TEQ: ND=DL/2	11.5	0.157	11.5				
TEQ: ND=DL	11.5	0.313	11.5				

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Sample ID: SC-09 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	Alpha Analytical	Matrix:	Solid	Lab Project ID:	A8077	Date Received:	18-Aug-2015
Project ID:	L1519473	Weight/Volume:	10.10 g	Lab Sample ID	A8077_13508_DF_002	Date Extracted:	19-Aug-2015
Date Collected:	12-Aug-2015	% Solid:	55.0 %	QC Batch No:	13508	Date Analyzed:	26-Aug-2015
		Split:	-	Dilution:	-	Time Analyzed:	04:24:54

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	0.701				ES 2378-TCDD	87.7	
12378-PeCDD	2.12			J	ES 12378-PeCDD	88.8	
123478-HxCDD	4.52				ES 123478-HxCDD	82.1	
123678-HxCDD	18.8				ES 123678-HxCDD	80.9	
123789-HxCDD	9.1				ES 123789-HxCDD	79.1	
1234678-HpCDD	418				ES 1234678-HpCDD	85.9	
OCDD	2,860				ES OCDD	90.8	
2378-TCDF	5.57				ES 2378-TCDF	84.3	
12378-PeCDF	2.53				ES 12378-PeCDF	93.8	
23478-PeCDF	6.73				ES 23478-PeCDF	87.1	
123478-HxCDF	7.75				ES 123478-HxCDF	91.6	
123678-HxCDF	4.75				ES 123678-HxCDF	91.7	
234678-HxCDF	7.29				ES 234678-HxCDF	89.8	
123789-HxCDF	0.161			J	ES 123789-HxCDF	90.8	
1234678-HpCDF	119				ES 1234678-HpCDF	96.1	
1234789-HpCDF	5.91				ES 1234789-HpCDF	97.4	
OCDF	227				ES OCDF	93.3	
Totals					**Standard**	**CS/AS Recoveries**	
					CS 37Cl-2378-TCDD	85.4	
Total TCDD	18.3		18.6		CS 12347-PeCDD	96.3	
Total PeCDD	31.2		31.9		CS 12346-PeCDF	91.5	
Total HxCDD	201		201		CS 123469-HxCDF	94.1	
Total HpCDD	912		912		CS 1234689-HpCDF	95.8	
					AS 1368-TCDD	88.9	
Total TCDF	72.1		75.6		AS 1368-TCDF	89.3	
Total PeCDF	71.5		71.8				
Total HxCDF	130		132				
Total HpCDF	298		298				
Total PCDD/Fs	**4,820**		**4,830**				
ITEF TEQs							
TEQ: ND=0	19.6		19.6				
TEQ: ND=DL/2	19.6	0.416	19.6				
TEQ: ND=DL	19.6	0.833	19.6				

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Sample ID: SC-10-S1 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	Alpha Analytical	Matrix:	Solid	Lab Project ID:	A8077	Date Received:	18-Aug-2015
Project ID:	L1519473	Weight/Volume:	9.96 g	Lab Sample ID	A8077_13508_DF_003	Date Extracted:	19-Aug-2015
Date Collected:	12-Aug-2015	% Solid:	80.7 %	QC Batch No:	13508	Date Analyzed:	26-Aug-2015
		Split:	-	Dilution:	-	Time Analyzed:	05:17:45

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	0.173			J	ES 2378-TCDD	87.4	
12378-PeCDD	0.44			J	ES 12378-PeCDD	91.8	
123478-HxCDD	EMPC		0.598	J	ES 123478-HxCDD	81.6	
123678-HxCDD	3.51				ES 123678-HxCDD	80.3	
123789-HxCDD	1.62			J	ES 123789-HxCDD	79.6	
1234678-HpCDD	76.8				ES 1234678-HpCDD	83.4	
OCDD	500				ES OCDD	79.9	
2378-TCDF	1.39				ES 2378-TCDF	83.5	
12378-PeCDF	0.789			J	ES 12378-PeCDF	95.9	
23478-PeCDF	2.17			J	ES 23478-PeCDF	88	
123478-HxCDF	2.11			J	ES 123478-HxCDF	89	
123678-HxCDF	1.55			J	ES 123678-HxCDF	89.5	
234678-HxCDF	2.35			J	ES 234678-HxCDF	87.8	
123789-HxCDF	EMPC		0.242	J	ES 123789-HxCDF	87	
1234678-HpCDF	25.2				ES 1234678-HpCDF	94.7	
1234789-HpCDF	1.5			J	ES 1234789-HpCDF	91.9	
OCDF	54				ES OCDF	83.1	
Totals					**Standard**	**CS/AS Recoveries**	
					CS 37Cl-2378-TCDD	88.3	
Total TCDD	2.62		2.62		CS 12347-PeCDD	102	
Total PeCDD	9.72		10.2		CS 12346-PeCDF	95.4	
Total HxCDD	47.9		48.5		CS 123469-HxCDF	94.3	
Total HpCDD	173		173		CS 1234689-HpCDF	94.5	
					AS 1368-TCDD	94	
Total TCDF	20.2		22.2		AS 1368-TCDF	93.4	
Total PeCDF	21		21.6				
Total HxCDF	32.4		32.6				
Total HpCDF	64.3		64.3				
Total PCDD/Fs	**925**		**929**				
ITEF TEQs							
TEQ: ND=0	4.36		4.44				
TEQ: ND=DL/2	4.37	0.181	4.44				
TEQ: ND=DL	4.39	0.362	4.44				

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Sample ID: SC-11 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	Alpha Analytical	Matrix:	Solid	Lab Project ID:	A8077	Date Received:	18-Aug-2015
Project ID:	L1519473	Weight/Volume:	9.89 g	Lab Sample ID	A8077_13508_DF_004	Date Extracted:	19-Aug-2015
Date Collected:	12-Aug-2015	% Solid:	46.2 %	QC Batch No:	13508	Date Analyzed:	26-Aug-2015
		Split:	-	Dilution:	-	Time Analyzed:	06:10:31

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	1.27				ES 2378-TCDD	92.3	
12378-PeCDD	3.56				ES 12378-PeCDD	97.4	
123478-HxCDD	6.37				ES 123478-HxCDD	88.8	
123678-HxCDD	35.4				ES 123678-HxCDD	83.4	
123789-HxCDD	14.7				ES 123789-HxCDD	86.5	
1234678-HpCDD	796				ES 1234678-HpCDD	96	
OCDD	5,730				ES OCDD	99	
2378-TCDF	8.11				ES 2378-TCDF	89.9	
12378-PeCDF	3.4				ES 12378-PeCDF	98	
23478-PeCDF	9				ES 23478-PeCDF	96.4	
123478-HxCDF	11.2				ES 123478-HxCDF	95.8	
123678-HxCDF	6.91				ES 123678-HxCDF	94.5	
234678-HxCDF	10.8				ES 234678-HxCDF	92.2	
123789-HxCDF	ND	0.141			ES 123789-HxCDF	85.9	
1234678-HpCDF	195				ES 1234678-HpCDF	102	
1234789-HpCDF	10.8				ES 1234789-HpCDF	105	
OCDF	473				ES OCDF	103	
Totals					**Standard**	**CS/AS Recoveries**	
					CS 37Cl-2378-TCDD	92.9	
Total TCDD	21.1		22		CS 12347-PeCDD	102	
Total PeCDD	49.5		51.1		CS 12346-PeCDF	75.5	
Total HxCDD	324		324		CS 123469-HxCDF	99.7	
Total HpCDD	1,730		1,730		CS 1234689-HpCDF	106	
					AS 1368-TCDD	92.5	
Total TCDF	98.9		101		AS 1368-TCDF	92.3	
Total PeCDF	94.8		95.6				
Total HxCDF	207		207				
Total HpCDF	555		555				
Total PCDD/Fs	**9,290**		**9,290**				
ITEF TEQs							
TEQ: ND=0	33.3		33.3				
TEQ: ND=DL/2	33.3	0.234	33.3				
TEQ: ND=DL	33.3	0.469	33.3				

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Sample ID: Method Blank A8077_13508 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	Alpha Analytical	Matrix:	Solid	Lab Project ID:	A8077	Date Received:	n/a
Project ID:	L1519473	Weight/Volume:	10.00 g	Lab Sample ID	MB1_13508_DF_SDS-RJ	Date Extracted:	19-Aug-2015
Date Collected:	n/a	% Solid:	n/a	QC Batch No:	13508	Date Analyzed:	26-Aug-2015
		Split:	-	Dilution:	-	Time Analyzed:	10:49:27

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	0.0887			ES 2378-TCDD	81.3	
12378-PeCDD	ND	0.164			ES 12378-PeCDD	87.4	
123478-HxCDD	ND	0.114			ES 123478-HxCDD	81.6	
123678-HxCDD	ND	0.116			ES 123678-HxCDD	82	
123789-HxCDD	ND	0.115			ES 123789-HxCDD	79.7	
1234678-HpCDD	ND	0.165			ES 1234678-HpCDD	81.8	
OCDD	ND	0.326			ES OCDD	81.1	
2378-TCDF	ND	0.102			ES 2378-TCDF	69.7	
12378-PeCDF	ND	0.0728			ES 12378-PeCDF	86.5	
23478-PeCDF	ND	0.0883			ES 23478-PeCDF	71.3	
123478-HxCDF	ND	0.0911			ES 123478-HxCDF	71.7	
123678-HxCDF	ND	0.0784			ES 123678-HxCDF	86.1	
234678-HxCDF	ND	0.0919			ES 234678-HxCDF	75.3	
123789-HxCDF	ND	0.129			ES 123789-HxCDF	65.4	
1234678-HpCDF	ND	0.0712			ES 1234678-HpCDF	110	
1234789-HpCDF	ND	0.168			ES 1234789-HpCDF	68.3	
OCDF	ND	0.388			ES OCDF	62.9	
Totals					**Standard**	**CS/AS Recoveries**	
					CS 37Cl-2378-TCDD	84	
Total TCDD	ND	0.0887	ND		CS 12347-PeCDD	97.6	
Total PeCDD	ND	0.164	ND		CS 12346-PeCDF	91.1	
Total HxCDD	ND	0.115	ND		CS 123469-HxCDF	95.2	
Total HpCDD	ND	0.165	ND		CS 1234689-HpCDF	93.2	
					AS 1368-TCDD	88.5	
Total TCDF	ND	0.102	ND		AS 1368-TCDF	88.7	
Total PeCDF	ND	0.0797	ND				
Total HxCDF	ND	0.0947	ND				
Total HpCDF	ND	0.105	ND				
Total PCDD/Fs	**ND**		**ND**				
ITEF TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	0.153	0.153	0.153				
TEQ: ND=DL	0.307	0.307	0.307				

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METHOD 1613B **PCDD/F ONGOING PRECISION AND RECOVERY (OPR)** **FORM 8A**

Lab Name:	SGS Environmental Services		
Initial Calibration:	ICAL: HRMS3_DF_03022015_21APR15		
Instrument ID:	HRMS3	GC Column ID:	ZB-5ms
VER Data Filename:	150825C26	Analysis Date:	26-AUG-2015 00:53:54
Lab ID:	OPR1_13508_DF		

NATIVE ANALYTES	SPIKE CONC.	CONC. FOUND	RANGE (ng/mL)			OK
2,3,7,8-TCDD	10	10.9	6.7	-	15.8	Y
1,2,3,7,8-PeCDD	50	54	35	-	71	Y
1,2,3,4,7,8-HxCDD	50	55.4	35	-	82	Y
1,2,3,6,7,8-HxCDD	50	57	38	-	67	Y
1,2,3,7,8,9-HxCDD	50	52.2	32	-	81	Y
1,2,3,4,6,7,8-HpCDD	50	54.3	35	-	70	Y
OCDD	100	110	78	-	144	Y
2,3,7,8-TCDF	10	13	7.5	-	15.8	Y
1,2,3,7,8-PeCDF	50	56	40	-	67	Y
2,3,4,7,8-PeCDF	50	58.4	34	-	80	Y
1,2,3,4,7,8-HxCDF	50	51.9	36	-	67	Y
1,2,3,6,7,8-HxCDF	50	53.9	42	-	65	Y
2,3,4,6,7,8-HxCDF	50	55.6	35	-	78	Y
1,2,3,7,8,9-HxCDF	50	53.6	39	-	65	Y
1,2,3,4,6,7,8-HpCDF	50	55.8	41	-	61	Y
1,2,3,4,7,8,9-HpCDF	50	55.8	39	-	69	Y
OCDF	100	112	63	-	170	Y

Contract-required concentration limits for OPR as specified in Table 6, Method 1613. 10/94

Processed: 26 Aug 2015 14:45 Analyst: AL

METHOD 1613B **PCDD/F ONGOING PRECISION AND RECOVERY (OPR)** **FORM 8B**

Lab Name:	SGS Environmental Services		
Initial Calibration:	ICAL: HRMS3_DF_03022015_21APR15		
Instrument ID:	HRMS3	GC Column ID:	ZB-5ms
VER Data Filename:	150825C26	Analysis Date:	26-AUG-2015 00:53:54
Lab ID:	OPR1_13508_DF		

LABELED ANALYTES	SPIKE CONC.	CONC. FOUND	RANGE (ng/mL)			OK
13C-2,3,7,8-TCDD	100	83.6	20	-	175	Y
13C-1,2,3,7,8-PeCDD	100	87.8	21	-	227	Y
13C-1,2,3,4,7,8-HxCDD	100	83.1	21	-	193	Y
13C-1,2,3,6,7,8-HxCDD	100	82.7	25	-	163	Y
13C-1,2,3,7,8,9-HxCDD	100	78.9	26	-	166	Y
13C-1,2,3,4,6,7,8-HpCDD	100	81.6	26	-	166	Y
13C-OCDD	200	154	26	-	397	Y
13C-2,3,7,8-TCDF	100	64.4	22	-	152	Y
13C-1,2,3,7,8-PeCDF	100	83.5	21	-	192	Y
13C-2,3,4,7,8-PeCDF	100	66.6	13	-	328	Y
13C-1,2,3,4,7,8-HxCDF	100	70.8	19	-	202	Y
13C-1,2,3,6,7,8-HxCDF	100	85.5	21	-	159	Y
13C-2,3,4,6,7,8-HxCDF	100	73.8	22	-	176	Y
13C-1,2,3,7,8,9-HxCDF	100	59.1	17	-	205	Y
13C-1,2,3,4,6,7,8-HpCDF	100	107	21	-	158	Y
13C-1,2,3,4,7,8,9-HpCDF	100	64.2	20	-	186	Y
13C-OCDF	200	116	26	-	397	Y
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD	40	34	12.4	-	76.4	Y

Contract-required concentration limits for OPR as specified in Table 6, Method 1613. 10/94

Processed: 26 Aug 2015 14:45 Analyst: AL

Sample Receipt Notification

5500 Business Drive
Wilmington, NC 28405 USA
Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Amy Boehm*
Receipt Date & Time:	*18-Aug-15 at 10:04*
AP Project name:	*A8077*
Requested TAT:	*14 days*
Projected due date:	*1-Sep-15*
Matrix:	*Soil*
Phone#:	*910-794-1613*
Email Address:	*Amy.Boehm@sgs.com*

Company Contact:	*Liz Porta*
Company:	*Alpha Analytical*
Project Name & Site:	*L1519473*
Project PO#:	*N/A*
QAAP/Contract #:	*N/A*
Requested Analysis:	*Method 1613B*
Phone#:	*508-898-9220*
Email Address:	*eporta@alphalab.com*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp	Container #	Shipping #
SC-08	A8077_001	SED	1	4oz amber	12-Aug-15	15:15	5.1	1	1Z E30 654 01 9627 0639
SC-09	A8077_002	SED	1	4oz amber	12-Aug-15	14:45	5.1	1	1Z E30 654 01 9627 0639
SC-10-S1	A8077_003	SED	1	4oz amber	12-Aug-15	14:23	5.1	1	1Z E30 654 01 9627 0639
SC-11	A8077_004	SED	1	4oz amber	12-Aug-15	13:50	5.1	1	1Z E30 654 01 9627 0639

Preservation Type: **Sample Seals:** No

Notes/Comments:

Samples received intact

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Barbara Hager *Logged in by: Barbara Hager* *QC'ed by:* AK 18 Aug 15

All services are rendered in accordance with the applicable SGS General Conditions of Service accessible via: http://www.sgs.com/terms_and_conditions.htm

SUBUPS: SGS-NC

A8077

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PAGE OF

ALPHA ANALYTICAL

estborough, MA
EL: 508-898-9220
X: 508-898-9193

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

Date Rec'd in Lab:

ALPHA Job #: L1519473

Project Information

Project Name:

Project Location: ME

Project #:

Project Manager: Elizabeth Porta

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☐ EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Client Information

lient: Alpha Analytical Lab

ddress: 8 Walkup Drive

estborough, Ma 01581

hone: 508-898-9220

ax:

mail: subreports@alphalab.com

These samples have been Previously analyzed by Alpha

ther Project Specific Requirements/Comments/Detection Limits:

ease reference Alpha Job #L1519473 on this report.

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

PHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	DIOXINS 1613B												Sample Specific Comments	TOTAL # BOTTLES
	SC-08	8/12/15	15:15	SED		☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		1
	SC-09	8/12/15	14:45	SED		☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		1
	SC-10-S1	8/12/15	14:23	SED		☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		1
	SC-11	8/12/15	13:50	SED		☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		1
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		

Container Type	Glass	-	-	-	-	-	-	-	-	-	-	-	-
Preservative	N/A	-	-	-	-	-	-	-	-	-	-	-	-

ASE ANSWER QUESTIONS ABOVE!

YOUR PROJECT
A MCP or CT RCP?

O: 01-01(I)
IUL-07)

Relinquished By:	Date/Time	Received By:	Date/Time
Courier Fedex	8-13-15 21:10	Barbara Hager	18-Aug-15 1004
			5.1°

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 Payment Terms.

Appendix C

TCLP Metals Laboratory Results

ANALYTICAL REPORT

Lab Number:	L1507918
Client:	ESS Group, Inc. 100 Fifth Avenue 5th Floor Waltham, MA 02451
ATTN:	Susan Herz
Phone:	(781) 419-7732
Project Name:	PNSY
Project Number:	N492-000
Report Date:	04/27/15

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Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), ME (MA00030), PA (68-02089), VA (460194), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), USFWS (Permit #LE2069641), USDA (Permit #P330-11-00109), 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: PNSY
Project Number: N492-000

Lab Number: L1507918
Report Date: 04/27/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1507918-01	SC-04-1	SEDIMENT	KITTERY, MAINE	11/26/14 10:45	12/01/14
L1507918-02	SC-04-2	SEDIMENT	KITTERY, MAINE	11/26/14 11:20	12/01/14
L1507918-03	SC-06-S2	SEDIMENT	KITTERY, MAINE	12/03/14 12:10	12/04/14
L1507918-04	SC-02-S1	SEDIMENT	KITTERY, MAINE	12/08/14 09:20	12/10/14
L1507918-05	SC-03-S1	SEDIMENT	KITTERY, MAINE	01/21/15 11:00	01/22/15
L1507918-06	SC-03-S2	SEDIMENT	KITTERY, MAINE	01/21/15 12:00	01/22/15

Project Name: PNSY **Lab Number:** L1507918
Project Number: N492-000 **Report Date:** 04/27/15

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. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: PNSY
Project Number: N492-000

Lab Number: L1507918
Report Date: 04/27/15

Case Narrative (continued)

Sample Receipt

All samples were frozen and kept in frozen storage to extend the holding time.

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: Elizabeth Porta

Title: Technical Director/Representative

Date: 04/27/15

METALS

Project Name:	PNSY	**Lab Number:**	L1507918
Project Number:	N492-000	**Report Date:**	04/27/15

SAMPLE RESULTS

Lab ID:	L1507918-01	Date Collected:	11/26/14 10:45
Client ID:	SC-04-1	Date Received:	12/01/14
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment	TCLP/SPLP Ext. Date:	04/23/15 18:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Westborough Lab											
Chromium, TCLP	ND		mg/l	0.20	--	1	04/25/15 12:29	04/25/15 15:27	EPA 3015	1,6010C	TT
Lead, TCLP	ND		mg/l	0.50	--	1	04/25/15 12:29	04/25/15 15:27	EPA 3015	1,6010C	TT

Project Name:	PNSY	**Lab Number:**	L1507918
Project Number:	N492-000	**Report Date:**	04/27/15

SAMPLE RESULTS

Lab ID:	L1507918-02	Date Collected:	11/26/14 11:20
Client ID:	SC-04-2	Date Received:	12/01/14
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment	TCLP/SPLP Ext. Date:	04/23/15 18:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Westborough Lab											
Chromium, TCLP	ND		mg/l	0.20	--	1	04/25/15 12:29	04/25/15 15:45	EPA 3015	1,6010C	TT
Lead, TCLP	ND		mg/l	0.50	--	1	04/25/15 12:29	04/25/15 15:45	EPA 3015	1,6010C	TT

Project Name:	PNSY	**Lab Number:**	L1507918
Project Number:	N492-000	**Report Date:**	04/27/15

SAMPLE RESULTS

Lab ID:	L1507918-03	Date Collected:	12/03/14 12:10
Client ID:	SC-06-S2	Date Received:	12/04/14
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment	TCLP/SPLP Ext. Date:	04/23/15 18:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Westborough Lab											
Lead, TCLP	ND		mg/l	0.50	--	1	04/25/15 12:29	04/27/15 12:29	EPA 3015	1,6010C	FG

Project Name:	PNSY	**Lab Number:**	L1507918
Project Number:	N492-000	**Report Date:**	04/27/15

SAMPLE RESULTS

Lab ID:	L1507918-04	Date Collected:	12/08/14 09:20
Client ID:	SC-02-S1	Date Received:	12/10/14
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment	TCLP/SPLP Ext. Date:	04/23/15 18:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Westborough Lab											
Lead, TCLP	ND		mg/l	0.50	--	1	04/25/15 12:29	04/27/15 12:33	EPA 3015	1,6010C	FG
Mercury, TCLP	ND		mg/l	0.0010	--	1	04/24/15 14:50	04/24/15 18:33	EPA 7470A	1,7470A	AB

Project Name:	PNSY	**Lab Number:**	L1507918
Project Number:	N492-000	**Report Date:**	04/27/15

SAMPLE RESULTS

Lab ID:	L1507918-05	Date Collected:	01/21/15 11:00
Client ID:	SC-03-S1	Date Received:	01/22/15
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment	TCLP/SPLP Ext. Date:	04/23/15 18:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Westborough Lab											
Lead, TCLP	ND		mg/l	0.50	--	1	04/25/15 12:29	04/27/15 12:37	EPA 3015	1,6010C	FG

Project Name:	PNSY	**Lab Number:**	L1507918
Project Number:	N492-000	**Report Date:**	04/27/15

SAMPLE RESULTS

Lab ID:	L1507918-06	Date Collected:	01/21/15 12:00
Client ID:	SC-03-S2	Date Received:	01/22/15
Sample Location:	KITTERY, MAINE	Field Prep:	Not Specified
Matrix:	Sediment	TCLP/SPLP Ext. Date:	04/23/15 18:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Westborough Lab											
Lead, TCLP	1.6		mg/l	0.50	--	1	04/25/15 12:29	04/27/15 12:40	EPA 3015	1,6010C	FG

Project Name: PNSY **Lab Number:** L1507918

Project Number: N492-000 **Report Date:** 04/27/15

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Westborough Lab for sample(s): 04 Batch: WG778962-1										
Mercury, TCLP	ND		mg/l	0.0010	--	1	04/24/15 14:50	04/24/15 18:29	1,7470A	AB

Prep Information

Digestion Method: EPA 7470A

TCLP/SPLP Extraction Date: 04/23/15 18:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Westborough Lab for sample(s): 01-06 Batch: WG779154-1										
Chromium, TCLP	ND		mg/l	0.20	--	1	04/25/15 12:29	04/25/15 15:19	1,6010C	TT
Lead, TCLP	ND		mg/l	0.50	--	1	04/25/15 12:29	04/25/15 15:19	1,6010C	TT

Prep Information

Digestion Method: EPA 3015

TCLP/SPLP Extraction Date: 04/23/15 18:15

Lab Control Sample Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1507918
Report Date: 04/27/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Westborough Lab Associated sample(s): 04 Batch: WG778962-2								
Mercury, TCLP	113		-		80-120	-		
TCLP Metals by EPA 1311 - Westborough Lab Associated sample(s): 01-06 Batch: WG779154-2								
Chromium, TCLP	95		-		75-125	-		20
Lead, TCLP	98		-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1507918
Report Date: 04/27/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Westborough Lab Associated sample(s): 04 QC Batch ID: WG778962-4 QC Sample: L1507918-04 Client ID: SC-02-S1												
Mercury, TCLP	ND	0.025	0.0252	101		-	-		80-120	-		20
TCLP Metals by EPA 1311 - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG779154-4 QC Sample: L1507918-01 Client ID: SC-04-1												
Chromium, TCLP	ND	2	1.9	95		-	-		75-125	-		20
Lead, TCLP	ND	5.1	5.0	98		-	-		75-125	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-000

Lab Number: L1507918
Report Date: 04/27/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Westborough Lab Associated sample(s): 04 QC Batch ID: WG778962-3 QC Sample: L1507918-04 Client ID: SC-02-S1						
Mercury, TCLP	ND	ND	mg/l	NC		20
TCLP Metals by EPA 1311 - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG779154-3 QC Sample: L1507918-01 Client ID: SC-04-1						
Chromium, TCLP	ND	ND	mg/l	NC		20
Lead, TCLP	ND	ND	mg/l	NC		20

Project Name: PNSY
Project Number: N492-000

Lab Number: L1507918
Report Date: 04/27/15

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent
D	Absent
B	Absent
C	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1507918-01A	Amber 250ml unpreserved	A	N/A	3.0	Y	Absent	-
L1507918-01X	Plastic 120ml HNO3 preserved spl	A	<2	3.0	Y	Absent	PB-CI(180),CR-CI(180)
L1507918-01X1	Tumble Vessel	A	N/A	3.0	Y	Absent	-
L1507918-02A	Amber 250ml unpreserved	A	N/A	3.0	Y	Absent	-
L1507918-02X	Plastic 120ml HNO3 preserved spl	A	<2	3.0	Y	Absent	PB-CI(180),CR-CI(180)
L1507918-02X1	Tumble Vessel	A	N/A	3.0	Y	Absent	-
L1507918-03A	Amber 250ml unpreserved	B	N/A	4.9	Y	Absent	-
L1507918-03X	Plastic 120ml HNO3 preserved spl	B	<2	4.9	Y	Absent	PB-CI(180)
L1507918-03X1	Tumble Vessel	B	N/A	4.9	Y	Absent	-
L1507918-04A	Amber 250ml unpreserved	C	N/A	4.1	Y	Absent	-
L1507918-04X	Plastic 120ml HNO3 preserved spl	C	<2	4.1	Y	Absent	HG-C(28),PB-CI(180)
L1507918-04X1	Tumble Vessel	C	N/A	4.1	Y	Absent	-
L1507918-05A	Amber 250ml unpreserved	D	N/A	2.4	Y	Absent	-
L1507918-05X	Plastic 120ml HNO3 preserved spl	D	<2	2.4	Y	Absent	PB-CI(180)
L1507918-05X1	Tumble Vessel	D	N/A	2.4	Y	Absent	-
L1507918-06A	Amber 250ml unpreserved	D	N/A	2.4	Y	Absent	-
L1507918-06X	Plastic 120ml HNO3 preserved spl	D	<2	2.4	Y	Absent	PB-CI(180)
L1507918-06X1	Tumble Vessel	D	N/A	2.4	Y	Absent	-

*Values in parentheses indicate holding time in days

Project Name:	PNSY	**Lab Number:**	L1507918
Project Number:	N492-000	**Report Date:**	04/27/15

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
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.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: 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.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
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.
MSD	- 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.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL 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.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

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 ten times (10x) the concentration found in the blank. For MCP-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. 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. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
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.

Report Format: Data Usability Report

Project Name:	PNSY	**Lab Number:**	L1507918
Project Number:	N492-000	**Report Date:**	04/27/15

Data Qualifiers

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

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. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. 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 RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name: PNSY **Lab Number:** L1507918
Project Number: N492-000 **Report Date:** 04/27/15

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

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 Analytical 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 Analytical.

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.

Certification Information

Last revised December 16, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA 2540D: TSS
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F,**
EPA 353.2: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE ____ OF ____

8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Date Rec'd in Lab: 4/17/15

ALPHA Job #: L1429023

Project Information

Project Name: PNSY
Project Location: Kittery, Maine
Project #: N492-000
Project Manager: Susan Herz
ALPHA Quote #:

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☐ Same as Client info PO #:

Client Information

Client: ESS Group, Inc.
Address: 100 Fifth Avenue 5th Floor, Waltham, MA
Phone: 781-419-7732
Email: sherz@essgroup.com

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due:

Additional Project Information:

1. Grain size per ASTM D422
2. Total solids and moisture content SM2540G
3. Total Organic Carbons EPA SW-846 method 9060

07918

	ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☐ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☒ PAH	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15	METALS: ☐ RCRA5 ☒ RCRA8 ☐ PP13	EPH: ☐ Ranges & Targets ☐ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	☒ PCB ☒ PEST	TPH: ☐ Quant Only ☐ Fingerprint	Grain size	Total solids + moisture content	Total Organic Carbons			Sample Comments	TOTAL # BOTTLES
01	2902301	SC-04-1	11/26/14	1045	Soil	MJD		X		X			X		X	X	X		x		2
02	~~02~~	SC-04-2	"	1120	"	MJD		X		X			X		X	X	X		x		2

SAMPLE INFO
Filtration: TCLP Pb, Cr
Preservation: ☐ Lab to do

SEDIMENT SAMPLING
OVER WATER
ENVIRONMENTAL COC

4 TOTAL

TO MANSFIELD

Container Type	P= Plastic, A= Amber glass, V= Vial, G= Glass, B= Bacteria cup, C= Cube, O= Other, E= Encore, D= BOD Bottle
Preservative	A= None, B= HCl, C= HNO_3, D= H_2SO_4, E= NaOH, F= MeOH, G= $NaHSO_4$, H = $Na_2S_2O_3$, I= Ascorbic Acid, J = NH_4Cl, K= Zn Acetate, O= Other

Container Type															
Preservative															

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	11/29/14 0900	M. Cuto	12/1/14 1632
M. Cuto	12/1/14 1632	[signature] RAL	12/1/14 1630
[signature]	12/1/14 1805	[signature]	12/1/14 1805
[signature]	12/2/14 0400	Manchester lab	12/2/14 0400
[signature]	4/17/15	[signature]	4-17-15 1830
[signature]	4/17/15 1940	[signature]	4/17/15 1940

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

kb 4/17/15 L1507918

CHAIN OF CUSTODY

PAGE ____ OF ____

Date Rec'd in Lab: 4/17/15

ALPHA Job #: L1429023

ALPHA ANALYTICAL
8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Client Information

Client: ESS Group, Inc.
Address: 100 Fifth Avenue 5th Floor, Waltham, MA
Phone: 781-419-7732
Email: SHerz@essgroup.com

Project Information

Project Name: PNSY
Project Location: Kittery, Maine
Project #: N492-000
Project Manager: Susan Herz
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due:

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Additional Project Information:
1. Grain size per ASTM D422
2. Total solids and moisture content SM2540G
3. Total Organic Carbons EPA SW-846 method 9060

ANALYSIS: VOC: ☐ 8260 ☐ 624 SVOC: ☐ 524.2 ☐ ABN ☒ PAH METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15 METALS: ☐ RCRA ☐ PP13 EPH: ☐ Ranges Only ☐ Ranges & Targets VPH: ☐ Ranges Only ☐ Ranges & Targets ☒ PCB ☒ PEST TPH: ☐ Quant Only ☐ Fingerprint Grain size Total solids + moisture content Total Organic Carbons Site Specific

SAMPLE INFO: Filtration: TCLP Pb; Preservation: ☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC	SVOC	METALS	METALS	EPH	VPH	PCB	TPH	Grain size	Total solids + moisture content	Total Organic Carbons			Sample Comments	TOTAL BOTTLES
07918 ~~29023-03~~	SC-07-S1	12/2/14	1105	Soil	MJD		X		X			X		X	X	X				2
~~04~~	SC-06-S1	12/3/14	1050	"	MJD		X		X			X		X	X	X				2
.03 ~~05~~	SC-06-S2	"	1210	"	MJD		X		X			X		X	X	X		x		2
					Container Type		A		A			A		P	P	P				
					Preservative		A		A			A		A	A	A				

SEDIMENT SAMPLING
OVER WATER TO MANSFIELD
ENVIRONMENTAL COC

(6 TOTAL)

Container Type: P= Plastic, A= Amber glass, V= Vial, G= Glass, B= Bacteria cup, C= Cube, O= Other, E= Encore, D= BOD Bottle

Preservative: A= None, B= HCl, C= HNO_3, D= H_2SO_4, E= NaOH, F= MeOH, G= $NaHSO_4$, H= $Na_2S_2O_3$, I= Ascorbic Acid, J= NH_4Cl, K= Zn Acetate, O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	12/4/14 0550	[signature]	12/4/14 1615
[signature]	12/4/14 1830	[signature]	12/4/14 18:00
[signature]	12/5/14 0400	[signature]	12/5/14 0400
[signature]	4/17/15	[signature]	4/17/15 1830
[signature]	4/17/15 1940	[signature]	4/17/15 1940

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

kb 4/17/15 L1507918 Serial No:04271516:51

CHAIN OF CUSTODY

PAGE ____ OF ____

Date Rec'd in Lab: 4/17/15

ALPHA Job #: L1429023

ALPHA Analytical
8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Client Information

Client: ESS Group, Inc.
Address: 100 Fifth Avenue 7th Floor, Waltham, MA
Phone: 781-419-7732
Email: sherz@essgroup.com

Project Information

Project Name: PNSY
Project Location: Kittery, Maine
Project #: N492-000
Project Manager: Susan Herz
ALPHA Quote #:

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due:

Additional Project Information:

Grain size per ASTM D422
. Total solids and moisture content SM2540G
. Total Organic Carbons EPA SW-846 method 9060

Site Specific

SAMPLE INFO: TCLP Pb, Hg

☐ Field ☐ Lab to do
Preservation ☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☐ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☒ PAH	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15	METALS: ☐ RCRA ☐ PP13	EPH: ☐ Ranges & Targets ☐ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	☒ PCB ☒ PEST	TPH: ☐ Quant Only ☐ Fingerprint	Grain size	Total solids + moisture content	Total Organic Carbons		Sample Comments	TOTAL # BOTTLES
07918-04	SC-02-S1	12/8/14	0920	Sol	MJD		X		X			X		X	X	X		x	2

2 TOTAL

SEDIMENT SAMPLING
OVER WATER
ENVIRONMENTAL COC

TO MANSFIELD

Container Type
Preservative

Container Type
= Plastic
= Amber glass
= Vial
= Glass
= Bacteria cup
= Cube
= Other
= Encore
= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
	12/10/14 0550		12/10/14 1600
Jessica Graziosi Haley Aldrich	12/10/14 1630	Jessica Graziosi Haley Aldrich	12/10/14 1630
	12/10/14 1804	AIRL	12/10/14 1804
	12/11/14 0400	Mansfield	12/11/14 0400
	4/17/15		4/17/15
Menna Gendeau	4/17/15 1940	Menna Gendeau	4/17/15 1830

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

kb 4/17/15 L1507918

CHAIN OF CUSTODY

PAGE ____ OF ____

Date Rec'd in Lab: 4/17/15 (AM)

ALPHA Job #: L1501520

ALPHA ANALYTICAL
8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Client Information

Client: ESS Group, Inc.
Address: 100 Fifth Avenue, 5th Floor, Waltham, MA
Phone: 781-419-7732
Email: sHerz@essgroup.com

Project Information

Project Name: PNSY
Project Location: Kittery, Maine
Project #: N492-000
Project Manager: Susan Herz
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due:

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program ____ Criteria ____

Additional Project Information:
1. Grain size per ASTM D422
2. Total solids and moisture content SM2540G
3. Total Organic Carbons EPA SW-846 method 9060

ANALYSIS: VOC: ☐ 8260 ☐ 624 ☐ 524.2; SVOC: ☐ ABN ☒ PAH; METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15; METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13; EPH: ☐ Ranges & Targets ☐ Ranges Only; VPH: ☐ Ranges & Targets ☐ Ranges Only; ☒ PCB ☒ PEST; TPH: ☐ Quant Only ☐ Fingerprint; Grain size; Total solids + moisture content; Total Organic Carbons; TCLP Pb

Filtration: ☐ Field ☐ Lab to do
Preservation: ☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC	SVOC	METALS	METALS	EPH	VPH	PCB	PEST	TPH	Grain size	Total solids + moisture content	Total Organic Carbons	TCLP Pb		Sample Comments	# BOTTLES
07918.05	SC-03-S1	1/21/15	1100	Soil	MJD		X		X			X			X	X	X	X			2
.06	SC-03-S2	1/21/15	1200	Soil	MJD		X		X			X			X	X	X	X			2

SEDIMENT SAMPLING
OVER WATER
ENVIRONMENTAL COC

TO MANSFIELD

4 TOTAL

Container Type: P = Plastic, A = Amber glass, V = Vial, G = Glass, B = Bacteria cup, C = Cube, O = Other, E = Encore, D = BOD Bottle

Preservative: A = None, B = HCl, C = HNO_3, D = H_2SO_4, E = NaOH, F = MeOH, G = $NaHSO_4$, H = $Na_2S_2O_3$, I = Ascorbic Acid, J = NH_4Cl, K = Zn Acetate, O = Other

Container Type											
Preservative											

Relinquished By:	Date/Time	Received By:	Date/Time
Matt Dodson H+A	1/22/15 1500	[illegible] H+A	1/22/15 1500
Redmond Crafort H+A	1/22/15 1630	[illegible] A-AC	1/22/15 1630
[illegible] A-AC	1/22/15 1745	[illegible]	1/22/15 1745
[illegible]	1/23/15 0400	Mansfield Co	1/23/15 0400
[illegible]	4/17/15	[illegible]	4/17/15 1830
[illegible]	4/17/15 1940	[illegible]	4/17/15 1940

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

CHAIN OF CUSTODY

PAGE ____ OF ____

kb 4/17/15 L1507918

Serial No:0427151031

Date Rec'd in Lab:

ALPHA Job #: ~~L1429023~~

8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300

Client Information

Client: ESS Group, Inc.
Address: 100 Fifth Avenue
5th Floor, Waltham, MA
Phone: 781-419-7732
Email: SHerz@essgroup.com

Project Information

Project Name: PNSY
Project Location: Kittery, Maine
Project #: N492-000
Project Manager: Susan Herz
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due:

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Additional Project Information:

1. Grain size per ASTM D422
2. Total solids and moisture content SM2540G
3. Total Organic Carbons EPA SW-846 method 9060

07918

ANALYSIS: VOC: ☐ 8260 ☐ 624 ☐ 524.2; SVOC: ☐ ABN ☒ PAH; METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15; METALS: ☐ RCRA5 ☒ RCRA8 ☐ PP13; EPH: ☐ Ranges & Targets ☐ Ranges Only; VPH: ☐ Ranges & Targets ☐ Ranges Only; PCB ☒ PEST; TPH: ☐ Quant Only ☐ Fingerprint; Grain size; Total solids + moisture content; Total Organic Carbons; TCLP Pb, Cr

SAMPLE INFO: Filtration; Preservation ☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC	SVOC	METALS	METALS	EPH	VPH	PCB	TPH	Grain size	Total solids + moisture content	Total Organic Carbons	TCLP Pb, Cr	Sample Comments	TOTAL # BOTTLES
01 ~~2902301~~	SC-04-1	11/26/14	1045	Soil	MJD		X		X			X		X	X	X	X		2
02 ~~02~~	SC-04-2	"	1120	"	MJD		X		X			X		X	X	X	X		2

SEDIMENT SAMPLING
OVER WATER
ENVIRONMENTAL COC

4 TOTAL

TO MANSFIELD

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Container Type			
Preservative			

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	11/29/14 0900	M. Cuto	12/1/14 162
M. Cuto [signature]	12/1/14 162	[signature] AAL	12/1/14 1630
[signature]	12/1/14 1805	[signature]	12/1/14 1805
[signature]	12/2/14 0400	Mansfield Lab	12/2/14 0400

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

kb 4/17/15 Seal Intact 15:51

CHAIN OF CUSTODY

PAGE ____ OF ____

Date Rec'd in Lab:

ALPHA Job #: L1429023

8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Project Information

Project Name: PNSY
Project Location: Kittery, Maine
Project #: N492-000
Project Manager: Susan Herz
ALPHA Quote #:

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☐ Same as Client info PO #:

Client Information

Client: ESS Group, Inc.
Address: 100 Fifth Avenue 5th Floor, Waltham, MA
Phone: 781-419-7732
Email: SHerz@essgroup.com

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Additional Project Information:

1. Grain size per ASTM D422
2. Total solids and moisture content SM2540G
3. Total Organic Carbons EPA SW-846 method 9060

Site Specific

TCLP Pb

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☐ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☒ PAH	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15	METALS: ☐ RCRA8 ☐ PP13	EPH: ☐ Ranges & Targets ☒ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	PCB ☒ PEST	TPH: ☐ Quant Only ☐ Fingerprint	Grain size	Total solids & moisture content	Total Organic Carbons			Sample Comments	TOTAL BOTTLES
07918 ~~29023 03~~	SC-07-S1	12/2/14	1105	Soil	MJD		X		X			X		X	X	X				2
~~04~~	SC-06-S1	12/3/14	1050	"	MJD		X		X			X		X	X	X				2
.03 ~~05~~	SC-06-S2	"	1210	"	MJD		X		X			X		X	X	X		X		2

SEDIMENT SAMPLING OVER WATER TO MANSFIELD ENVIRONMENTAL COC

(6 TOTAL)

Container Type			A		A			A		P	P	P		
Preservative			A		A			A		A	A	A		

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
	12/4/14 0550		12/4/14 1615
	12/4/14 1800		12/4/14 18:00
	12/5/14 0400	Mansfield 60	12/5/14 0400

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

kb 4/17/15 Serial_No:20150417151651

CHAIN OF CUSTODY

PAGE ____ OF ____

Date Rec'd in Lab:

ALPHA Job #: ~~L1429023~~

ALPHA ANALYTICAL

8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300

Client Information

Client: ESS Group, Inc.
Address: 100 Fifth Avenue
5th Floor, Waltham, MA
Phone: 781-419-7732
Email: SHerz@essgroup.com

Project Information

Project Name: PNSY
Project Location: Kittery, Maine
Project #: N492-000
Project Manager: Susan Herz
ALPHA Quote #:

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due:

Additional Project Information:

Grain Size per ASTM D422
. Total solids and moisture content SM2540G
. Total Organic Carbons EPA SW-846 method 9060

Site Specific

TCLP Pb, Hg

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☐ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☒ PAH	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15	METALS: ☐ RCRA 8 ☐ PP13	EPH: ☐ Ranges & Targets ☐ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	☒ PCB ☒ PEST	TPH: ☐ Quant Only ☐ Fingerprint	Grain Size	Total Solids + moisture content	Total Organic Carbons		Sample Comments	TOTAL # BOTTLES
~~-07~~ 07918-04	SC-02-S1	12/8/14	0920	Sed	MJD		X		X			X		X	X	X	X		2

2 TOTAL

SEDIMENT SAMPLING
OVER WATER
ENVIRONMENTAL COC

TO MANSFIELD

Container Type																			
Preservative																			

Container Type
= Plastic
= Amber glass
= Vial
= Glass
= Bacteria cup
= Cube
= Other
= Encore
= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
	12/10/14 0550	Deborah Crawford	12/10/14 1600
Deborah Crawford Haley Aldrich	12/10/14 1630	Haley Aldrich ARL	12/10/14 1630
	12/10/14 1804		12/10/14 1804
	12/11/14 0400	Mansfield	12/11/14 0400

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

kb 4/17/15 L1507918

CHAIN OF CUSTODY

PAGE ____ OF ____

Date Rec'd In Lab:

ALPHA Job #: L1501520

8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300

Client Information

Client: ESS Group, Inc.
Address: 100 Fifth Avenue
5th Floor, Waltham, MA
Phone: 781-419-7732
Email: SHerz@essgroup.com

Project Information

Project Name: PNSY
Project Location: Kittery, Maine
Project #: N492-000
Project Manager: Susan Herz
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due:

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Additional Project Information:

1. Grain size per ASTM D422
2. Total solids and moisture content SM2540G
3. Total Organic Carbons EPA SW-846 method 9060

TCLP Pb

Filtration ☐ Field ☐ Lab to do
Preservation ☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☐ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☒ PAH	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15	METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13	EPH: ☐ Ranges & Targets ☐ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	PCB ☒ PEST	TPH: ☐ Quant Only ☐ Fingerprint	Grain size	Total solids + moisture content	Total Organic Carbons				Sample Comments	# BOTTLES
07918.05	SC-03-S1	1/21/15	1100	Soil	MJD		X		X			X		X	X	X		X			2
.06	SC-03-S2	1/21/15	1200	Soil	MJD		X		X			X		X	X	X		X			2

SEDIMENT SAMPLING
OVER WATER
ENVIRONMENTAL COC

TO MANSFIELD

4 TOTAL

Container Type																					
Preservative																					

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
Matt Dodson H+A	1/22/15 1500	[illegible] H+A	1/22/15 1500
Redmond Crafford H+A	1/22/15 1630	[illegible] AAC	1/22/15 16:30
[illegible] AAC	1/22/15 17:15	[illegible]	1/22/15 17:15
[illegible]	1/23/15 0100	Mansfield Co	1/23/15 0100

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

ANALYTICAL REPORT

Lab Number:	L1523245
Client:	ESS Group, Inc. 100 Fifth Avenue 5th Floor Waltham, MA 02451
ATTN:	Stephanie Wilson
Phone:	(781) 419-7710
Project Name:	PNSY
Project Number:	N492-003
Report Date:	09/23/15

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), ME (MA00030), PA (68-02089), VA (460194), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), USFWS (Permit #LE2069641), USDA (Permit #P330-11-00109), 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: PNSY
Project Number: N492-003

Lab Number: L1523245
Report Date: 09/23/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1523245-01	SC-08	SEDIMENT	KITTERY, ME	08/12/15 15:15	08/13/15
L1523245-02	SC-09	SEDIMENT	KITTERY, ME	08/12/15 14:45	08/13/15
L1523245-03	SC-10-S1	SEDIMENT	KITTERY, ME	08/12/15 14:23	08/13/15
L1523245-04	SC-11	SEDIMENT	KITTERY, ME	08/12/15 13:50	08/13/15

Project Name: PNSY
Project Number: N492-003

Lab Number: L1523245
Report Date: 09/23/15

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. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. 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. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name:	PNSY	**Lab Number:**	L1523245
Project Number:	N492-003	**Report Date:**	09/23/15

Case Narrative (continued)

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: Elizabeth Porta

Title: Technical Director/Representative

Date: 09/23/15

METALS

Project Name:	PNSY	**Lab Number:**	L1523245
Project Number:	N492-003	**Report Date:**	09/23/15

SAMPLE RESULTS

Lab ID:	L1523245-01	Date Collected:	08/12/15 15:15
Client ID:	SC-08	Date Received:	08/13/15
Sample Location:	KITTERY, ME	Field Prep:	Not Specified
Matrix:	Sediment	TCLP/SPLP Ext. Date:	09/19/15 16:41

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Westborough Lab											
Chromium, TCLP	ND		mg/l	0.20	--	1	09/22/15 07:23	09/22/15 16:03	EPA 3015	1,6010C	TT
Lead, TCLP	ND		mg/l	0.50	--	1	09/22/15 07:23	09/22/15 16:03	EPA 3015	1,6010C	TT

Project Name:	PNSY	**Lab Number:**	L1523245
Project Number:	N492-003	**Report Date:**	09/23/15

SAMPLE RESULTS

Lab ID:	L1523245-02	Date Collected:	08/12/15 14:45
Client ID:	SC-09	Date Received:	08/13/15
Sample Location:	KITTERY, ME	Field Prep:	Not Specified
Matrix:	Sediment	TCLP/SPLP Ext. Date:	09/19/15 16:41

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Westborough Lab											
Chromium, TCLP	ND		mg/l	0.20	--	1	09/22/15 07:23	09/22/15 16:07	EPA 3015	1,6010C	TT
Lead, TCLP	ND		mg/l	0.50	--	1	09/22/15 07:23	09/22/15 16:07	EPA 3015	1,6010C	TT

Project Name:	PNSY	**Lab Number:**	L1523245
Project Number:	N492-003	**Report Date:**	09/23/15

SAMPLE RESULTS

Lab ID:	L1523245-03	Date Collected:	08/12/15 14:23
Client ID:	SC-10-S1	Date Received:	08/13/15
Sample Location:	KITTERY, ME	Field Prep:	Not Specified
Matrix:	Sediment	TCLP/SPLP Ext. Date:	09/19/15 16:41

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Westborough Lab											
Chromium, TCLP	ND		mg/l	0.20	--	1	09/22/15 07:23	09/22/15 17:06	EPA 3015	1,6010C	TT
Lead, TCLP	ND		mg/l	0.50	--	1	09/22/15 07:23	09/22/15 17:06	EPA 3015	1,6010C	TT

Project Name:	PNSY	**Lab Number:**	L1523245
Project Number:	N492-003	**Report Date:**	09/23/15

SAMPLE RESULTS

Lab ID:	L1523245-04	Date Collected:	08/12/15 13:50
Client ID:	SC-11	Date Received:	08/13/15
Sample Location:	KITTERY, ME	Field Prep:	Not Specified
Matrix:	Sediment	TCLP/SPLP Ext. Date:	09/19/15 16:41

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Westborough Lab											
Chromium, TCLP	ND		mg/l	0.20	--	1	09/22/15 07:23	09/22/15 21:23	EPA 3015	1,6010C	TT
Lead, TCLP	ND		mg/l	0.50	--	1	09/22/15 07:23	09/22/15 21:23	EPA 3015	1,6010C	TT

Project Name: PNSY **Lab Number:** L1523245

Project Number: N492-003 **Report Date:** 09/23/15

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Westborough Lab for sample(s): 01-04 Batch: WG823549-1										
Chromium, TCLP	ND		mg/l	0.20	--	1	09/22/15 07:23	09/22/15 14:23	1,6010C	TT
Lead, TCLP	ND		mg/l	0.50	--	1	09/22/15 07:23	09/22/15 14:23	1,6010C	TT

Prep Information

Digestion Method: EPA 3015

TCLP/SPLP Extraction Date: 09/19/15 16:41

Lab Control Sample Analysis

Batch Quality Control

Project Name: PNSY

Project Number: N492-003

Lab Number: L1523245

Report Date: 09/23/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Westborough Lab Associated sample(s): 01-04 Batch: WG823549-2								
Chromium, TCLP	90		-		75-125	-		20
Lead, TCLP	100		-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-003

Lab Number: L1523245
Report Date: 09/23/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG823549-4 QC Sample: L1523321-01 Client ID: MS Sample												
Chromium, TCLP	ND	2	1.9	95		-	-		75-125	-		20
Lead, TCLP	ND	5.1	5.4	106		-	-		75-125	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: PNSY
Project Number: N492-003

Lab Number: L1523245
Report Date: 09/23/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG823549-3 QC Sample: L1523321-01 Client ID: DUP Sample						
Chromium, TCLP	ND	ND	mg/l	NC		20
Lead, TCLP	ND	ND	mg/l	NC		20

Project Name: PNSY
Project Number: N492-003

Lab Number: L1523245
Report Date: 09/23/15

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1523245-01A	Amber 500ml unpreserved	A	N/A	2.4	Y	Absent	-
L1523245-01X	Plastic 250ml HNO3 preserved spl	A	<2	2.4	Y	Absent	PB-CI(180),CR-CI(180)
L1523245-01X9	Tumble Vessel	A	N/A	2.4	Y	Absent	-
L1523245-02A	Amber 500ml unpreserved	A	N/A	2.4	Y	Absent	-
L1523245-02X	Plastic 250ml HNO3 preserved spl	A	<2	2.4	Y	Absent	PB-CI(180),CR-CI(180)
L1523245-02X9	Tumble Vessel	A	N/A	2.4	Y	Absent	-
L1523245-03A	Amber 500ml unpreserved	A	N/A	2.4	Y	Absent	-
L1523245-03X	Plastic 250ml HNO3 preserved spl	A	<2	2.4	Y	Absent	PB-CI(180),CR-CI(180)
L1523245-03X9	Tumble Vessel	A	N/A	2.4	Y	Absent	-
L1523245-04A	Amber 500ml unpreserved	A	N/A	2.4	Y	Absent	-
L1523245-04X	Plastic 250ml HNO3 preserved spl	A	<2	2.4	Y	Absent	PB-CI(180),CR-CI(180)
L1523245-04X9	Tumble Vessel	A	N/A	2.4	Y	Absent	-

*Values in parentheses indicate holding time in days

Project Name:	PNSY	**Lab Number:**	L1523245
Project Number:	N492-003	**Report Date:**	09/23/15

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
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.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: 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.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
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.
MSD	- 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.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL 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.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

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 ten times (10x) the concentration found in the blank. For MCP-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. 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. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

Report Format: Data Usability Report

Project Name: PNSY **Lab Number:** L1523245

Project Number: N492-003 **Report Date:** 09/23/15

Data Qualifiers

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.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

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. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. 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 RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name: PNSY **Lab Number:** L1523245
Project Number: N492-003 **Report Date:** 09/23/15

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

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 Analytical 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 Analytical.

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.

Certification Information

Last revised December 16, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA 2540D: TSS
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F,**
EPA 353.2: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Serial_No:09231516:51

L1523245 ~~L1519473~~ KB 9/18/15

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL

8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Date Rec'd in Lab: 8/13/15
ALPHA Job #: ~~L1519473~~

Client Information

- Client: ESS Group, Inc.
- Address: 100 5th Ave, 5th Flr. Waltham, MA 02451
- Phone: 781-419-7710
- Email: SWilson@essgroup.com

Project Information

- Project Name: PNSY
- Project Location: ~~Portsmouth~~ Kittery, ME
- Project #: N492-003
- Project Manager: S. Wilson
- ALPHA Quote #:

Turn-Around Time

- ☒ Standard
- ☐ RUSH (only confirmed if pre-approved!)
- Date Due:

Report Information - Data Deliverables

- ☒ ADEx
- ☒ EMAIL

Billing Information

- ☒ Same as Client info
- PO #:

Regulatory Requirements & Project Information Requirements

- ☐ Yes ☐ No MA MCP Analytical Methods
- ☐ Yes ☐ No CT RCP Analytical Methods
- ☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
- ☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
- ☐ Yes ☐ No NPDES RGP
- ☒ Other State /Fed Program: Maine Criteria: Residential RAGs

Additional Project Information:

* Place sample material ON HOLD pending results for Metal Analysis. TCLP analysis may be requested if metal concentrations show high levels.

ANALYSIS

Printed options: VOC: ☐ 8260 ☐ 624 ☐ 524.2; SVOC: ☐ ABN ☒ PAH (8270D SIM); METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15; METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13; EPH: ☐ Ranges & Targets ☐ Ranges Only; VPH: ☐ Ranges & Targets ☐ Ranges Only; ☒ PCB ☐ PEST; TPH: ☐ Quant Only ☐ Fingerprint

Handwritten analyses: Hex Chromium (7196A); Dissolved (?) Metals (6010B) (?); Total As, Total Cd, Total Cr; Total Pb (6010B); Total Hg (7471A); TCLP Cr + Pb

SAMPLE INFO — Filtration: ☐ Field ☐ Lab to do; Preservation: ☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	SVOC (PAH)	PCB	Hex Chromium	Dissolved (?) Metals	Total As, Cd, Cr	Total Pb	Total Hg	TCLP Cr + Pb	Sample Comments	Total # Bottles
23245-01 (~~19473~~)	SC-08	8/12/15	1515	SE	MP	X	X	X	X	X	X	X	X		
02	SC-09	↓	1445	↓	↓	X	X	X	X	X	X	X	X		
03	SC-10-S1	↓	1423	↓	↓	X	X	X	X	X	X	X	X		
04	SC-11	↓	1350	↓	↓	X	X	X	X	X	X	X	X		

	SVOC	PCB	Hex Chromium	Dissolved (?) Metals	Total As, Cd, Cr	Total Pb	Total Hg
Container Type	A	A	A	A	A	A	A
Preservative	A	A	A	A	A	A	A

Container Type: P= Plastic, A= Amber glass, V= Vial, G= Glass, B= Bacteria cup, C= Cube, O= Other, E= Encore, D= BOD Bottle

Preservative: A= None, B= HCl, C= HNO_3, D= H_2SO_4, E= NaOH, F= MeOH, G= $NaHSO_4$, H = $Na_2S_2O_3$, I= Ascorbic Acid, J = NH_4Cl, K= Zn Acetate, O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
M. Bittner (?)	8/13/15 1045	[signature] AAL	8/13/15 1045
[signature]	8/13/15 1750	[signature]	8/13/15 1750
[signature]	9/18/15 19:15	[signature]	9/18/15 1915
[signature]	9/18/15 2021	[signature]	9/18/15 2021

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

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Serial_No:09231516:51

L1523245

KB 9/18/15

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 8/13/15

ALPHA Job #: ~~L1519473~~

ALPHA ANALYTICAL

8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300

Client Information

Client: ESS Group, Inc.

Address: 100 5th Ave, 5th Flr.
Waltham, MA 02451

Phone: 781-419-7710

Email: SWilson@essgroup.com

Project Information

Project Name: PNSY

Project Location: ~~Portsmouth~~ Kittery, ME

Project #: N492-003

Project Manager: S. Wilson

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due:

Report Information - Data Deliverables

☒ ADEx ☒ EMAIL

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods

☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)

☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)

☐ Yes ☐ No NPDES RGP

☒ Other State /Fed Program Maine Criteria Residential RAGs

Additional Project Information:

* Place sample material ON HOLD pending results for Metal Analysis. TCLP analysis may be requested if metal concentrations show high levels.

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☐ 8260 ☐ 624 ☐ 524.2	~~SVOC: ☐ 8270~~	~~PAH (8270D SIM)~~	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15	METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13	EPH: ☐ Ranges & Targets ☐ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	~~PCB~~ ~~☐ PEST~~	TPH: ☐ Quant Only ☐ Fingerprint	~~Hex Chromium (3060A)~~	~~Dissolved Chromium (6010B)~~	~~Total Cr, Total Cu, Total Ni~~	~~Total Pb (6020)~~	~~Total Hg (7471A)~~	TCLP Cr + Pb	Sample Comments	TOTAL # BOTTLES
2324LS ~~1447~~-01	SC-08	8/12/15	1515	SE	MP		X					X			X	X	X	X	X	X		
02	SC-09	↓	1445	↓	↓		X					X			X	X	X	X	X	X		
03	SC-10-S1	↓	1423	↓	↓		X					X			X	X	X	X	X	X		
04	SC-11	↓	1350	↓	↓		X					X			X	X	X	X	X	X		
Container Type							A					A			A	A	A	A	A			
Preservative							A					A			A	A	A	A	A			

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
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D= H_2SO_4
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F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
M. Rettew	8/13/15 1045	[illegible]	8/13/15 10:45
[illegible]	8/13/15 1750	[illegible]	8/13/15 1750

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

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