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March 29, 2010 Reference No. 059570

Mr. Jason Keys, Environmental Officer
Public Works & Government Services Canada
Environmental Services Group
PO Box 7350
Saint John, NB E2L 4J4

Dear Mr. Keys:

Re: Marine Sediment Sampling Program (MSSP)
North Head Harbour (SCH 2603), Grand Manan Island
Charlotte County, New Brunswick

Conestoga-Rovers & Associates (CRA) is pleased to provide Public Works and Government Services Canada (PWGSC) with the findings of a marine sediment sampling program (MSSP) undertaken at North Head Harbour, Grand Manan Island, Charlotte County, NB. The purpose of this program is to characterize the sediment to determine acceptable disposal options for the marine sediment intended to be dredged.

SCOPE AND METHODOLOGY

The MSSP was conducted on March 9 and 10, 2010 at North Head Harbor (SCH 2603), in Charlotte County, NB (Figure 1). The program consisted of the collection of sediment samples from 26 different locations within 4 areas in the vicinity of the two wharfs (Figure 2). The samples consisted of Surface (0-15 cm) and Subsurface (>30 cm and preferably at the 60-75 cm interval) where available at all locations. If the 60-75 cm interval depth could not be sampled due to sediment conditions or presence of bedrock, a sample was collected from the deepest 10 cm depth interval. If sampler refusal occurred at less than approximately 30 cm depth, only a surface sample (0-15 cm) was collected. Twenty six (26) surface and five (5) sub-surface samples were collected.

The sediment samples were collected using a push core tube and a diving team. The four sample areas and numbers of samples in each areas were selected by Public Works and Government Services Canada (PWGSC). CRA subdivided each area into 40 potential sample locations and used a random number generator to select the requested number of samples in each area. It is noted that some sediment sample locations were relocated in the field due to presence of bedrock (absence of sediments) at the randomly picked location. Sample refusal was verified by multiple nearby attempts. The depth to bedrock was also recorded at all sampling locations. Sample locations are shown on Figure 2.

CRA retained Dominator Marine Services Inc. (DMS) of Saint John, NB to complete the diving and sampling portion of this project. A CRA representative was on-site during sample collection and the samples were collected in laboratory supplied jars and maintained in cool storage until delivery to the laboratory. The CRA representative forwarded the samples to Maxxam Analytics Inc. (Maxxam) in Dartmouth, NS, an accredited laboratory with the Standards Council of Canada (SCC) for select chemical analyses.

At the request of PWGSC, the sediment samples were analyzed for the ocean disposal suite of parameters and compared to the Canadian Environmental Protection Act (CEPA) Disposal at Sea Regulations and the Canadian Council of Ministers of the Environment (CCME) marine sediment quality guidelines (SQGs). The sediment sample results were also compared to the commercial CCME Soil quality guidelines (SQGs) for land disposal. Total Petroleum Hydrocarbon (TPH) results were compared to the Atlantic RBCA Tier I Risk-Based Screening Levels (RBSL) and one-half of these values are based on Health Canada guidance dated July 10, 2006. The sediment samples were submitted to the laboratory for the following parameters: hexavalent chromium, BTEX, TPH, available and total metals, mercury (total), low level polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyl's (PCBs). In addition analyses were completed for total organic carbon (TOC), total inorganic carbon (TIC) and grain size distribution.

The Quality Assurance/Quality Control (QA/QC) sampling was conducted on approximately 10% of parameters that were analysed. In addition, Maxxam has an in-house QA/QC program to govern sample analysis, including replicates. QA/QC was addressed by submitting blind field duplicates. The results of this testing were used to evaluate the reliability of the sampling/analysis. Three blind field duplicate samples were collected on site and sent for analysis and are as follows:

- QA/QC-1; duplicate of 10SED-4 (0-15 cm);
- QA/QC-2; duplicate of 10SED-8 (0-15 cm); and
- QA/QC-3; duplicate of 10DED-23 (0-15 cm).

The marine sediment samples (total of 34 including 3 blind field duplicates) were analyzed in accordance with, and evaluated against the following:

<u>Ocean based disposal analysis</u>

- The Canadian Environmental Protection Act (CEPA) Disposal at Sea Regulations; and

- The Canadian Council of Ministers of the Environment (CCME) Sediment Quality Guidelines for the Protection of Aquatic Life (2002), Marine Sediment Probable Effects Levels (PELs).

Land based disposal analysis

- The Atlantic RBCA Version 2.0 Tier I Risk-Based Screening Levels (RBSLs) for TPH;
- Health Canada Guidance on Atlantic RBCA TPH (July 10, 2006); and
- The Canadian Council of Ministers of the Environment (CCME) Soil Quality Guidelines (SQGs) for the Protection of Environmental and Human Health (September 2007, 2008) for commercial applications for other parameters.

The coordinates for the sampling program are listed in Table 1 as northing and easting (Datum: NAD83, CSRS 98 NB Double Stereographic). These coordinates were used to navigate to the sample locations with a pre-programmed Global Positioning System (GPS). The sample depth, recovery and general observation/comments for each sample are also included in Table 1.

TABLE 1

SAMPLING PROGRAM COORDINATES, NORTH HEAD HARBOUR
GRAND MANAN ISLAND, CHARLOTTE COUNTY, NB

Sample Identification	*EASTING x*	*NORTHING y*	*Surface*	*Subsurface*	*Comments/Observations*
Area #1					
10SED-1	2480374.63231	7306820.85665	0-15 cm	NC	100% recovery. Black silt. Bedrock at 30 cm
10SED-2	2480327.10606	7306838.90016	0-15 cm	30-45 cm	80% recovery. Black silt. Bedrock at 45 cm.
10SED-3	2480419.67134	7306839.93648	0-15 cm	40-50 cm	80% recovery. Black silt. Bedrock at 55 cm.
10SED-4	2480356.16122	7306876.48339	0-15 cm	NC	100% recovery. Black silt. Bedrock at 25 cm
10SED-5	2480328.13372	7306891.97916	0-15 cm	NC	100% recovery. Black silt. Bedrock at 30 cm
10SED-6	2480347.66462	7306925.53070	0-15 cm	NC	100% recovery. Black silt. Bedrock at 30 cm
Area #2					
10SED-7	2480187.35318	7306963.96363	0-15 cm	40-54 cm	75% recovery. Black silt. Bedrock at 54 cm
10SED-8	2480196.48627	7306983.28411	0-15 cm	NC	100% recovery. Black silt. Bedrock at 29 cm
10SED-9	2480161.24031	7306999.21328	0-15 cm	NC	100% recovery. Black silt. Bedrock at 32 cm
10SED-10	2480148.70788	7307028.51325	0-15 cm	NC	100% recovery. Black silt. Bedrock at 30 cm

TABLE 1

**SAMPLING PROGRAM COORDINATES, NORTH HEAD HARBOUR
GRAND MANAN ISLAND, CHARLOTTE COUNTY, NB**

Sample Identification	*EASTING x*	*NORTHING y*	*Surface*	*Subsurface*	*Comments/Observations*
10SED-11	2480225.14744	7307014.07710	0-15 cm	45-60 cm	60% recovery. Black silt underlain by silty clay. Bedrock at 60 cm
10SED-12	2480175.85615	7307044.17187	0-15 cm	NC	100% recovery. Black silt. Bedrock at 22 cm
Area #3					
10SED-13	2480062.93131	7306920.65164	0-15 cm	30-41 cm	50% recovery. Brown fine grained silty sand. Bedrock at 41 cm
10SED-14	2480078.22083	7306881.79338	0-15 cm	NC	100% recovery. Brown fine grained silty sand. Bedrock at 33 cm
10SED-15	2480077.79263	7306908.33582	0-15 cm	NC	100% recovery. Brown fine grained silty sand. Bedrock at 27 cm
10SED-16	2480077.57716	7306947.39904	0-15 cm	NC	100% recovery. Brown fine grained silty sand. Bedrock at 31 cm.
10SED-17	2480077.79244	7306960.99012	0-15 cm	NC	100% recovery. Brown fine grained silty sand. Bedrock at 24 cm.
10SED-18	2480107.72980	7306894.74351	0-15 cm	NC	100% recovery. Brown fine grained silty sand. Bedrock at 18 cm.
10SED-19	2480108.15803	7306908.33392	0-15 cm	NC	100% recovery. Brown fine grained silty sand. Bedrock at 34 cm
Area #4					
10SED-20	2479958.03534	7306995.17490	0-15 cm	NC	100% recovery. Brown fine grained silty sand. Bedrock at 18 cm
10SED-21	2480001.32088	7307003.31075	0-15 cm	NC	90% recovery. Brown fine grained silty sand. Bedrock at 19 cm
10SED-22	2479984.19077	7306984.31363	0-15 cm	NC	100% recovery. Black silt. Bedrock at 24 cm

TABLE 1

**SAMPLING PROGRAM COORDINATES, NORTH HEAD HARBOUR
GRAND MANAN ISLAND, CHARLOTTE COUNTY, NB**

Sample Identification	*EASTING x*	*NORTHING y*	*Surface*	*Subsurface*	*Comments/Observations*
10SED-23	2480038.08485	7307022.77739	0-15 cm	NC	100% recovery. Brown fine grained silty sand. Bedrock at 18 cm
10SED-24	2480076.94005	7306993.90576	0-15 cm	NC	100% recovery. Black silt. Bedrock at 24 cm
10SED-25	2480056.44996	7307016.58896	0-15 cm	NC	100% recovery. Black silt. Bedrock at 20 cm
10SED-26	2480081.88702	7307022.29521	0-15 cm	NC	100% recovery. Black silty sand. Bedrock at 19 cm

Note: NC- Sample not collected

Exposed bedrock with no accumulated sediment was noted below the water surface, especially in Area 4. The blue line on Figure 4 and the shore line were the areas where bedrock was observed with no deposited sediment.

MARINE SEDIMENT SAMPLING ANALYTICAL RESULTS

The analytical results for the 34 marine sediment samples (including 3 blind field duplicate samples) obtained at 26 sample locations at the North Head Harbour are summarized in Table Nos. 2 to 7 and are discussed below. The complete set of analytical results, laboratory QA/QC and Certificates of Analyses for all parameters tested are provided in Appendix A.

PAH Concentrations (Table 2)

Ocean based disposal comparison:

Thirty two (32) samples (27 surface and 5 sub-surface) including 3 blind field duplicate samples collected at North Head Harbour exceed the CEPA Disposal at Sea Regulation of 2.5 mg/kg for total PAHs. Twenty nine (29) samples (24 surface and 5 sub-surface) including 2 blind field duplicates exceed the CCME Marine Sediment PELs.

Land based disposal comparison:

Six (6) samples (3 surface and 3 sub-surface) collected at North Head Harbour exceed the commercial CCME SQGs for Human Health, Direct Contact for Benzo(a)Pyrene B(a)P Total Potency Equivalents (TPE). Sixteen (16) samples (12 surface and 4 sub-surface) including 1 field duplicate sample exceed the Modified B(a)P TPE Concentration for soil contamination by coal tar or creosote mixtures (B(a)P TPE x 3).

All samples collected at North Head Harbour exceed the commercial CCME SQGs for human health, protection of potable groundwater and the Index of Additive Cancer Risk (Drinking water Check) IACR of <1 mg/kg.

All samples collected are within the commercial CCME SQGs for Environmental Health, Direct Contact.

All samples exceed the commercial CCME SQGs for Environmental Health, Protection of Freshwater Life.

PCB Concentrations (Table 3)

Ocean based disposal comparison:

Four (4) samples (3 surface and 1 sub-surface) exceed the CEPA Disposal at Sea Regulation. One (1) sample (1 surface) exceed the CCME Marine Sediment Probable Effect Levels (PELs).

Land based disposal comparison:

All of the sediment samples collected contain PCB concentrations within the CCME SQGs for commercial applications.

Metal Concentrations (Table 4A and 4B)

Ocean based disposal comparison:

Sediment samples collected from North Head Harbour were analyzed for total metals and the analytical results were compared to the established CEPA Disposal at Sea Regulation and the CCME Marine Sediment PELs. Eight (8) samples (6 surface and 2 sub-surface) including 1 blind field duplicate sample exceed the CEPA Disposal at sea regulation for Cadmium. Two (2) samples (1 surface and 1 sub-surface) exceed the CCME Marine Sediment PELs for Copper. One (1) sample (1 surface) exceed the CCME Marine Sediment PELs for lead. Refer to Table No. 4A.

Land based disposal comparison:

Sediment samples collected from North Head Harbour were analyzed for available metals including Hexavalent Chromium and the analytical results were compared to the CCME SQGs for commercial applications. Eighteen (18) samples (14 surface and 4 sub-surface) including 2 field duplicate samples exceed the CCME SQGs for commercial applications for arsenic. Four (4) samples (2 surface and 2 sub-surface) exceeds for copper and one (1) sample (1 surface) exceeds for lead. It is noted that available Mercury was not reported, however, the total mercury concentration for all samples submitted were within applicable guidelines. Refer to Table 4B.

Petroleum Hydrocarbons (Table 5)

The sediment samples collected at North Head Harbour were analyzed for total petroleum hydrocarbon (TPH) including a Benzene, toluene, ethylbenzene and xylenes (BTEX) breakdown. The TPH analytical results were compared to the established Atlantic RBCA Version 2.0, Atlantic Canada Tier I Risk Based Screening Levels and the Health Canada guidance for TPH dated July 10, 2006. The BTEX results were compared to the CCME SQGs for commercial applications. BTEX concentrations were not detected in all of the samples collected. The TPH concentration ranged from 38 mg/kg to 1300 mg/kg. All sediment samples were within the Atlantic RBCA Tier 1 soil criteria for BTEX and TPH (#6 Oil). All TPH results were within the Health Canada guidance. The TPH concentration in the sediment samples were mainly classified as #6 Oil.

Total Inorganic Carbon (TIC) and Total Organic Carbon (TOC) (Table 6)

The sediment samples collected at North Head Harbour were analyzed for TIC and TOC and ranged from 1.5 g/kg to 10 g/kg and 3.8 g/kg to 41 g/kg, respectively.

Sediment Grain Size (Table 7)

The laboratory determined that the grain size distribution for the sediment samples collected at North Head Harbour was predominantly sand (average of 47%) with lesser amounts of silt (average 31%), clay (average of 18%) and gravel (average of 4%).

QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

Sampling was completed according to industry standards with new disposal gloves worn during each sampling event and the sampling equipment thoroughly washed prior to each sampling event. Laboratory supplied sample bottles were utilized and samples were kept in cool storage until shipment to the laboratory. Three blind field duplicate samples were collected on site and submitted to the laboratory for analysis.

As per CRA's internal review policy, a project reviewer, Neil Brodie, was established at the outset of the project. This individual reviewed this report prior to its release.

Blind field duplicates were taken and submitted to the laboratory for duplicate analysis. Locations were 10SED-4 (0-15 cm) (QA/QC-1), 10SED-8 (0-15 cm) (QA/QC-2) and 10SED-23 (0-15 cm) (QA/QC-3).

Following is the opinion of the consultant on the validity and interpretation of the laboratory analytical results based on the blind field duplicate quality control samples submitted.

Where either the original sample or the blind field duplicate exceeds guideline or regulation values used for comparison, it is recommended that the higher of the two be assumed correct. All of the data was considered suitable for use except one blind field duplicate for 10SED-23 (QA/QC-3) discussed below for Lead.

Agreement between original samples and blind field duplicates by analytical parameter is discussed in greater detail below.

PAH QA/QC

Relative Percent Difference (RPD) ranged from 0-65%. The CCME Marine Sediment Quality Guidelines (PEL) regulation/guideline exceedances varies for some parameters between the original sample 10SED-4 and the blind field duplicate QA/QC-1. As noted above, the higher value was used for comparison to regulation/guidelines.

PCB QA/QC

The RPD was 0% for the three blind field duplicates.

Total Metals

The RPD ranged from 0-57%. Regulation/Guideline exceedances were the same for each parameter between the original samples and the three blind field duplicates except for lead concentration in the blind field duplicate QA/QC-1 exceeding the CCME SQG of 112 mg/kg. The original sample did not exceed CCME SQG for lead.

Available Metals

The RPD for all parameters between the original samples and the three blind field duplicates ranged from 0-57% except for lead in QA/QC-3 with a RPD of 175%. Regulation/Guideline exceedances were the same for each parameters except for lead concentration in the blind field duplicate QA/QC-3 exceeding the CCME SQG of 260 mg/kg. The original sample did not exceed CCME SQG for lead. The laboratory was contacted regarding the higher lead result (340 mg/kg) in the blind field duplicate sample. A visual inspection of the dried, ground portion of the blind field duplicate sample determined that the sample is not homogeneous (many pieces of white material distributed throughout the sample). It is expected that this inhomogenity contributed to the high lead concentration for this sample. The higher result should be assumed to be correct.

BTEX/TPH

The RPD ranged from 0 to 29% which is considered excellent.

Grain Size QA/QC

RPD of the gravel, sand, silt, clay fractions for the thee blind field duplicates ranged from 0-30% with the exception of the gravel content between the original sample and the blind field duplicate QA/QC-2 which had a RPD of 160%. None would alter the conclusion that the sediments were predominately fine-grained materials.

SUMMARY

Marine sediment samples were collected at 26 locations in four Areas identified by PWGSC at North Head Harbour (SCH 2603) on Grand Manan Island in Charlotte County, NB in March 2010. One sample was collected at each location from surface depth (0 – 30 cm) and one deeper where sediment depth was sufficient. Sediment accumulation was generally shallow with depths of less than 30 cm at 21 of the 26 sample locations.

Bedrock with no accumulated sediment was observed to extend from shore, particularly in Area 4 in the western area of the harbour.

Quality control samples collected and analysed were considered acceptable and all data including quality control samples were used for assessment.

Sample analysis included parameters for comparison to CEPA Disposal at Sea Regulations and soil criteria for Commercial land use. The majority of the sediments tested were found to exceed Disposal at Sea Regulations, primarily for PAH. The source of the PAH is not known but may be from creosote treated wood used in harbour construction.

Comparison to land disposal criteria was based generally on compliance with Commercial land use criteria. PAH, arsenic, copper and lead exceeded Commercial land use criteria. These criteria assumed direct contact human and ecological exposure was possible and potable groundwater was in the immediate area. More detailed consideration of the land disposal area might eliminate these potential risks.

CLOSING

CRA appreciates the opportunity to provide services to your organization. Please do not hesitate to call if you have any questions regarding this, or any other matter.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Neil Brodie, P.Eng. Mario Theriault, Ctech.

NB/ad/2
Encl.

Meters

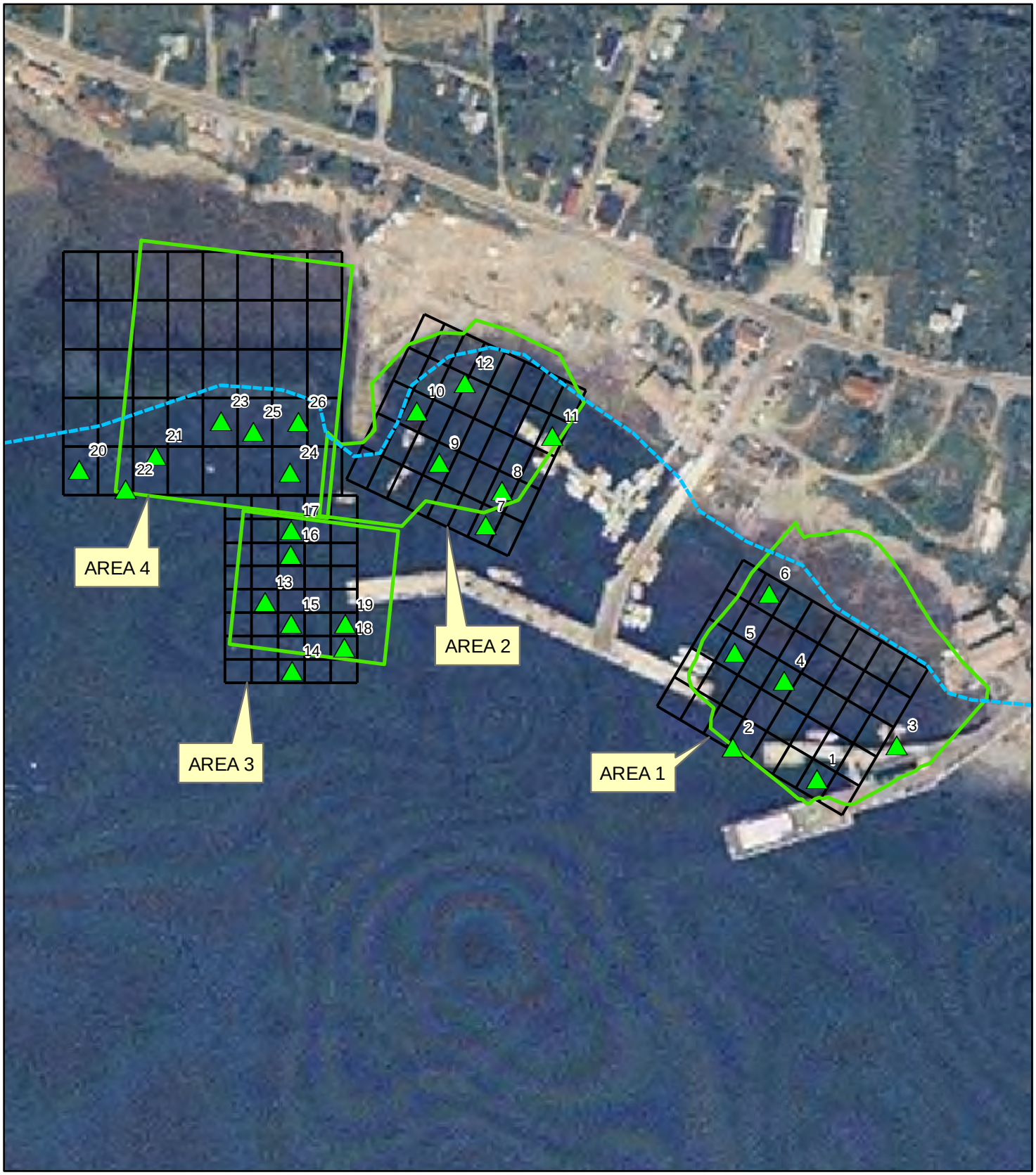
0 380 760 1,520 2,280 3,040

1:50,000

N

figure 1
Site Location
Marine Sediment Sampling Program
North Head Harbour SCH 2603, Grand Manan Island
Charlotte County, New Brunswick

059570-00(KEYS001)GIS-FR002



059570-00(KEYS001)GIS-FR001

Legend

- Edge of Visible Bedrock
- Sediment Sample location
- PWGSC Sampling Area

Meters

0 20 40 80 120 160

1:3,000

N

figure 2
Sample Locations
Marine Sediment Sampling Program
North Head Harbour SCH 2603, Grand Manan Island
Charlotte County, New Brunswick

TABLE 2

SOIL ANALYTICAL RESULTS - PAHs (mg/kg)

Parameters	*CEPA Disposal at Sea Regulations*	*CCME Marine Sediment Quality Guidelines (PEL*	*2008 CCME Guidelines (Commercial) - Human Health, Direct Contact, 10-5 ILCR*	*CCME PEFs*	*2008 CCME Guidelines (Commercial) - Human Health, Protection of Potable Groundwater*	*2008 CCME Guidelines (Commercial) - Environmental Health, Direct Contact*	*2008 CCME Guidelines (Commercial) - Environmental Health, Protection of Freshwater Life*	*Detection Limits*	Sample Locations								
									10SED-1	10SED-2		10SED-3		10SED-4	QA/QC-1 (Field dup of 10SED-4)	10SED-5	10SED-6
									0-15cm	0 - 15cm	30-45cm	0 - 15cm	40-50cm	0-15cm	0-15cm	0-15cm	0-15cm
									3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/10/2010
1-Methylnaphthalene								0.005	0.014	<0.005	0.044	0.015	0.054	<0.005	<0.005	0.014	0.015
2-Methylnaphthalene		0.201						0.005	0.039	0.022	**0.23**	0.029	0.052	0.012	0.015	0.022	0.025
Acenaphthylene		0.128					320	0.005	0.070	0.032	**0.26**	0.081	**0.33**	0.017	0.016	0.028	0.082
Acenaphthene		0.0889					0.28	0.005	**0.19**	**0.15**	**0.19**	**0.31**	**0.33**	0.037	0.021	0.077	0.055
Anthracene		0.245				32		0.005	**2.8**	**1.7**	**8.4**	**1.5**	**2.1**	**0.31**	**0.36**	**0.49**	**0.60**
Benz(a)anthracene		0.693		0.1	0.33			0.005	**6.2**	**4.5**	**15 (3)**	**3.5**	**6.5**	**0.76**	**0.88**	**1.7**	**1.1**
Benzo(a)pyrene		0.763		1	0.37	72	8800	0.005	**4.6**	**2.8**	**7.0**	**3.5**	**4.6**	0.69	**1.0**	**1.3**	**1.1**
Benzo(b)fluoranthene				0.1	0.16			0.005	5.3	4.0	5.5	4.6	4.7	0.95	1.2	1.7	1.2
Benzo(g,h,i)perylene				0.01	6.8			0.005	2.2	1.3	2.1	1.8	2.2	0.45	0.66	0.77	0.61
Benzo(k)fluoranthene				0.1	0.034			0.005	2.8	2.1	4.9	2.1	3.1	0.59	0.68	0.86	0.71
Chrysene		0.846		0.01	2.1			0.005	**10**	**4.9**	**25 (3)**	**5.1**	**7.7**	**1.2**	**1.7**	**2.0**	**1.5**
Dibenz(a,h)anthracene		0.135		1	0.23			0.005	**0.74**	**0.43**	**0.75**	**0.55**	**0.70**	0.13	**0.18**	**0.24**	**0.19**
Fluoranthene		1.494				180		0.005	**5.7**	**17**	**140 (3)**	**4.4**	**12 (3)**	0.95	1.4	**5.2**	**1.8**
Fluorene		0.144					0.25	0.005	**0.57**	**0.37**	**6.5**	**0.35**	**0.49**	0.071	0.082	0.12	**0.18**
Indenopyrene				0.1	2.7			0.005	2.2	1.4	2.2	1.8	2.3	0.44	0.59	0.76	0.60
Naphthalene		0.391					0.013	0.005	0.051	0.023	0.11	0.036	0.080	0.013	<0.005	0.024	0.033
Perylene								0.005	1.2	0.82	1.9	0.95	1.2	0.21	0.31	0.38	0.29
Phenanthrene		0.544					0.046	0.005	**3.2**	**3.1**	**57 (3)**	**1.9**	**2.0**	0.42	**0.56**	**0.82**	**1.3**
Pyrene		1.398						0.005	**11**	**19**	**140 (3)**	**6.5**	**12 (3)**	0.81	1.2	**4.7**	**1.7**
Total PAH (1/2 Detection Limit used)	2.5								**58.874**	**63.65**	**40.084**	**39.021**	**38.436**	**8.0625**	**10.859**	**21.205**	**13.09**
B(a)P Total Potency Equivalents (TPE)			5.3						7.11	4.49	9.03	5.32	7.06	1.11	1.54	2.07	1.67
Modified B(a)P TPE Concentration due to soil contamination by coal tar or creosote mixtures (B(a)P TPE x 3).			5.3						21.34	13.48	27.09	15.96	21.18	3.33	4.62	6.21	5.02
Index of Additive Cancer Risk (Drinking Water check) (IACR)					<1.0				155.82	112.88	201.80	116.33	160.57	28.82	34.78	46.97	36.54

Notes:
Where parameter is not detected, TPE and IACR calculations use 1/2 the detection limit
CCME - Canadian Council of Ministers of the Environment Canadian Soil Quality Guidelines, Polycyclic Aromatic Hydrocarbons Commercial land use, 2008
PEFs - Potency Equivalence Factor - indicates the parameter's relative potency to B(a)P
IACR - Index of Additive Cancer Risk (Drinking Water Check) =

([Benz[a]anthracene]/0.33 mg·kg-1) + ([Chrysene]/2.1 mg·kg-1) + ([Benzo[b+j]fluoranthene]/0.16 mg·kg-1) + ([Benzo[k]fluoranthene]/0.034 mg·kg-1) + ([Benzo[a]pyrene]/0.37 mg·kg-1) + ([Indeno[1,2,3-c,d]pyrene]/2.7 mg·kg-1) + ([Dibenz[a,h]anthracene]/0.23 mg·kg-1) + ([Benzo[g,h,i]perylene]/6.8 mg·kg-1)

ILCR - Incremental Lifetime Cancer Risk
PEL - Probable Effect Levels
Bold - Value indicates CEPA Disposal at Sea Guidelines exceedances
Bold - Value indicates CCME Marine Sediment Quality Guidelines (PEL) exceedances
Shaded Values - Parameter Exceeds Human Health Soil Direct Contact Guidelines for B(a)P TPE and B(a)P TPE x3
Shaded Values - Parameter Exceeds Human Health Protection of Potable Water Guidelines
Shaded Values - Parameter Exceeds Environmental Health Soil Direct Contact Guidelines
Shaded Values - Parameter Exceeds Human Health Protection of Freshwater Life Guidelines
<0.005 - Less Than Reportable Detection Limit
--- No Applicable guideline
QA/QC-1 - Blind field duplicate sample
(1) - Duplicate: sample results are within 5x RDL
(2) - Duplicate: < 10 % of compounds in multi-component analysis in violation
(3) - Elevated PAH RDL(s) due to sample dilution

TABLE 2

SOIL ANALYTICAL RESULTS - PAHs (mg/kg)

Parameters	*CEPA Disposal at Sea Regulations*	*CCME Marine Sediment Quality Guidelines (PEL*	*2008 CCME Guidelines (Commercial) - Human Health, Direct Contact, 10-5 ILCR*	*CCME PEFs*	*2008 CCME Guidelines (Commercial) - Human Health, Protection of Potable Groundwater*	*2008 CCME Guidelines (Commercial) - Environmental Health, Direct Contact*	*2008 CCME Guidelines (Commercial) - Environmental Health, Protection of Freshwater Life*	*Detection Limits*	Sample Locations									
									10SED-7		10SED-8		QA/QC-2 (Field dup of 10SED-8)	10SED-9	10SED-10	10SED-11		10SED-12
									0-15cm	40-54cm	0-15cm	Lab Dup	0-15cm	0-15cm	0-15cm	0-15cm	45-60cm	0-15cm
									3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
1-Methylnaphthalene								0.005	0.036	0.057	0.034	0.017 (1)	0.025	0.033	0.034	0.016	0.015	0.056
2-Methylnaphthalene		0.201						0.005	0.054	0.084	0.051	0.031 (2)	0.035	0.049	0.053	0.021	0.019	0.077
Acenaphthylene		0.128					320	0.005	**0.14**	**0.23**	0.10	0.085	0.099	**0.14**	**0.14**	0.041	0.042	0.082
Acenaphthene		0.0889					0.28	0.005	**0.28**	**0.39**	**0.12**	**0.14**	0.061	**0.20**	**0.16**	**0.14**	0.082	**0.26**
Anthracene		0.245				32		0.005	**1.2**	**1.6**	**0.65**	**0.67**	**0.66**	**0.99**	**0.92**	**0.47**	**0.37**	**0.70**
Benz(a)anthracene		0.693		0.1	0.33			0.005	**3.5**	**5.9**	**2.6**	**2.3**	**2.6**	**2.8**	**2.5**	**1.6**	**1.2**	**1.8**
Benzo(a)pyrene		0.763		1	0.37	72	8800	0.005	**3.8**	**5.7**	**2.3**	**2.0**	**2.2**	**2.6**	**2.1**	**1.5**	**1.2**	**1.7**
Benzo(b)fluoranthene				0.1	0.16			0.005	3.4	5.2	2.1	1.9	2.1	2.3	1.9	1.3	1.3	1.7
Benzo(g,h,i)perylene				0.01	6.8			0.005	1.8	2.7	1.2	1.0	1.1	1.2	1.1	0.85	0.73	0.95
Benzo(k)fluoranthene				0.1	0.034			0.005	1.9	3.0	1.5	1.2	1.3	1.3	1.2	0.95	0.72	0.82
Chrysene		0.846		0.01	2.1			0.005	**3.5**	**5.4**	**2.6**	**2.4**	**2.8**	**2.7**	**2.6**	**1.8**	**1.3**	**2.0**
Dibenz(a,h)anthracene		0.135		1	0.23			0.005	**0.55**	**0.80**	**0.37**	**0.32**	**0.34**	**0.35**	**0.34**	**0.26**	**0.21**	**0.28**
Fluoranthene		1.494				180		0.005	**7.0**	**10 (3)**	**5.0**	**4.0**	**5.6**	**5.6**	**5.2**	**2.5**	**1.8**	**4.4**
Fluorene		0.144					0.25	0.005	**0.33**	**0.53**	**0.23**	**0.18**	**0.20**	**0.31**	**0.26**	0.11	0.091	**0.23**
Indenopyrene				0.1	2.7			0.005	1.9	2.8	1.2	1.1	1.1	1.2	1.2	0.88	0.75	0.98
Naphthalene		0.391					0.013	0.005	0.12	0.18	0.12	0.046 (2)	0.074	0.10	0.090	0.027	0.034	0.13
Perylene								0.005	0.93	1.4	0.66	0.58	0.65	0.65	0.62	0.45	0.36	0.45
Phenanthrene		0.544					0.046	0.005	**2.6**	**4.0**	**2.0**	**1.6**	**1.8**	**2.4**	**2.4**	**0.89**	**0.72**	**2.6**
Pyrene		1.398						0.005	**7.0**	**11 (3)**	**4.4**	**3.6**	**4.7**	**5.7**	**4.4**	**2.1**	**1.9**	**3.8**
Total PAH (1/2 Detection Limit used)	2.5								**40.0**	**39.971**	**27.235**	**23.075**	**27.444**	**30.622**	**27.217**	**15.905**	**12.843**	**23.015**
B(a)P Total Potency Equivalents (TPE)			5.3						5.47	8.27	3.45	3.00	3.29	3.75	3.16	2.26	1.83	2.54
Modified B(a)P TPE Concentration due to soil contamination by coal tar or creosote mixtures (B(a)P TPE x 3).			5.3						16.42	24.81	10.34	9.01	9.87	11.25	9.47	6.78	5.48	7.62
Index of Additive Cancer Risk (Drinking Water check) (IACR)					<1.0				103.04	161.50	74.81	62.63	68.57	71.55	63.74	47.41	38.10	47.46

Notes:

Where parameter is not detected, TPE and IACR calculations use 1/2 the detection limit

CCME - Canadian Council of Ministers of the Environment Canadian Soil Quality Guidelines, Polycyclic Aromatic Hydrocarbons Commercial land use, 2008

PEFs - Potency Equivalence Factor - indicates the parameter's relative potency to B(a)P

IACR - Index of Additive Cancer Risk (Drinking Water Check) =

([Benz[a]anthracene]/0.33 mg·kg-1) + ([Chrysene]/2.1 mg·kg-1) + ([Benzo[b+j]fluoranthene]/0.16 mg·kg-1) + ([Benzo[k]fluoranthene]/0.034 mg·kg-1) + ([Benzo[a]pyrene]/0.37 mg·kg-1) + ([Indeno[1,2,3-c,d]pyrene]/2.7 mg·kg-1) + ([Dibenz[a,h]anthracene]/0.23 mg·kg-1) + ([Benzo[g,h,i]perylene]/6.8 mg·kg-1)

ILCR - Incremental Lifetime Cancer Risk

PEL - Probable Effect Levels

Bold - Value indicates CEPA Disposal at Sea Guidelines exceedances

Bold - Value indicates CCME Marine Sediment Quality Guidelines (PEL) exceedances

Shaded Values - Parameter Exceeds Human Health Soil Direct Contact Guidelines for B(a)P TPE and B(a)P TPE x3

Shaded Values - Parameter Exceeds Human Health Protection of Potable Water Guidelines

Shaded Values - Parameter Exceeds Environmental Health Soil Direct Contact Guidelines

Shaded Values - Parameter Exceeds Human Health Protection of Freshwater Life Guidelines

<0.005 - Less Than Reportable Detection Limit

--- No Applicable guideline

QA/QC-1 - Blind field duplicate sample

(1) - Duplicate: sample results are within 5x RDL

(2) - Duplicate: < 10 % of compounds in multi-component analysis in violation

(3) - Elevated PAH RDL(s) due to sample dilution

TABLE 2

SOIL ANALYTICAL RESULTS - PAHs (mg/kg)

Parameters	*CEPA Disposal at Sea Regulations*	*CCME Marine Sediment Quality Guidelines (PEL*	*2008 CCME Guidelines (Commercial) - Human Health, Direct Contact, 10-5 ILCR*	*CCME PEFs*	*2008 CCME Guidelines (Commercial) - Human Health, Protection of Potable Groundwater*	*2008 CCME Guidelines (Commercial) - Environmental Health, Direct Contact*	*2008 CCME Guidelines (Commercial) - Environmental Health, Protection of Freshwater Life*	*Detection Limits*	Sample Locations										
									10SED-13		10SED-14	10SED-15	10SED-16	10SED-17	10SED-18	10SED-19	10SED-20	10SED-21	
									0-15cm	30-41cm	0-15cm	0-15cm	0-15cm	0-15cm	0-15cm	0-15cm	0-15cm	0-15cm	Lab Dup
									3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
1-Methylnaphthalene								0.005	0.014	0.013	0.017	0.009	0.006	<0.005	<0.005	0.008	<0.005	<0.005	<0.005
2-Methylnaphthalene		0.201						0.005	0.016	0.012	0.021	0.010	0.009	0.012	0.007	0.012	<0.005	<0.005	<0.005
Acenaphthylene		0.128					320	0.005	0.055	0.029	0.042	0.023	0.019	0.028	0.013	0.022	<0.005	<0.005	<0.005
Acenaphthene		0.0889					0.28	0.005	0.083	0.021	0.020	0.024	0.012	0.012	0.017	0.020	<0.005	<0.005	<0.005
Anthracene		0.245				32		0.005	**0.39**	0.24	0.22	**0.31**	0.14	**0.42**	0.22	0.18	0.019	0.042	0.033
Benz(a)anthracene		0.693		0.1	0.33			0.005	**1.1**	**1.1**	**0.92**	**1.1**	**1.2**	**1.2**	**1.2**	**1.6**	0.15	0.15	0.14
Benzo(a)pyrene		0.763		1	0.37	72	8800	0.005	**0.88**	**1.0**	**0.88**	**0.95**	**0.92**	**0.93**	**0.87**	**1.0**	0.16	0.17	0.15
Benzo(b)fluoranthene				0.1	0.16			0.005	0.78	0.85	0.70	0.85	0.94	0.95	0.84	1.2	0.12	0.14	0.13
Benzo(g,h,i)perylene				0.01	6.8			0.005	0.48	0.51	0.43	0.49	0.48	0.53	0.41	0.40	0.094	0.087	0.076
Benzo(k)fluoranthene				0.1	0.034			0.005	0.53	0.44	0.40	0.36	0.40	0.55	0.47	0.81	0.097	0.090	0.063
Chrysene		0.846		0.01	2.1			0.005	**1.1**	**1.1**	**0.90**	**1.1**	**1.2**	**1.3**	**1.1**	**1.6**	0.18	0.17	0.17
Dibenz(a,h)anthracene		0.135		1	0.23			0.005	**0.14**	**0.14**	0.12	**0.14**	0.13	**0.17**	0.11	0.11	0.025	0.032	0.023
Fluoranthene		1.494				180		0.005	**1.9**	**2.4**	**1.6**	**2.0**	**1.5**	**1.8**	1.4	**1.8**	0.33	0.31	0.30
Fluorene		0.144					0.25	0.005	0.11	0.094	0.073	0.080	0.045	0.077	0.058	0.062	<0.005	0.010	0.008
Indenopyrene				0.1	2.7			0.005	0.47	0.51	0.42	0.48	0.46	0.51	0.39	0.41	0.097	0.083	0.075
Naphthalene		0.391					0.013	0.005	0.023	0.018	0.037	0.019	0.015	0.017	0.011	0.025	<0.005	0.006	<0.005
Perylene								0.005	0.25	0.26	0.22	0.26	0.26	0.29	0.23	0.28	0.048	0.057	0.049
Phenanthrene		0.544					0.046	0.005	**0.92**	**1.0**	**0.72**	**0.99**	0.49	**0.70**	**0.60**	0.49	0.091	0.14	0.10
Pyrene		1.398						0.005	**1.7**	**2.5**	**1.5**	**1.9**	**1.4**	**1.7**	1.3	**2.1**	0.28	0.27	0.25
Total PAH (1/2 Detection Limit used)	2.5								**10.941**	**12.237**	**9.24**	**11.095**	**9.626**	**11.199**	**9.249**	**12.129**	1.706	1.767	1.58
B(a)P Total Potency Equivalents (TPE)			5.3						1.32	1.45	1.26	1.38	1.37	1.44	1.29	1.53	0.23	0.25	0.22
Modified B(a)P TPE Concentration due to soil contamination by coal tar or creosote mixtures (B(a)P TPE x 3).			5.3						3.97	4.34	3.77	4.15	4.10	4.32	3.86	4.60	0.70	0.75	0.65
Index of Additive Cancer Risk (Drinking Water check) (IACR)					<1.0				27.55	25.69	22.48	23.18	25.14	29.89	26.27	40.33	4.73	4.70	3.71

Notes:

Where parameter is not detected, TPE and IACR calculations use 1/2 the detection limit

CCME - Canadian Council of Ministers of the Environment Canadian Soil Quality Guidelines, Polycyclic Aromatic Hydrocarbons Commercial land use, 2008

PEFs - Potency Equivalence Factor - indicates the parameter's relative potency to B(a)P

IACR - Index of Additive Cancer Risk (Drinking Water Check) =

([Benz[a]anthracene]/0.33 mg·kg-1) + ([Chrysene]/2.1 mg·kg-1) + ([Benzo[b+j]fluoranthene]/0.16 mg·kg-1) + ([Benzo[k]fluoranthene]/0.034 mg·kg-1) + ([Benzo[a]pyrene]/0.37 mg·kg-1) + ([Indeno[1,2,3-c,d]pyrene]/2.7 mg·kg-1) + ([Dibenz[a,h]anthracene]/0.23 mg·kg-1) + ([Benzo[g,h,i]perylene]/6.8 mg·kg-1)

ILCR - Incremental Lifetime Cancer Risk

PEL - Probable Effect Levels

Bold - Value indicates CEPA Disposal at Sea Guidelines exceedances

Bold - Value indicates CCME Marine Sediment Quality Guidelines (PEL) exceedances

Shaded Values - Parameter Exceeds Human Health Soil Direct Contact Guidelines for B(a)P TPE and B(a)P TPE x3

Shaded Values - Parameter Exceeds Human Health Protection of Potable Water Guidelines

Shaded Values - Parameter Exceeds Environmental Health Soil Direct Contact Guidelines

Shaded Values - Parameter Exceeds Human Health Protection of Freshwater Life Guidelines

<0.005 - Less Than Reportable Detection Limit

--- No Applicable guideline

QA/QC-1 - Blind field duplicate sample

(1) - Duplicate: sample results are within 5x RDL

(2) - Duplicate: < 10 % of compounds in multi-component analysis in violation

(3) - Elevated PAH RDL(s) due to sample dilution

TABLE 2

SOIL ANALYTICAL RESULTS - PAHs (mg/kg)

Parameters	*CEPA Disposal at Sea Regulations*	*CCME Marine Sediment Quality Guidelines (PEL*	*2008 CCME Guidelines (Commercial) - Human Health, Direct Contact, 10-5 ILCR*	*CCME PEFs*	*2008 CCME Guidelines (Commercial) - Human Health, Protection of Potable Groundwater*	*2008 CCME Guidelines (Commercial) - Environmental Health, Direct Contact*	*2008 CCME Guidelines (Commercial) - Environmental Health, Protection of Freshwater Life*	*Detection Limits*	Sample Locations					
									10SED-22	10SED-23	QA/QC-3 (Field dup of 10SED-23)	10SED-24	10SED-25	10SED-26
									0-15cm	0-15cm	0-15cm	0-15cm	0-15cm	0-15cm
									3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
1-Methylnaphthalene								0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.006
2-Methylnaphthalene		0.201						0.005	0.009	0.012	0.011	0.013	0.012	<0.005
Acenaphthylene		0.128					320	0.005	0.013	0.022	0.027	0.034	0.031	0.021
Acenaphthene		0.0889					0.28	0.005	0.017	0.021	0.018	0.030	0.022	0.023
Anthracene		0.245				32		0.005	0.13	0.11	0.17	**0.31**	0.17	0.20
Benz(a)anthracene		0.693		0.1	0.33			0.005	0.54	0.53	0.55	**1.6**	**0.98**	**0.93**
Benzo(a)pyrene		0.763		1	0.37	72	8800	0.005	0.58	0.57	0.58	**1.4**	**0.96**	**0.90**
Benzo(b)fluoranthene				0.1	0.16			0.005	0.49	0.44	0.43	1.4	0.79	0.84
Benzo(g,h,i)perylene				0.01	6.8			0.005	0.33	0.32	0.35	0.71	0.51	0.50
Benzo(k)fluoranthene				0.1	0.034			0.005	0.38	0.35	0.35	0.92	0.64	0.40
Chrysene		0.846		0.01	2.1			0.005	0.59	0.60	0.62	**1.7**	**0.88**	**0.97**
Dibenz(a,h)anthracene		0.135		1	0.23			0.005	0.085	0.081	0.081	**0.20**	**0.14**	**0.14**
Fluoranthene		1.494				180		0.005	1.0	1.1	1.2	**2.7**	**1.8**	**1.5**
Fluorene		0.144					0.25	0.005	0.033	0.039	0.052	0.095	0.051	0.049
Indenopyrene				0.1	2.7			0.005	0.30	0.35	0.30	0.68	0.49	0.48
Naphthalene		0.391					0.013	0.005	0.017	0.018	0.015	0.018	0.018	0.019
Perylene								0.005	0.17	0.18	0.18	0.45	0.29	0.29
Phenanthrene		0.544					0.046	0.005	0.40	0.33	0.48	**0.84**	**0.55**	0.54
Pyrene		1.398						0.005	0.97	1.0	1.1	**2.6**	**1.5**	**1.6**
Total PAH (1/2 Detection Limit used)	2.5								**6.057**	**6.1**	**6.517**	**15.703**	**9.837**	**9.411**
B(a)P Total Potency Equivalents (TPE)			5.3						0.85	0.83	0.83	2.08	1.40	1.32
Modified B(a)P TPE Concentration due to soil contamination by coal tar or creosote mixtures (B(a)P TPE x 3).			5.3						2.54	2.48	2.50	6.25	4.21	3.96
Index of Additive Cancer Risk (Drinking Water check) (IACR)					<1.0				18.25	17.01	17.03	46.48	30.61	23.59

Notes:

Where parameter is not detected, TPE and IACR calculations use 1/2 the detection limit

CCME - Canadian Council of Ministers of the Environment Canadian Soil Quality Guidelines, Polycyclic Aromatic Hydrocarbons Commercial land use, 2008

PEFs - Potency Equivalence Factor - indicates the parameter's relative potency to B(a)P

IACR - Index of Additive Cancer Risk (Drinking Water Check) =

([Benz[a]anthracene]/0.33 mg·kg-1) + ([Chrysene]/2.1 mg·kg-1) + ([Benzo[b+j]fluoranthene]/0.16 mg·kg-1) + ([Benzo[k]fluoranthene]/0.034 mg·kg-1) + ([Benzo[a]pyrene]/0.37 mg·kg-1) + ([Indeno[1,2,3-c,d]pyrene]/2.7 mg·kg-1) + ([Dibenz[a,h]anthracene]/0.23 mg·kg-1) + ([Benzo[g,h,i]perylene]/6.8 mg·kg-1)

ILCR - Incremental Lifetime Cancer Risk

PEL - Probable Effect Levels

Bold - Value indicates CEPA Disposal at Sea Guidelines exceedances

Bold - Value indicates CCME Marine Sediment Quality Guidelines (PEL) exceedances

Shaded Values - Parameter Exceeds Human Health Soil Direct Contact Guidelines for B(a)P TPE and B(a)P TPE x3

Shaded Values - Parameter Exceeds Human Health Protection of Potable Water Guidelines

Shaded Values - Parameter Exceeds Environmental Health Soil Direct Contact Guidelines

Shaded Values - Parameter Exceeds Human Health Protection of Freshwater Life Guidelines

<0.005 - Less Than Reportable Detection Limit

--- No Applicable guideline

QA/QC-1 - Blind field duplicate sample

(1) - Duplicate: sample results are within 5x RDL

(2) - Duplicate: < 10 % of compounds in multi-component analysis in violation

(3) - Elevated PAH RDL(s) due to sample dilution

TABLE 3

PCB CONCENTRATIONS IN SEDIMENT SAMPLES

Parameter	Units	CEPA Disposal at Sea Regulations	CCME Marine Sediment Quality Guidelines (2002) PEL	CCME Soil Quality Guidelines, September 2007 Commercial	Sample Identification and Date					
					10SED-1	10SED-2		10SED-3		10SED-4
					0-15cm	0 - 15cm	30-45cm	0 - 15cm	40-50cm	0-15cm
					3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010
Polychlorinated Biphenyl Results										
Total PCB Concentration	**mg/kg**	**0.1**	**0.189**	**33**	**0.37**	**0.14**	<0.05	**0.18**	**0.15**	<0.01

Notes:
--- No Applicable Guideline
<0.01 - Less Than Reportable Detection Limit
PEL - Probable Effect Levels
Bold - Values indicate CEPA Disposal at Sea Regulation exceedances
Bold - Values indicate CCME Marine Sediment Quality Guidelines PEL exceedances
Shaded values indicate CCME Soil Quality Guidelines for Commercial Application exceedances

TABLE 3

PCB CONCENTRATIONS IN SEDIMENT SAMPLES

Parameter	Units	CEPA Disposal at Sea Regulations	CCME Marine Sediment Quality Guidelines (2002) PEL	CCME Soil Quality Guidelines, September 2007 Commercial	Sample Identification and Date					
					QA/QC-1 (Field dup of 10SED-4)	10SED-5	10SED-6	10SED-7		
					0-15cm	0-15cm	0-15cm	0-15cm	40-54cm	Lab Dup
					3/9/2010	3/9/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
Polychlorinated Biphenyl Results										
Total PCB Concentration	**mg/kg**	**0.1**	**0.189**	**33**	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01

Notes:
--- No Applicable Guideline
<0.01 - Less Than Reportable Detection Limit
PEL - Probable Effect Levels
Bold - Values indicate CEPA Disposal at Sea Regulation exceedances
Bold - Values indicate CCME Marine Sediment Quality Guidelines PEL exceedances
Shaded values indicate CCME Soil Quality Guidelines for Commercial Application exceedances

TABLE 3

PCB CONCENTRATIONS IN SEDIMENT SAMPLES

Parameter	Units	CEPA Disposal at Sea Regulations	CCME Marine Sediment Quality Guidelines (2002) PEL	CCME Soil Quality Guidelines, September 2007 Commercial	Sample Identification and Date					
					10SED-8	QA/QC-2 (Field dup of 10SED-8)	10SED-9	10SED-10	10SED-11	
					0-15cm	0-15cm	0-15cm	0-15cm	0-15cm	45-60cm
					3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
Polychlorinated Biphenyl Results										
Total PCB Concentration	**mg/kg**	**0.1**	**0.189**	**33**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Notes:
--- No Applicable Guideline
<0.01 - Less Than Reportable Detection Limit
PEL - Probable Effect Levels
Bold - Values indicate CEPA Disposal at Sea Regulation exceedances
Bold - Values indicate CCME Marine Sediment Quality Guidelines PEL exceedances
Shaded values indicate CCME Soil Quality Guidelines for Commercial Application exceedances

TABLE 3

PCB CONCENTRATIONS IN SEDIMENT SAMPLES

Parameter	Units	CEPA Disposal at Sea Regulations	CCME Marine Sediment Quality Guidelines (2002) PEL	CCME Soil Quality Guidelines, September 2007 Commercial	Sample Identification and Date					
					10SED-12	10SED-13		10SED-14	10SED-15	10SED-16
					0-15cm	0-15cm	30-41cm	0-15cm	0-15cm	0-15cm
					3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
Polychlorinated Biphenyl Results										
Total PCB Concentration	**mg/kg**	**0.1**	**0.189**	**33**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Notes:
--- No Applicable Guideline
<0.01 - Less Than Reportable Detection Limit
PEL - Probable Effect Levels
Bold - Values indicate CEPA Disposal at Sea Regulation exceedances
Bold - Values indicate CCME Marine Sediment Quality Guidelines PEL exceedances
Shaded values indicate CCME Soil Quality Guidelines for Commercial Application exceedances

TABLE 3

PCB CONCENTRATIONS IN SEDIMENT SAMPLES

Parameter	Units	CEPA Disposal at Sea Regulations	CCME Marine Sediment Quality Guidelines (2002) PEL	CCME Soil Quality Guidelines, September 2007 Commercial	Sample Identification and Date					
					10SED-17	10SED-18	10SED-19	10SED-20	10SED-21	10SED-22
					0-15cm	0-15cm	0-15cm	0-15cm	0-15cm	0-15cm
					3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
Polychlorinated Biphenyl Results										
Total PCB Concentration	**mg/kg**	**0.1**	**0.189**	**33**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Notes:
--- No Applicable Guideline
<0.01 - Less Than Reportable Detection Limit
PEL - Probable Effect Levels
Bold - Values indicate CEPA Disposal at Sea Regulation exceedances
Bold - Values indicate CCME Marine Sediment Quality Guidelines PEL exceedances
Shaded values indicate CCME Soil Quality Guidelines for Commercial Application exceedances

TABLE 3

PCB CONCENTRATIONS IN SEDIMENT SAMPLES

Parameter	Units	CEPA Disposal at Sea Regulations	CCME Marine Sediment Quality Guidelines (2002) PEL	CCME Soil Quality Guidelines, September 2007 Commercial	Sample Identification and Date					
					10SED-23		QA/QC-3 (Field dup of 10SED-23)	10SED-24	10SED-25	10SED-26
					0-15cm	Lab Dup	0-15cm	0-15cm	0-15cm	0-15cm
					3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
Polychlorinated Biphenyl Results										
Total PCB Concentration	**mg/kg**	**0.1**	**0.189**	**33**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Notes:
--- No Applicable Guideline
<0.01 - Less Than Reportable Detection Limit
PEL - Probable Effect Levels
Bold - Values indicate CEPA Disposal at Sea Regulation exceedances
Bold - Values indicate CCME Marine Sediment Quality Guidelines PEL exceedances
Shaded values indicate CCME Soil Quality Guidelines for Commercial Application exceedances

TABLE 4A: TOTAL METALS CONCENTRATIONS IN SEDIMENT SAMPLE

Parameter	Units	CEPA Disposal at Sea Regulations	CCME Marine Sediment Quality Guidelines (2002) PEL	Sample Identification and Date						
				10SED-1	10SED-2		10SED-3		10SED-4	QA/QC-1 (Field dup of 10SED-4)
				0-15cm	0 - 15cm	30-45cm	0 - 15cm	40-50cm	0-15cm	0-15cm
				3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010
Total Aluminum (Al)	**mg/kg**	**---**	**---**	57000	62000	68000	63000	55000	73000	100000
Total Antimony (Sb)	**mg/kg**	**---**	**---**	2.1	2.0	<2.0	<2.0	<2.0	2.6	3.0
Total Arsenic (As)	**mg/kg**	**---**	**41.6**	21	23	16	22	13	36	35
Total Barium (Ba)	**mg/kg**	**---**	**---**	960	1300	630	930	720	4100	7300
Total Beryllium (Be)	**mg/kg**	**---**	**---**	<2.0	<2.0	<2.0	2.0	<2.0	2.5	3.1
Total Cadmium (Cd)	**mg/kg**	**0.6**	**4.2**	**0.77**	0.43	0.40	**0.95**	**1.1**	0.38	0.30
Total Chromium (Cr)	**mg/kg**	**---**	**160**	79	78	91	79	72	80	90
Total Cobalt (Co)	**mg/kg**	**---**	**---**	15	15	17	14	14	16	19
Total Copper (Cu)	**mg/kg**	**---**	**108**	89	58	96	74	70	68	92
Total Iron (Fe)	**mg/kg**	**---**	**---**	36000	34000	36000	34000	32000	34000	36000
Total Lead (Pb)	**mg/kg**	**---**	**112**	99	80	79	97	98	110	**130**
Total Manganese (Mn)	**mg/kg**	**---**	**---**	410	420	460	390	380	480	570
Total Mercury	**mg/kg**	**0.75**	**0.7**	0.14	0.1	0.11	0.11	0.3	0.05	0.08
Total Molybdenum (Mo)	**mg/kg**	**---**	**---**	8.5	3.7	5.9	6.0	6.8	2.9	3.0
Total Nickel (Ni)	**mg/kg**	**---**	**---**	36	35	35	33	33	39	44
Total Selenium (Se)	**mg/kg**	**---**	**---**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Strontium (Sr)	**mg/kg**	**---**	**---**	140	120	130	120	110	150	190
Total Thallium (Tl)	**mg/kg**	**---**	**---**	0.65	0.62	0.58	0.73	0.66	0.76	0.81
Total Tin (Sn)	**mg/kg**	**---**	**---**	18	15	18	16	21	8.4	9.6
Total Uranium (U)	**mg/kg**	**---**	**---**	3.1	2.7	3.0	3.1	2.9	2.9	3.2
Total Vanadium (V)	**mg/kg**	**---**	**---**	110	110	120	110	110	110	120
Total Zinc (Zn)	**mg/kg**	**---**	**271**	220	160	170	230	240	140	130

Notes:
na - Not Analyzed
--- No Applicable Guideline
<2.0 - Less Than Reportable Detection Limit
PEL - Probable Effect Levels
Bold - Values indicate CEPA Disposal at Sea Regulation exceedances
Bold - Values indicate CCME Marine Sediment Quality Guidelines PEL exceedances
(1) - Poor RPD due to sample inhomogeneity

TABLE 4A: TOTAL METALS CONCENTRATIONS IN SEDIMENT SAMPLE

Parameter	Units	CEPA Disposal at Sea Regulations	CCME Marine Sediment Quality Guidelines (2002) PEL	Sample Identification and Date						
				10SED-5	10SED-6	10SED-7		10SED-8	QA/QC-2 (Field dup of 10SED-8)	
				0-15cm	0-15cm	0-15cm	40-54cm	0-15cm	0-15cm	Lab Dup
				3/9/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
Total Aluminum (Al)	**mg/kg**	**---**	**---**	68000	81000	69000	65000	57000	65000	67000
Total Antimony (Sb)	**mg/kg**	**---**	**---**	3.0	4.3	4.0	4.7	<2.0	<2.0	<2.0
Total Arsenic (As)	**mg/kg**	**---**	**41.6**	38	36	20	18	13	14	15
Total Barium (Ba)	**mg/kg**	**---**	**---**	6900	4300	1100	1100	630	630	630
Total Beryllium (Be)	**mg/kg**	**---**	**---**	2.7	3.0	2.1	2.1	<2.0	<2.0	2.2
Total Cadmium (Cd)	**mg/kg**	**0.6**	**4.2**	0.31	0.30	**0.65**	**0.85**	**0.72**	**0.66**	**0.95** (1)
Total Chromium (Cr)	**mg/kg**	**---**	**160**	89	89	78	79	72	75	74
Total Cobalt (Co)	**mg/kg**	**---**	**---**	18	17	16	16	13	14	13
Total Copper (Cu)	**mg/kg**	**---**	**108**	**120**	87	80	95	69	61	68
Total Iron (Fe)	**mg/kg**	**---**	**---**	33000	36000	36000	36000	32000	32000	33000
Total Lead (Pb)	**mg/kg**	**---**	**112**	89	94	110	96	78	84	83
Total Manganese (Mn)	**mg/kg**	**---**	**---**	490	570	410	430	390	440	440
Total Mercury	**mg/kg**	**0.75**	**0.7**	0.09	0.09	0.18	0.19	0.15	0.27	na
Total Molybdenum (Mo)	**mg/kg**	**---**	**---**	2.7	2.7	5.7	7.2	4.0	4.1	4.1
Total Nickel (Ni)	**mg/kg**	**---**	**---**	42	38	37	37	30	32	32
Total Selenium (Se)	**mg/kg**	**---**	**---**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Strontium (Sr)	**mg/kg**	**---**	**---**	180	150	120	140	110	140	140
Total Thallium (Tl)	**mg/kg**	**---**	**---**	0.81	0.82	0.69	0.69	0.61	0.62	0.62
Total Tin (Sn)	**mg/kg**	**---**	**---**	11	8.1	53	57	19	22	24
Total Uranium (U)	**mg/kg**	**---**	**---**	3.2	3.0	3.2	3.8	2.6	2.8	2.9
Total Vanadium (V)	**mg/kg**	**---**	**---**	120	110	110	110	100	110	110
Total Zinc (Zn)	**mg/kg**	**---**	**271**	130	130	220	240	170	170	200

Notes:
na - Not Analyzed
--- No Applicable Guideline
<2.0 - Less Than Reportable Detection Limit
PEL - Probable Effect Levels
Bold - Values indicate CEPA Disposal at Sea Regulation exceedances
Bold - Values indicate CCME Marine Sediment Quality Guidelines PEL exceedances
(1) - Poor RPD due to sample inhomogeneity

TABLE 4A: TOTAL METALS CONCENTRATIONS IN SEDIMENT SAMPLE

Parameter	Units	CEPA Disposal at Sea Regulations	CCME Marine Sediment Quality Guidelines (2002) PEL	Sample Identification and Date						
				10SED-9		10SED-10	10SED-11			10SED-12
				0-15cm	Lab Dup	0-15cm	0-15cm	Lab Dup	45-60cm	0-15cm
				3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
Total Aluminum (Al)	**mg/kg**	**---**	**---**	63000	56000	61000	69000	na	68000	50000
Total Antimony (Sb)	**mg/kg**	**---**	**---**	4.0	3.9	<2.0	2.1	na	4.0	4.4
Total Arsenic (As)	**mg/kg**	**---**	**41.6**	20	18	12	19	na	30	11
Total Barium (Ba)	**mg/kg**	**---**	**---**	1300	1000	650	820	na	1200	640
Total Beryllium (Be)	**mg/kg**	**---**	**---**	<2.0	2.1	<2.0	2.0	na	2.4	<2.0
Total Cadmium (Cd)	**mg/kg**	**0.6**	**4.2**	0.46	0.52	0.56	**0.61**	na	0.34	0.37
Total Chromium (Cr)	**mg/kg**	**---**	**160**	77	76	79	82	na	79	78
Total Cobalt (Co)	**mg/kg**	**---**	**---**	15	14	13	15	na	19	12
Total Copper (Cu)	**mg/kg**	**---**	**108**	75	65	77	66	na	**750**	95
Total Iron (Fe)	**mg/kg**	**---**	**---**	34000	32000	32000	34000	na	38000	30000
Total Lead (Pb)	**mg/kg**	**---**	**112**	85	83	73	63	na	71	95
Total Manganese (Mn)	**mg/kg**	**---**	**---**	440	410	390	430	na	620	380
Total Mercury	**mg/kg**	**0.75**	**0.7**	0.1	na	0.14	0.08	0.06	0.08	0.15
Total Molybdenum (Mo)	**mg/kg**	**---**	**---**	4.8	4.9	3.4	3.0	na	2.9	3.9
Total Nickel (Ni)	**mg/kg**	**---**	**---**	34	34	31	34	na	39	28
Total Selenium (Se)	**mg/kg**	**---**	**---**	<2.0	<2.0	<2.0	<2.0	na	<2.0	<2.0
Total Strontium (Sr)	**mg/kg**	**---**	**---**	130	120	140	110	na	110	110
Total Thallium (Tl)	**mg/kg**	**---**	**---**	0.69	0.68	0.58	0.68	na	0.70	0.46
Total Tin (Sn)	**mg/kg**	**---**	**---**	43	34	22	11	na	11	23
Total Uranium (U)	**mg/kg**	**---**	**---**	3.4	3.3	2.3	2.4	na	2.6	2.3
Total Vanadium (V)	**mg/kg**	**---**	**---**	110	110	110	120	na	110	93
Total Zinc (Zn)	**mg/kg**	**---**	**271**	180	180	180	180	na	130	210

Notes:
na - Not Analyzed
--- No Applicable Guideline
<2.0 - Less Than Reportable Detection Limit
PEL - Probable Effect Levels
Bold - Values indicate CEPA Disposal at Sea Regulation exceedances
Bold - Values indicate CCME Marine Sediment Quality Guidelines PEL exceedances
(1) - Poor RPD due to sample inhomogeneity

TABLE 4A: TOTAL METALS CONCENTRATIONS IN SEDIMENT SAMPLE

Parameter	Units	CEPA Disposal at Sea Regulations	CCME Marine Sediment Quality Guidelines (2002) PEL	Sample Identification and Date						
				10SED-13		10SED-14	10SED-15	10SED-16	10SED-17	10SED-18
				0-15cm	30-41cm	0-15cm	0-15cm	0-15cm	0-15cm	0-15cm
				3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
Total Aluminum (Al)	**mg/kg**	**---**	**---**	54000	59000	58000	57000	62000	60000	60000
Total Antimony (Sb)	**mg/kg**	**---**	**---**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Arsenic (As)	**mg/kg**	**---**	**41.6**	6.6	5.4	7.3	6.6	7.9	7.4	6.2
Total Barium (Ba)	**mg/kg**	**---**	**---**	410	410	440	460	470	440	460
Total Beryllium (Be)	**mg/kg**	**---**	**---**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Cadmium (Cd)	**mg/kg**	**0.6**	**4.2**	<0.15	<0.15	<0.15	0.16	0.28	0.23	<0.15
Total Chromium (Cr)	**mg/kg**	**---**	**160**	63	64	71	66	67	68	71
Total Cobalt (Co)	**mg/kg**	**---**	**---**	10	10	11	11	11	11	11
Total Copper (Cu)	**mg/kg**	**---**	**108**	16	17	16	20	21	22	23
Total Iron (Fe)	**mg/kg**	**---**	**---**	25000	25000	26000	26000	26000	27000	27000
Total Lead (Pb)	**mg/kg**	**---**	**112**	21	27	23	24	26	37	26
Total Manganese (Mn)	**mg/kg**	**---**	**---**	310	330	350	340	380	380	370
Total Mercury	**mg/kg**	**0.75**	**0.7**	0.04	0.04	0.02	0.02	0.03	0.05	0.07
Total Molybdenum (Mo)	**mg/kg**	**---**	**---**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Nickel (Ni)	**mg/kg**	**---**	**---**	24	27	25	25	27	29	28
Total Selenium (Se)	**mg/kg**	**---**	**---**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Strontium (Sr)	**mg/kg**	**---**	**---**	99	100	110	110	100	100	100
Total Thallium (Tl)	**mg/kg**	**---**	**---**	0.45	0.46	0.49	0.47	0.53	0.51	0.50
Total Tin (Sn)	**mg/kg**	**---**	**---**	6.3	7.1	5.5	4.0	7.1	8.2	6.0
Total Uranium (U)	**mg/kg**	**---**	**---**	1.3	1.5	1.4	1.4	1.6	1.7	1.5
Total Vanadium (V)	**mg/kg**	**---**	**---**	85	87	88	86	85	91	86
Total Zinc (Zn)	**mg/kg**	**---**	**271**	76	81	81	82	110	100	81

Notes:
na - Not Analyzed
--- No Applicable Guideline
<2.0 - Less Than Reportable Detection Limit
PEL - Probable Effect Levels
Bold - Values indicate CEPA Disposal at Sea Regulation exceedances
Bold - Values indicate CCME Marine Sediment Quality Guidelines PEL exceedances
(1) - Poor RPD due to sample inhomogeneity

TABLE 4A: TOTAL METALS CONCENTRATIONS IN SEDIMENT SAMPLE

Parameter	Units	CEPA Disposal at Sea Regulations	CCME Marine Sediment Quality Guidelines (2002) PEL	Sample Identification and Date						
				10SED-19	10SED-20	10SED-21	10SED-22	10SED-23	QA/QC-3 (Field dup of 10SED-23)	
				0-15cm	0-15cm	0-15cm	0-15cm	0-15cm	0-15cm	Lab Dup
				3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
Total Aluminum (Al)	**mg/kg**	**---**	**---**	59000	56000	58000	66000	61000	71000	na
Total Antimony (Sb)	**mg/kg**	**---**	**---**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	na
Total Arsenic (As)	**mg/kg**	**---**	**41.6**	6.8	6.7	6.7	6.7	8.5	8.4	na
Total Barium (Ba)	**mg/kg**	**---**	**---**	440	420	520	500	460	490	na
Total Beryllium (Be)	**mg/kg**	**---**	**---**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	na
Total Cadmium (Cd)	**mg/kg**	**0.6**	**4.2**	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	na
Total Chromium (Cr)	**mg/kg**	**---**	**160**	64	63	61	64	65	70	na
Total Cobalt (Co)	**mg/kg**	**---**	**---**	11	8.1	8.4	9.9	10	11	na
Total Copper (Cu)	**mg/kg**	**---**	**108**	17	10	12	16	17	21	na
Total Iron (Fe)	**mg/kg**	**---**	**---**	25000	24000	25000	26000	27000	28000	na
Total Lead (Pb)	**mg/kg**	**---**	**112**	21	16	19	22	27	37	na
Total Manganese (Mn)	**mg/kg**	**---**	**---**	330	270	320	360	360	370	na
Total Mercury	**mg/kg**	**0.75**	**0.7**	0.02	0.01	0.02	0.02	0.02	0.03	0.04
Total Molybdenum (Mo)	**mg/kg**	**---**	**---**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	na
Total Nickel (Ni)	**mg/kg**	**---**	**---**	25	23	27	24	25	27	na
Total Selenium (Se)	**mg/kg**	**---**	**---**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	na
Total Strontium (Sr)	**mg/kg**	**---**	**---**	98	93	94	100	97	98	na
Total Thallium (Tl)	**mg/kg**	**---**	**---**	0.52	0.43	0.44	0.48	0.42	0.48	na
Total Tin (Sn)	**mg/kg**	**---**	**---**	4.2	3.9	4.4	5.2	8.8	15	na
Total Uranium (U)	**mg/kg**	**---**	**---**	1.4	1.0	1.1	1.3	1.5	1.6	na
Total Vanadium (V)	**mg/kg**	**---**	**---**	83	77	88	86	87	92	na
Total Zinc (Zn)	**mg/kg**	**---**	**271**	78	61	65	77	80	83	na

Notes:
na - Not Analyzed
--- No Applicable Guideline
<2.0 - Less Than Reportable Detection Limit
PEL - Probable Effect Levels
Bold - Values indicate CEPA Disposal at Sea Regulation exceedances
Bold - Values indicate CCME Marine Sediment Quality Guidelines PEL exceedances
(1) - Poor RPD due to sample inhomogeneity

TABLE 4A: TOTAL METALS CONCENTRATIONS IN SEDIMENT SAMPLE

Parameter	Units	CEPA Disposal at Sea Regulations	CCME Marine Sediment Quality Guidelines (2002) PEL	Sample Identification and Date		
				10SED-24	10SED-25	10SED-26
				0-15cm	0-15cm	0-15cm
				3/10/2010	3/10/2010	3/10/2010
Total Aluminum (Al)	**mg/kg**	**---**	**---**	63000	67000	69000
Total Antimony (Sb)	**mg/kg**	**---**	**---**	<2.0	<2.0	<2.0
Total Arsenic (As)	**mg/kg**	**---**	**41.6**	11	9.7	10
Total Barium (Ba)	**mg/kg**	**---**	**---**	420	440	460
Total Beryllium (Be)	**mg/kg**	**---**	**---**	<2.0	<2.0	<2.0
Total Cadmium (Cd)	**mg/kg**	**0.6**	**4.2**	0.38	0.26	0.31
Total Chromium (Cr)	**mg/kg**	**---**	**160**	79	67	76
Total Cobalt (Co)	**mg/kg**	**---**	**---**	13	11	13
Total Copper (Cu)	**mg/kg**	**---**	**108**	39	25	34
Total Iron (Fe)	**mg/kg**	**---**	**---**	30000	30000	30000
Total Lead (Pb)	**mg/kg**	**---**	**112**	39	34	36
Total Manganese (Mn)	**mg/kg**	**---**	**---**	430	420	440
Total Mercury	**mg/kg**	**0.75**	**0.7**	0.04	0.03	0.04
Total Molybdenum (Mo)	**mg/kg**	**---**	**---**	2.6	2.0	2.7
Total Nickel (Ni)	**mg/kg**	**---**	**---**	28	30	32
Total Selenium (Se)	**mg/kg**	**---**	**---**	<2.0	<2.0	<2.0
Total Strontium (Sr)	**mg/kg**	**---**	**---**	120	99	130
Total Thallium (Tl)	**mg/kg**	**---**	**---**	0.52	0.49	0.53
Total Tin (Sn)	**mg/kg**	**---**	**---**	8.0	7.2	7.5
Total Uranium (U)	**mg/kg**	**---**	**---**	2.0	1.8	2.2
Total Vanadium (V)	**mg/kg**	**---**	**---**	110	91	110
Total Zinc (Zn)	**mg/kg**	**---**	**271**	110	96	100

Notes:
na - Not Analyzed
--- No Applicable Guideline
<2.0 - Less Than Reportable Detection Limit
PEL - Probable Effect Levels
Bold - Values indicate CEPA Disposal at Sea Regulation exceedances
Bold - Values indicate CCME Marine Sediment Quality Guidelines PEL exceedances
(1) - Poor RPD due to sample inhomogeneity

TABLE 4B

AVAILABLE METAL CONCENTRATIONS IN SEDIMENT SAMPLES

Parameter	Units	CCME Soil Quality Guidelines, September 2007 Commercial	Sample Identification and Date										
			10SED-1		10SED-2		10SED-3		10SED-4	QA/QC-1 (Field dup of 10SED-4)		10SED-5	10SED-6
			0-15cm	Lab Dup	0 - 15cm	30-45cm	0 - 15cm	40-50cm	0-15cm	0-15cm	Lab Dup	0-15cm	0-15cm
			3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/10/2010
Chromium (VI)	**ug/g**	**1400**	<0.4 (3)	na	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.4 (3)
Available Aluminum (Al)	**mg/kg**	**---**	14000	12000	10000	12000	11000	11000	8600	8000	na	7700	6600
Available Antimony (Sb)	**mg/kg**	**40**	<2	<2	<2	<2	<2	<2	<2	<2	na	2	3
Available Arsenic (As)	**mg/kg**	**12**	**22**	**21**	**21**	**18**	**24**	**17**	**33**	**39**	na	**44**	**41**
Available Barium (Ba)	**mg/kg**	**2000**	260	240	300	170	210	180	590	720	na	550	520
Available Beryllium (Be)	**mg/kg**	**8**	<2	<2	<2	<2	<2	<2	<2	<2	na	<2	<2
Available Bismuth (Bi)	**mg/kg**	**---**	<2	<2	<2	<2	<2	<2	<2	<2	na	<2	<2
Available Boron (B)	**mg/kg**	**---**	51	46	38	43	47	42	28	27	na	26	24
Available Cadmium (Cd)	**mg/kg**	**22**	0.7	0.7	0.4	0.3	1.0	1.0	<0.3	0.3	na	0.4	<0.3
Available Chromium (Cr)	**mg/kg**	**87**	39	34	26	31	31	30	21	20	na	27	17
Available Cobalt (Co)	**mg/kg**	**300**	13	12	11	11	11	10	14	16	na	17	16
Available Copper (Cu)	**mg/kg**	**91**	79	71	53	81	72	69	63	76	na	76	81
Available Iron (Fe)	**mg/kg**	**---**	33000	29000	26000	27000	27000	27000	29000	30000	na	32000	30000
Available Lead (Pb)	**mg/kg**	**260**	110	81 (1)	70	79	81	86	100	120	na	93	93
Available Lithium (Li)	**mg/kg**	**---**	31	28	24	27	27	29	22	21	na	19	17
Available Manganese (Mn)	**mg/kg**	**---**	370	320	320	280	300	320	420	480	na	530	530
Total Mercury (Hg)	**mg/kg**	**24**	0.14	na	0.10	0.11	0.11	0.30	0.05	0.08	na	0.09	0.09
Available Molybdenum (Mo)	**mg/kg**	**40**	8	7	3	5	6	6	3	3	na	4	3
Available Nickel (Ni)	**mg/kg**	**50**	33	29	26	23	28	26	32	36	na	42	34
Available Rubidium (Rb)	**mg/kg**	**---**	15	14	11	11	13	9	9	9	na	8	7
Available Selenium (Se)	**mg/kg**	**2.9**	<5 (2)	<5 (2)	<2	<2	<5 (2)	<5 (2)	<2	<2	na	<2	<2
Available Silver (Ag)	**mg/kg**	**40**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	na	<0.5	<0.5
Available Strontium (Sr)	**mg/kg**	**---**	76	93	46	55	57	55	48	52	na	53	55
Available Thallium (Tl)	**mg/kg**	**1**	0.2	0.2	0.1	0.1	0.2	0.2	<0.1	<0.1	na	<0.1	0.1
Available Tin (Sn)	**mg/kg**	**300**	17	13	10	14	13	18	5	6	na	8	6
Available Uranium (U)	**mg/kg**	**33**	2.1	1.8	1.4	1.8	1.9	2.0	1.6	1.7	na	1.6	1.5
Available Vanadium (V)	**mg/kg**	**130**	53	47	37	47	46	39	31	29	na	26	24
Available Zinc (Zn)	**mg/kg**	**360**	260	200	140	160	220	250	120	130	na	130	110

Notes:
--- No Applicable Guideline
<2 - Less Than Reportable Detection Limit
na- Not Analyzed
Bold - Values indicate CCME Soil Quality Guidelines for Commercial Application exceedances
(1) - Poor duplicate agreement due to sample inhomogeneity
(2) - Elevated reporting limit due to sample matrix
(3) - Sample contained a high amount of moisture. Reporting limits were adjusted for dry weight of sample.

TABLE 4B

AVAILABLE METAL CONCENTRATIONS IN SEDIMENT SAMPLES

Parameter	Units	CCME Soil Quality Guidelines, September 2007 Commercial	Sample Identification and Date									
			10SED-7		10SED-8	QA/QC-2 (Field dup of 10SED-8)	10SED-9	10SED-10	10SED-11			10SED-12
			0-15cm	40-54cm	0-15cm	0-15cm	0-15cm	0-15cm	0-15cm	Lab Dup	45-60cm	0-15cm
			3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
Chromium (VI)	**ug/g**	**1400**	<0.4(3)	<0.4 (3)	<0.4 (3)	<0.2	<0.2	<0.2	<0.2	na	<0.2	<0.4 (3)
Available Aluminum (Al)	**mg/kg**	**---**	11000	11000	11000	12000	10000	11000	13000	na	11000	9700
Available Antimony (Sb)	**mg/kg**	**40**	3	4	<2	<2	4	<2	<2	na	3	<2
Available Arsenic (As)	**mg/kg**	**12**	**27**	**26**	**15**	**16**	**23**	**15**	**21**	na	**34**	**13**
Available Barium (Ba)	**mg/kg**	**2000**	270	220	170	180	270	160	280	na	370	190
Available Beryllium (Be)	**mg/kg**	**8**	<2	<2	<2	<2	<2	<2	<2	na	<2	<2
Available Bismuth (Bi)	**mg/kg**	**---**	<2	<2	<2	<2	<2	<2	<2	na	<2	<2
Available Boron (B)	**mg/kg**	**---**	40	41	47	48	33	50	48	na	27	27
Available Cadmium (Cd)	**mg/kg**	**22**	0.6	0.6	0.6	0.7	0.5	0.6	0.7	na	0.3	0.4
Available Chromium (Cr)	**mg/kg**	**87**	26	27	28	32	25	29	33	na	27	23
Available Cobalt (Co)	**mg/kg**	**300**	14	14	10	11	13	10	13	na	19	9
Available Copper (Cu)	**mg/kg**	**91**	70	**110**	58	60	74	68	**92**	na	**1200**	**94**
Available Iron (Fe)	**mg/kg**	**---**	31000	30000	25000	27000	27000	25000	29000	na	34000	23000
Available Lead (Pb)	**mg/kg**	**260**	120	120	83	81	97	69	67	na	74	82
Available Lithium (Li)	**mg/kg**	**---**	26	27	28	30	26	27	30	na	27	23
Available Manganese (Mn)	**mg/kg**	**---**	360	360	270	280	340	260	340	na	560	210
Total Mercury (Hg)	**mg/kg**	**24**	0.18	0.19	0.15	0.27	0.10	0.14	0.08	0.06	0.08	0.15
Available Molybdenum (Mo)	**mg/kg**	**40**	6	7	4	4	5	3	3	na	3	4
Available Nickel (Ni)	**mg/kg**	**50**	32	32	25	27	30	24	30	na	37	22
Available Rubidium (Rb)	**mg/kg**	**---**	11	11	12	13	11	11	14	na	11	6
Available Selenium (Se)	**mg/kg**	**2.9**	<2	<2	<5 (2)	<5 (2)	<2	<5 (2)	<5 (2)	na	<2	<2
Available Silver (Ag)	**mg/kg**	**40**	0.7	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	na	0.5	<0.5
Available Strontium (Sr)	**mg/kg**	**---**	74	79	60	60	66	66	57	na	50	48
Available Thallium (Tl)	**mg/kg**	**1**	0.2	0.2	0.2	0.2	0.2	0.2	0.2	na	0.1	<0.1
Available Tin (Sn)	**mg/kg**	**300**	53	58	18	19	38	12	9	na	9	12
Available Uranium (U)	**mg/kg**	**33**	2.4	2.8	1.8	1.9	2.3	1.6	1.5	na	1.6	1.7
Available Vanadium (V)	**mg/kg**	**130**	39	42	42	47	37	41	46	na	35	32
Available Zinc (Zn)	**mg/kg**	**360**	220	250	150	170	180	150	180	na	130	190

Notes:
--- No Applicable Guideline
<2 - Less Than Reportable Detection Limit
na- Not Analyzed
Bold - Values indicate CCME Soil Quality Guidelines for Commercial Application exceedances
(1) - Poor duplicate agreement due to sample inhomogeneity
(2) - Elevated reporting limit due to sample matrix
(3) - Sample contained a high amount of moisture. Reporting limits were adjusted for dry weight of sample.

TABLE 4B

AVAILABLE METAL CONCENTRATIONS IN SEDIMENT SAMPLES

Parameter	Units	CCME Soil Quality Guidelines, September 2007 Commercial	Sample Identification and Date									
			10SED-13			10SED-14	10SED-15	10SED-16	10SED-17	10SED-18	10SED-19	10SED-20
			0-15cm	Lab Dup	30-41cm	0-15cm	0-15cm	0-15cm	0-15cm	0-15cm	0-15cm	0-15cm
			3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
Chromium (VI)	**ug/g**	**1400**	<0.2	na	<0.2	<0.2	<0.4 (3)	<0.4 (3)	<0.4 (3)	<0.2	<0.2	<0.2
Available Aluminum (Al)	**mg/kg**	**---**	9600	9900	9500	9100	9600	9800	11000	9500	9300	7400
Available Antimony (Sb)	**mg/kg**	**40**	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Available Arsenic (As)	**mg/kg**	**12**	5	5	5	6	6	7	7	5	5	5
Available Barium (Ba)	**mg/kg**	**2000**	86	92	78	86	110	110	100	110	96	44
Available Beryllium (Be)	**mg/kg**	**8**	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Available Bismuth (Bi)	**mg/kg**	**---**	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Available Boron (B)	**mg/kg**	**---**	19	19	17	19	21	23	26	18	19	10
Available Cadmium (Cd)	**mg/kg**	**22**	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Available Chromium (Cr)	**mg/kg**	**87**	18	17	18	17	19	20	21	18	19	13
Available Cobalt (Co)	**mg/kg**	**300**	7	7	7	7	7	7	8	7	7	5
Available Copper (Cu)	**mg/kg**	**91**	14	15	14	15	15	19	20	15	19	8
Available Iron (Fe)	**mg/kg**	**---**	18000	19000	18000	18000	19000	19000	20000	18000	18000	15000
Available Lead (Pb)	**mg/kg**	**260**	19	21	25	19	21	25	26	21	18	11
Available Lithium (Li)	**mg/kg**	**---**	26	27	25	24	26	27	28	25	25	23
Available Manganese (Mn)	**mg/kg**	**---**	190	180	180	190	200	190	200	190	190	130
Total Mercury (Hg)	**mg/kg**	**24**	0.04	na	0.04	0.02	0.02	0.03	0.05	0.07	0.02	0.01
Available Molybdenum (Mo)	**mg/kg**	**40**	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Available Nickel (Ni)	**mg/kg**	**50**	17	18	18	17	18	19	20	17	18	14
Available Rubidium (Rb)	**mg/kg**	**---**	6	6	6	6	6	7	8	6	6	3
Available Selenium (Se)	**mg/kg**	**2.9**	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Available Silver (Ag)	**mg/kg**	**40**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Available Strontium (Sr)	**mg/kg**	**---**	32	41	29	41	36	33	38	33	32	27
Available Thallium (Tl)	**mg/kg**	**1**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1	<0.1
Available Tin (Sn)	**mg/kg**	**300**	3	5	7	4	4	4	5	5	2	2
Available Uranium (U)	**mg/kg**	**33**	0.7	0.8	0.9	0.8	0.7	0.7	0.9	0.8	0.7	0.3
Available Vanadium (V)	**mg/kg**	**130**	27	27	28	28	29	31	33	28	27	23
Available Zinc (Zn)	**mg/kg**	**360**	63	65	66	63	65	70	79	67	64	45

Notes:
--- No Applicable Guideline
<2 - Less Than Reportable Detection Limit
na- Not Analyzed
Bold - Values indicate CCME Soil Quality Guidelines for Commercial Application exceedances
(1) - Poor duplicate agreement due to sample inhomogeneity
(2) - Elevated reporting limit due to sample matrix
(3) - Sample contained a high amount of moisture. Reporting limits were adjusted for dry weight of sample.

TABLE 4B

AVAILABLE METAL CONCENTRATIONS IN SEDIMENT SAMPLES

Parameter	Units	CCME Soil Quality Guidelines, September 2007 Commercial	Sample Identification and Date							
			10SED-21		10SED-22	10SED-23	QA/QC-3 (Field dup of 10SED-23)	10SED-24	10SED-25	10SED-26
			0-15cm	Lab Dup	0-15cm	0-15cm	0-15cm	0-15cm	0-15cm	0-15cm
			3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
Chromium (VI)	**ug/g**	**1400**	<0.2	na	<0.2	<0.2	<0.2	<0.8 (3)	<0.4 (3)	<0.2
Available Aluminum (Al)	**mg/kg**	**---**	9600	9400	9200	9400	11000	11000	11000	12000
Available Antimony (Sb)	**mg/kg**	**40**	<2	<2	<2	<2	19	<2	<2	<2
Available Arsenic (As)	**mg/kg**	**12**	5	5	6	7	7	10	11	10
Available Barium (Ba)	**mg/kg**	**2000**	110	110	94	83	92	100	89	110
Available Beryllium (Be)	**mg/kg**	**8**	<2	<2	<2	<2	<2	<2	<2	<2
Available Bismuth (Bi)	**mg/kg**	**---**	<2	<2	<2	<2	<2	<2	<2	<2
Available Boron (B)	**mg/kg**	**---**	13	13	19	24	23	53	30	49
Available Cadmium (Cd)	**mg/kg**	**22**	<0.3	<0.3	<0.3	<0.3	<0.3	0.4	<0.3	0.4
Available Chromium (Cr)	**mg/kg**	**87**	18	16	17	17	20	25	21	27
Available Cobalt (Co)	**mg/kg**	**300**	6	6	7	7	8	9	8	10
Available Copper (Cu)	**mg/kg**	**91**	11	11	16	18	17	31	23	31
Available Iron (Fe)	**mg/kg**	**---**	20000	19000	18000	19000	22000	22000	26000	24000
Available Lead (Pb)	**mg/kg**	**260**	16	15	18	22	**340**	34	27	35
Available Lithium (Li)	**mg/kg**	**---**	27	27	27	26	30	28	31	32
Available Manganese (Mn)	**mg/kg**	**---**	160	160	180	200	220	240	310	250
Total Mercury (Hg)	**mg/kg**	**24**	0.02	na	0.02	0.02	0.03	0.04	0.03	0.04
Available Molybdenum (Mo)	**mg/kg**	**40**	<2	<2	<2	<2	<2	2	<2	3
Available Nickel (Ni)	**mg/kg**	**50**	18	17	18	18	21	22	22	25
Available Rubidium (Rb)	**mg/kg**	**---**	5	4	6	6	7	10	8	11
Available Selenium (Se)	**mg/kg**	**2.9**	<2	<2	<2	<2	<2	<5 (2)	<2	<2
Available Silver (Ag)	**mg/kg**	**40**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Available Strontium (Sr)	**mg/kg**	**---**	26	26	34	33	33	66	41	53
Available Thallium (Tl)	**mg/kg**	**1**	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.1
Available Tin (Sn)	**mg/kg**	**300**	7	4	4	5	9	6	5	6
Available Uranium (U)	**mg/kg**	**33**	0.6	0.5	0.7	0.9	1.0	1.3	1.1	1.5
Available Vanadium (V)	**mg/kg**	**130**	30	28	28	30	33	39	33	43
Available Zinc (Zn)	**mg/kg**	**360**	59	56	61	64	72	87	82	91

Notes:
--- No Applicable Guideline
<2 - Less Than Reportable Detection Limit
na- Not Analyzed
Bold - Values indicate CCME Soil Quality Guidelines for Commercial Application exceedances
(1) - Poor duplicate agreement due to sample inhomogeneity
(2) - Elevated reporting limit due to sample matrix
(3) - Sample contained a high amount of moisture. Reporting limits were adjusted for dry weight of sample.

TABLE 5

PETROLEUM HYDROCARBONS IN SEDIMENT SAMPLE

Parameter	Units	Tier I RBSLs Commercial Site, Non Potable Water Use, Coarse Grained Soil	Tier I RBSLs; Commercial Site, Potable Water Use, Coarse Grained Soil	CCME Commercial Guidelines, Fine Grained Soil September 2007	Sample Identification and Date						
					10SED-1	10SED-2			10SED-3		
					0-15cm	0 - 15cm	30-45cm	Lab Dup	0 - 15cm	Lab Dup	40-50cm
					3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010
Benzene	**mg/kg**	**1.8**	**0.03**	**0.0068**	<0.003	<0.003	<0.003	<0.003	<0.003	na	<0.003
Toluene	**mg/kg**	**160**	**0.38**	**0.08**	<0.03	<0.03	<0.03	<0.03	<0.03	na	<0.03
Ethylbenzene	**mg/kg**	**430**	**0.08**	**0.018**	<0.01	<0.01	<0.01	<0.01	<0.01	na	<0.01
Xylene (Total)	**mg/kg**	**200**	**11**	**2.4**	<0.05	<0.05	<0.05	<0.05	<0.05	na	<0.05
C6 - C10 (less BTEX)	**mg/kg**	**---**	**---**	**---**	<3	<3	<3	<3	<3	na	<3
>C10-C21 Hydrocarbons	**mg/kg**	**---**	**---**	**---**	310	140	200	na	310	320	350
>C21-<C32 Hydrocarbons	**mg/kg**	**---**	**---**	**---**	920	440	570	na	890	950	910
Modified TPH (Tier 1)	**mg/kg**	**450 Gasoline**	**450 Gasoline**	**225 (3)**	1200(1)	580	770(1)	na	1200(1)	na	1300 (2)
		7,400 Diesel/#2	**7,400 Diesel/#2**	**3,700 (3)**							
		10,000 #6 Oil	**10,000 #6 Oil**	**5,000 (3)**							

Notes:
na - Not Analyzed
--- No Applicable Guideline
<0.003 - Less Than Reportable Detection Limit
Atlantic RBCA Version 2.0 Document for Petroleum Impacted Sites (2003)
Bold - Exceeds Tier I RBSLs Non-Potable Water
Bold - Exceeds Tier I RBSLs Potable Water
Shaded - Exceeds CCME Commercial Guidelines (September 2007)
(1) - Lube oil fraction
(2) - One product in fuel / lube range. Lube oil fraction
(3) - Atlantic RBCA Tier I divided by 2 based on Health Canada guidance July 10, 2006

TABLE 5

PETROLEUM HYDROCARBONS IN SEDIMENT SAMPLE

Parameter	Units	Tier I RBSLs Commercial Site, Non Potable Water Use, Coarse Grained Soil	Tier I RBSLs; Commercial Site, Potable Water Use, Coarse Grained Soil	CCME Commercial Guidelines, Fine Grained Soil September 2007	Sample Identification and Date						
					10SED-4	QA/QC-1 (Field dup of 10SED-4)	10SED-5	10SED-6	10SED-7		10SED-8
					0-15cm	0-15cm	0-15cm	0-15cm	0-15cm	40-54cm	0-15cm
					3/9/2010	3/9/2010	3/9/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
Benzene	**mg/kg**	**1.8**	**0.03**	**0.0068**	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Toluene	**mg/kg**	**160**	**0.38**	**0.08**	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Ethylbenzene	**mg/kg**	**430**	**0.08**	**0.018**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylene (Total)	**mg/kg**	**200**	**11**	**2.4**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
C6 - C10 (less BTEX)	**mg/kg**	**---**	**---**	**---**	<3	<3	<3	<3	<3	<3	<3
>C10-C21 Hydrocarbons	**mg/kg**	**---**	**---**	**---**	84	65	110	95	170	260	170
>C21-<C32 Hydrocarbons	**mg/kg**	**---**	**---**	**---**	230	180	280	270	500	650	450
Modified TPH (Tier 1)	**mg/kg**	**450 Gasoline**	**450 Gasoline**	**225 (3)**	320(1)	240(1)	390(1)	360(1)	670(1)	910(1)	620(1)
		7,400 Diesel/#2	**7,400 Diesel/#2**	**3,700 (3)**							
		10,000 #6 Oil	**10,000 #6 Oil**	**5,000 (3)**							

Notes:
na - Not Analyzed
--- No Applicable Guideline
<0.003 - Less Than Reportable Detection Limit
Atlantic RBCA Version 2.0 Document for Petroleum Impacted Sites (2003)
Bold - Exceeds Tier I RBSLs Non-Potable Water
Bold - Exceeds Tier I RBSLs Potable Water
Shaded - Exceeds CCME Commercial Guidelines (September 2007)
(1) - Lube oil fraction
(2) - One product in fuel / lube range. Lube oil fraction
(3) - Atlantic RBCA Tier I divided by 2 based on Health Canada guidance July 10, 2006

TABLE 5

PETROLEUM HYDROCARBONS IN SEDIMENT SAMPLE

Parameter	Units	Tier I RBSLs Commercial Site, Non Potable Water Use, Coarse Grained Soil	Tier I RBSLs; Commercial Site, Potable Water Use, Coarse Grained Soil	CCME Commercial Guidelines, Fine Grained Soil September 2007	Sample Identification and Date					
					QA/QC-2 (Field dup of 10SED-8)	10SED-9	10SED-10	10SED-11		10SED-12
					0-15cm	0-15cm	0-15cm	0-15cm	45-60cm	0-15cm
					3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
Benzene	**mg/kg**	**1.8**	**0.03**	**0.0068**	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Toluene	**mg/kg**	**160**	**0.38**	**0.08**	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Ethylbenzene	**mg/kg**	**430**	**0.08**	**0.018**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylene (Total)	**mg/kg**	**200**	**11**	**2.4**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
C6 - C10 (less BTEX)	**mg/kg**	**---**	**---**	**---**	<3	<3	<3	<3	<3	<3
>C10-C21 Hydrocarbons	**mg/kg**	**---**	**---**	**---**	130	160	160	160	110	100
>C21-<C32 Hydrocarbons	**mg/kg**	**---**	**---**	**---**	350	440	450	420	360	270
Modified TPH (Tier 1)	**mg/kg**	**450 Gasoline**	**450 Gasoline**	**225 (3)**	480(1)	610(1)	610(1)	590(1)	470(1)	370(1)
		7,400 Diesel/#2	**7,400 Diesel/#2**	**3,700 (3)**						
		10,000 #6 Oil	**10,000 #6 Oil**	**5,000 (3)**						

Notes:
na - Not Analyzed
--- No Applicable Guideline
<0.003 - Less Than Reportable Detection Limit
Atlantic RBCA Version 2.0 Document for Petroleum Impacted Sites (2003)
Bold - Exceeds Tier I RBSLs Non-Potable Water
Bold - Exceeds Tier I RBSLs Potable Water
Shaded - Exceeds CCME Commercial Guidelines (September 2007)
(1) - Lube oil fraction
(2) - One product in fuel / lube range. Lube oil fraction
(3) - Atlantic RBCA Tier I divided by 2 based on Health Canada guidance July 10, 2006

TABLE 5

PETROLEUM HYDROCARBONS IN SEDIMENT SAMPLE

Parameter	Units	Tier I RBSLs Commercial Site, Non Potable Water Use, Coarse Grained Soil	Tier I RBSLs; Commercial Site, Potable Water Use, Coarse Grained Soil	CCME Commercial Guidelines, Fine Grained Soil September 2007	Sample Identification and Date						
					10SED-13		10SED-14	10SED-15	10SED-16		10SED-17
					0-15cm	30-41cm	0-15cm	0-15cm	0-15cm	Lab Dup	0-15cm
					3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
Benzene	**mg/kg**	**1.8**	**0.03**	**0.0068**	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Toluene	**mg/kg**	**160**	**0.38**	**0.08**	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Ethylbenzene	**mg/kg**	**430**	**0.08**	**0.018**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylene (Total)	**mg/kg**	**200**	**11**	**2.4**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
C6 - C10 (less BTEX)	**mg/kg**	**---**	**---**	**---**	<3	<3	<3	<3	<3	<3	<3
>C10-C21 Hydrocarbons	**mg/kg**	**---**	**---**	**---**	32	110	31	34	41	na	42
>C21-<C32 Hydrocarbons	**mg/kg**	**---**	**---**	**---**	75	360	72	78	120	na	120
Modified TPH (Tier 1)	**mg/kg**	**450 Gasoline**	**450 Gasoline**	**225 (3)**	110(1)	470(1)	100(1)	110(1)	160(1)	na	160(1)
		7,400 Diesel/#2	**7,400 Diesel/#2**	**3,700 (3)**							
		10,000 #6 Oil	**10,000 #6 Oil**	**5,000 (3)**							

Notes:
na - Not Analyzed
--- No Applicable Guideline
<0.003 - Less Than Reportable Detection Limit
Atlantic RBCA Version 2.0 Document for Petroleum Impacted Sites (2003)
Bold - Exceeds Tier I RBSLs Non-Potable Water
Bold - Exceeds Tier I RBSLs Potable Water
Shaded - Exceeds CCME Commercial Guidelines (September 2007)
(1) - Lube oil fraction
(2) - One product in fuel / lube range. Lube oil fraction
(3) - Atlantic RBCA Tier I divided by 2 based on Health Canada guidance July 10, 2006

TABLE 5

PETROLEUM HYDROCARBONS IN SEDIMENT SAMPLE

Parameter	Units	Tier I RBSLs Commercial Site, Non Potable Water Use, Coarse Grained Soil	Tier I RBSLs; Commercial Site, Potable Water Use, Coarse Grained Soil	CCME Commercial Guidelines, Fine Grained Soil September 2007	Sample Identification and Date						
					10SED-18	10SED-19		10SED-20	10SED-21	10SED-22	10SED-23
					0-15cm	0-15cm	Lab Dup	0-15cm	0-15cm	0-15cm	0-15cm
					3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
Benzene	**mg/kg**	**1.8**	**0.03**	**0.0068**	<0.003	<0.003	na	<0.003	<0.003	<0.003	<0.003
Toluene	**mg/kg**	**160**	**0.38**	**0.08**	<0.03	<0.03	na	<0.03	<0.03	<0.03	<0.03
Ethylbenzene	**mg/kg**	**430**	**0.08**	**0.018**	<0.01	<0.01	na	<0.01	<0.01	<0.01	<0.01
Xylene (Total)	**mg/kg**	**200**	**11**	**2.4**	<0.05	<0.05	na	<0.05	<0.05	<0.05	<0.05
C6 - C10 (less BTEX)	**mg/kg**	**---**	**---**	**---**	<3	<3	na	<3	<3	<3	<3
>C10-C21 Hydrocarbons	**mg/kg**	**---**	**---**	**---**	24	26	<15	<15	<15	37	32
>C21-<C32 Hydrocarbons	**mg/kg**	**---**	**---**	**---**	67	78	67	38	44	86	89
Modified TPH (Tier 1)	**mg/kg**	**450 Gasoline**	**450 Gasoline**	**225 (3)**	91(1)	100(1)	na	38(1)	44(1)	120(1)	120(1)
		7,400 Diesel/#2	**7,400 Diesel/#2**	**3,700 (3)**							
		10,000 #6 Oil	**10,000 #6 Oil**	**5,000 (3)**							

Notes:
na - Not Analyzed
--- No Applicable Guideline
<0.003 - Less Than Reportable Detection Limit
Atlantic RBCA Version 2.0 Document for Petroleum Impacted Sites (2003)
Bold - Exceeds Tier I RBSLs Non-Potable Water
Bold - Exceeds Tier I RBSLs Potable Water
Shaded - Exceeds CCME Commercial Guidelines (September 2007)
(1) - Lube oil fraction
(2) - One product in fuel / lube range. Lube oil fraction
(3) - Atlantic RBCA Tier I divided by 2 based on Health Canada guidance July 10, 2006

TABLE 5

PETROLEUM HYDROCARBONS IN SEDIMENT SAMPLE

Parameter	Units	Tier I RBSLs Commercial Site, Non Potable Water Use, Coarse Grained Soil	Tier I RBSLs; Commercial Site, Potable Water Use, Coarse Grained Soil	CCME Commercial Guidelines, Fine Grained Soil September 2007	Sample Identification and Date			
					QA/QC-3 (Field dup of 10SED-23)	10SED-24	10SED-25	10SED-26
					0-15cm	0-15cm	0-15cm	0-15cm
					3/10/2010	3/10/2010	3/10/2010	3/10/2010
Benzene	**mg/kg**	**1.8**	**0.03**	**0.0068**	<0.003	<0.003	<0.003	<0.003
Toluene	**mg/kg**	**160**	**0.38**	**0.08**	<0.03	<0.03	<0.03	<0.03
Ethylbenzene	**mg/kg**	**430**	**0.08**	**0.018**	<0.01	<0.01	<0.01	<0.01
Xylene (Total)	**mg/kg**	**200**	**11**	**2.4**	<0.05	<0.05	<0.05	<0.05
C6 - C10 (less BTEX)	**mg/kg**	**---**	**---**	**---**	<3	<3	<3	<3
>C10-C21 Hydrocarbons	**mg/kg**	**---**	**---**	**---**	29	80	53	65
>C21-<C32 Hydrocarbons	**mg/kg**	**---**	**---**	**---**	68	220	130	170
Modified TPH (Tier 1)	**mg/kg**	**450 Gasoline**	**450 Gasoline**	**225 (3)**	98(1)	300(1)	180(1)	240(1)
		7,400 Diesel/#2	**7,400 Diesel/#2**	**3,700 (3)**				
		10,000 #6 Oil	**10,000 #6 Oil**	**5,000 (3)**				

Notes:
na - Not Analyzed
--- No Applicable Guideline
<0.003 - Less Than Reportable Detection Limit
Atlantic RBCA Version 2.0 Document for Petroleum Impacted Sites (2003)
Bold - Exceeds Tier I RBSLs Non-Potable Water
Bold - Exceeds Tier I RBSLs Potable Water
Shaded - Exceeds CCME Commercial Guidelines (September 2007)
(1) - Lube oil fraction
(2) - One product in fuel / lube range. Lube oil fraction
(3) - Atlantic RBCA Tier I divided by 2 based on Health Canada guidance July 10, 2006

TABLE 6

TOTAL ORGANIC/INORGANIC CARBON IN SEDIMENT SAMPLES

Parameter	Units	CEPA Disposal at Sea Regulations	CCME Marine Sediment Quality Guidelines PEL	CCME Soil Quality Guidelines, September 2007 Commercial	Sample Identification and Date					
					10SED-1		10SED-2		10SED-3	
					0-15cm	Lab Dup	0 - 15cm	30-45cm	0 - 15cm	40-50cm
					3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010
Total Inorganic Carbon (C)	**g/kg**	**---**	**---**	**---**	7	na	4	6.2	4.7	7.7
Moisture	**%**	**---**	**---**	**---**	63	na	58	51	62	54
Organic Carbon (TOC)	**g/kg**	**---**	**---**	**---**	36	33	25	30	39	34
Total Carbon-combustion IR	**g/kg**	**---**	**---**	**---**	43	41	28	36	43	42

Notes:
--- No Applicable Guideline

TABLE 6

TOTAL ORGANIC/INORGANIC CARBON IN SEDIMENT SAMPLES

Parameter	Units	CEPA Disposal at Sea Regulations	CCME Marine Sediment Quality Guidelines PEL	CCME Soil Quality Guidelines, September 2007 Commercial	Sample Identification and Date					
					10SED-4	QA/QC-1 (Field dup of 10SED-4)	10SED-5	10SED-6	10SED-7	
					0-15cm	0-15cm	0-15cm	0-15cm	0-15cm	40-54cm
					3/9/2010	3/9/2010	3/9/2010	3/10/2010	3/10/2010	3/10/2010
Total Inorganic Carbon (C)	**g/kg**	**---**	**---**	**---**	5.2	4.3	4.6	10	4.7	7.4
Moisture	**%**	**---**	**---**	**---**	49	51	48	48	56	51
Organic Carbon (TOC)	**g/kg**	**---**	**---**	**---**	15	13	15	15	29	28
Total Carbon-combustion IR	**g/kg**	**---**	**---**	**---**	21	17	19	25	34	35

Notes:
--- No Applicable Guideline

TABLE 6

TOTAL ORGANIC/INORGANIC CARBON IN SEDIMENT SAMPLES

Parameter	Units	CEPA Disposal at Sea Regulations	CCME Marine Sediment Quality Guidelines PEL	CCME Soil Quality Guidelines, September 2007 Commercial	Sample Identification and Date					
					10SED-8	QA/QC-2 (Field dup of 10SED-8)	10SED-9	10SED-10	10SED-11	
					0-15cm	0-15cm	0-15cm	0-15cm	0-15cm	45-60cm
					3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
Total Inorganic Carbon (C)	**g/kg**	**---**	**---**	**---**	2.1	3	4.5	3.7	4.7	2.3
Moisture	**%**	**---**	**---**	**---**	64	64	51	63	63	49
Organic Carbon (TOC)	**g/kg**	**---**	**---**	**---**	40	35	24	41	24	15
Total Carbon-combustion IR	**g/kg**	**---**	**---**	**---**	43	38	29	45	29	17

Notes:
--- No Applicable Guideline

TABLE 6

TOTAL ORGANIC/INORGANIC CARBON IN SEDIMENT SAMPLES

Parameter	Units	CEPA Disposal at Sea Regulations	CCME Marine Sediment Quality Guidelines PEL	CCME Soil Quality Guidelines, September 2007 Commercial	Sample Identification and Date				
					10SED-12	10SED-13		10SED-14	10SED-15
					0-15cm	0-15cm	30-41cm	0-15cm	0-15cm
					3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
Total Inorganic Carbon (C)	**g/kg**	**---**	**---**	**---**	6.4	2.9	2.2	1.9	2.6
Moisture	**%**	**---**	**---**	**---**	36	34	23	35	35
Organic Carbon (TOC)	**g/kg**	**---**	**---**	**---**	22	8.2	8.6	9.4	9
Total Carbon-combustion IR	**g/kg**	**---**	**---**	**---**	29	11	11	11	12

Notes:
--- No Applicable Guideline

TABLE 6

TOTAL ORGANIC/INORGANIC CARBON IN SEDIMENT SAMPLES

Parameter	Units	CEPA Disposal at Sea Regulations	CCME Marine Sediment Quality Guidelines PEL	CCME Soil Quality Guidelines, September 2007 Commercial	Sample Identification and Date					
					10SED-16		10SED-17	10SED-18	10SED-19	10SED-20
					0-15cm	Lab Dup	0-15cm	0-15cm	0-15cm	0-15cm
					3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
Total Inorganic Carbon (C)	**g/kg**	**---**	**---**	**---**	3	na	4	1.7	3.4	2.4
Moisture	**%**	**---**	**---**	**---**	41	na	45	31	35	30
Organic Carbon (TOC)	**g/kg**	**---**	**---**	**---**	12	11	12	7.6	7.1	3.8
Total Carbon-combustion IR	**g/kg**	**---**	**---**	**---**	15	16	16	9.2	11	6.2

Notes:
--- No Applicable Guideline

TABLE 6

TOTAL ORGANIC/INORGANIC CARBON IN SEDIMENT SAMPLES

Parameter	Units	CEPA Disposal at Sea Regulations	CCME Marine Sediment Quality Guidelines PEL	CCME Soil Quality Guidelines, September 2007 Commercial	Sample Identification and Date					
					10SED-21		10SED-22	10SED-23	QA/QC-3 (Field dup of 10SED-23)	10SED-24
					0-15cm	Lab Dup	0-15cm	0-15cm	0-15cm	0-15cm
					3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
Total Inorganic Carbon (C)	**g/kg**	**---**	**---**	**---**	2.6	na	2.9	3.6	2.4	1.5
Moisture	%	**---**	**---**	**---**	28	na	35	37	39	62
Organic Carbon (TOC)	**g/kg**	**---**	**---**	**---**	6.3	6.1	8.4	11	13	32
Total Carbon-combustion IR	**g/kg**	**---**	**---**	**---**	8.9	na	11	15	16	33

Notes:
--- No Applicable Guideline

TABLE 6

TOTAL ORGANIC/INORGANIC CARBON IN SEDIMENT SAMPLES

Parameter	Units	CEPA Disposal at Sea Regulations	CCME Marine Sediment Quality Guidelines PEL	CCME Soil Quality Guidelines, September 2007 Commercial	Sample Identification and Date	
					10SED-25	10SED-26
					0-15cm	0-15cm
					3/10/2010	3/10/2010
Total Inorganic Carbon (C)	**g/kg**	**---**	**---**	**---**	5.7	2.4
Moisture	**%**	**---**	**---**	**---**	47	58
Organic Carbon (TOC)	**g/kg**	**---**	**---**	**---**	16	28
Total Carbon-combustion IR	**g/kg**	**---**	**---**	**---**	22	31

Notes:
--- No Applicable Guideline

TABLE 7

GRAIN SIZE ANALYSIS IN SEDIMENT SAMPLES

Parameter	Units	Sample Identification and Date								
		10SED-1	10SED-2		10SED-3		10SED-4	QA/QC-1 (Field dup of 10SED-4)	10SED-5	10SED-6
		0-15cm	0 - 15cm	30-45cm	0 - 15cm	40-50cm	0-15cm	0-15cm	0-15cm	0-15cm
		3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/10/2010
< -4 Phi (16 mm)	%	100	100	100	100	100	100	100	100	100
< -3 Phi (8 mm)	%	100	100	100	100	100	100	100	100	100
< -2 Phi (4 mm)	%	100	100	100	100	100	100	100	100	100
< -1 Phi (2 mm)	%	98	100	98	100	98	82	77	100	99
< 0 Phi (1 mm)	%	91	96	92	91	93	76	73	98	97
< +1 Phi (0.5 mm)	%	86	92	88	86	86	72	71	96	95
< +2 Phi (0.25 mm)	%	81	87	83	80	74	66	67	93	90
< +3 Phi (0.12 mm)	%	76	80	75	74	58	61	63	87	79
< +4 Phi (0.062 mm)	%	71	71	65	67	45	55	57	73	60
< +5 Phi (0.031 mm)	%	69	67	62	65	43	51	53	64	53
< +6 Phi (0.016 mm)	%	57	53	50	53	35	37	42	49	39
< +7 Phi (0.0078 mm)	%	34	29	30	32	21	20	25	22	21
< +8 Phi (0.0039 mm)	%	27	23	25	26	17	16	21	17	16
< +9 Phi (0.0020 mm)	%	18	15	17	18	12	11	14	11	10
Gravel	%	2.4	0.4	2.3	0.2	1.8	18	23	0.3	1.0
Sand	%	27	29	33	33	53	27	20	27	39
Silt	%	44	48	40	41	28	39	36	56	44
Clay	%	27	23	25	26	17	16	21	17	16

Notes:
(1) - Small stick noted in PHI-1 fraction.
(2) - Small rock noted in -1PHI fraction.
(3) - %RPD violation not applicable.
Absolute values agree within 10%.

TABLE 7

GRAIN SIZE ANALYSIS IN SEDIMENT SAMPLES

Parameter	Units	Sample Identification and Date							
		10SED-7		10SED-8	QA/QC-2 (Field dup of 10SED-8)		10SED-9	10SED-10	
		0-15cm	40-54cm	0-15cm	0-15cm	Lab Dup	0-15cm	0-15cm	Lab Dup
		3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
< -4 Phi (16 mm)	%	100	100	100	100	100	100	100	100
< -3 Phi (8 mm)	%	100	100	100	100	100	100	100	100
< -2 Phi (4 mm)	%	100	100	100	100	100	100	100	100
< -1 Phi (2 mm)	%	100	99	99	95	100	99	100	100
< 0 Phi (1 mm)	%	97	97	95	91	95	96	96	97
< +1 Phi (0.5 mm)	%	94	95	90	87	91	92	93	93
< +2 Phi (0.25 mm)	%	90	92	84	82	86	85	86	87
< +3 Phi (0.12 mm)	%	85	86	78	76	81	74	79	80
< +4 Phi (0.062 mm)	%	75	73	65	64	70	61	64	63
< +5 Phi (0.031 mm)	%	68	66	57	59	64	54	53	55
< +6 Phi (0.016 mm)	%	53	52	42	45	47	43	39	41
< +7 Phi (0.0078 mm)	%	26	28	23	28	30	24	27	27
< +8 Phi (0.0039 mm)	%	20	21	19	24	25	20	22	23
< +9 Phi (0.0020 mm)	%	12	13	15	19	19	14	16	17
Gravel	%	0.3	0.7	0.5	4.6	0.2 (3)	1.4	<0.1	0.1
Sand	%	25	26	34	31	30	38	36	36
Silt	%	55	52	46	39	44	41	41	41
Clay	%	20	21	19	24	25	20	22	23

Notes:
(1) - Small stick noted in PHI-1 fraction.
(2) - Small rock noted in -1PHI fraction.
(3) - %RPD violation not applicable.
Absolute values agree within 10%.

TABLE 7

GRAIN SIZE ANALYSIS IN SEDIMENT SAMPLES

Parameter	Units	Sample Identification and Date								
		10SED-11		10SED-12	10SED-13		10SED-14	10SED-15	10SED-16	10SED-17
		0-15cm	45-60cm	0-15cm	0-15cm	30-41cm	0-15cm	0-15cm	0-15cm	0-15cm
		3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
< -4 Phi (16 mm)	%	100	100	100	100	100	100	100	100	100
< -3 Phi (8 mm)	%	100	100	100	100	100	100	100	100	100
< -2 Phi (4 mm)	%	100	100	100	100	100	100	100	100	100
< -1 Phi (2 mm)	%	100	97 (1)	81	100	98	100	99	94 (2)	100
< 0 Phi (1 mm)	%	97	92	71	99	97	99	98	93	98
< +1 Phi (0.5 mm)	%	93	89	65	98	96	98	97	93	97
< +2 Phi (0.25 mm)	%	89	87	52	97	94	95	97	91	94
< +3 Phi (0.12 mm)	%	85	84	41	70	64	68	63	69	75
< +4 Phi (0.062 mm)	%	78	76	23	24	26	27	27	31	43
< +5 Phi (0.031 mm)	%	74	71	20	22	23	23	23	26	36
< +6 Phi (0.016 mm)	%	58	56	17	16	18	19	18	20	28
< +7 Phi (0.0078 mm)	%	35	27	12	12	13	14	14	14	18
< +8 Phi (0.0039 mm)	%	28	20	11	11	12	12	11	12	17
< +9 Phi (0.0020 mm)	%	20	13	7.9	8.4	8.8	9.0	9.0	9.7	13
Gravel	%	0.2	2.9	19	0.4	2.0	0.3	0.7	5.6	<0.1
Sand	%	22	22	58	75	72	72	72	63	56
Silt	%	50	55	11	13	15	15	16	19	27
Clay	%	28	20	11	11	12	12	11	12	17

Notes:
(1) - Small stick noted in PHI-1 fraction.
(2) - Small rock noted in -1PHI fraction.
(3) - %RPD violation not applicable.
Absolute values agree within 10%.

TABLE 7

GRAIN SIZE ANALYSIS IN SEDIMENT SAMPLES

Parameter	Units	Sample Identification and Date									
		10SED-18	10SED-19	10SED-20	10SED-21	10SED-22	10SED-23	QA/QC-3 (Field dup of 10SED-23)	10SED-24	10SED-25	10SED-26
		0-15cm	0-15cm	0-15cm	0-15cm	0-15cm	0-15cm	0-15cm	0-15cm	0-15cm	0-15cm
		3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/10/2010
< -4 Phi (16 mm)	%	100	100	100	100	100	100	100	100	100	100
< -3 Phi (8 mm)	%	100	100	100	100	100	100	100	100	100	100
< -2 Phi (4 mm)	%	100	100	100	100	100	100	100	100	100	100
< -1 Phi (2 mm)	%	100	98	95	100	99	91	92	96	92	100
< 0 Phi (1 mm)	%	99	97	93	99	99	88	89	91	85	94
< +1 Phi (0.5 mm)	%	99	94	90	98	98	84	84	89	80	91
< +2 Phi (0.25 mm)	%	97	87	83	92	96	78	77	85	76	86
< +3 Phi (0.12 mm)	%	69	58	20	34	62	50	48	78	57	79
< +4 Phi (0.062 mm)	%	27	24	6.7	12	23	26	26	64	33	62
< +5 Phi (0.031 mm)	%	20	20	6.2	11	21	25	23	60	29	56
< +6 Phi (0.016 mm)	%	17	16	5.3	9.5	17	20	20	47	25	44
< +7 Phi (0.0078 mm)	%	12	11	4.2	7.1	12	15	14	33	19	32
< +8 Phi (0.0039 mm)	%	11	10	3.9	6.3	11	14	13	28	16	26
< +9 Phi (0.0020 mm)	%	8.4	8.1	3.2	5.0	8.5	10	9.9	21	12	20
Gravel	%	<0.1	1.7	5.4	0.1	0.6	9.3	8.2	4.3	8.2	0.1
Sand	%	73	75	88	88	76	65	66	31	59	38
Silt	%	16	13	2.9	5.7	12	12	13	37	17	36
Clay	%	11	10	3.9	6.3	11	14	13	28	16	26

Notes:
(1) - Small stick noted in PHI-1 fraction.
(2) - Small rock noted in -1PHI fraction.
(3) - %RPD violation not applicable.
Absolute values agree within 10%.

ATTACHMENT A

QA/QC AND LABORATORY CERTIFICATES OF ANALYSES

Your Project #: 059570
Site: NORTH HEAD HARBOUR
Your C.O.C. #: B 121795

Attention: Neil Brodie
Conestoga-Rovers and Associates Ltd
Fredericton
466 Hodgson Rd
Fredericton , NB
E3C 2G5

Report Date: 2010/03/22

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B029595
Received: 2010/03/12, 8:15

Sample Matrix: Soil
Samples Received: 34

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Chromium (VI) in Soil (1)	34	2010/03/17	2010/03/18	CAM SOP-00420	EPA 3060A
TEH in Soil (PIRI)	28	2010/03/15	2010/03/16	ATL SOP 00111 R3	Based on Atl. PIRI
TEH in Soil (PIRI)	6	2010/03/15	2010/03/17	ATL SOP 00111 R3	Based on Atl. PIRI
Mercury (CVAA)	13	2010/03/12	2010/03/15	ATL SOP 00026 R6	Based on EPA245.5
Mercury (CVAA)	21	2010/03/16	2010/03/17	ATL SOP 00026 R6	Based on EPA245.5
Metals Solid Avail. Unified MS - Nper	7	2010/03/15	2010/03/15	ATL SOP 00024 R5	Based on EPA6020A
Metals Solid Avail. Unified MS - Nper	22	2010/03/15	2010/03/16	ATL SOP 00024 R5	Based on EPA6020A
Metals Solid Avail. Unified MS - Nper	5	2010/03/16	2010/03/16	ATL SOP 00024 R5	Based on EPA6020A
Metals Solid Total MS - HF	20	2010/03/15	2010/03/16	ATL SOP 00024 R5	Based on EPA6020A
Metals Solid Total MS - HF	14	2010/03/17	2010/03/17	ATL SOP 00024 R5	Based on EPA6020A
Moisture	34	N/A	2010/03/15	ATL SOP 00001 R3	MOE Handbook 1983
PAH in sediment by GC/MS (Low Level)	26	2010/03/15	2010/03/19	ATL SOP 00102 R4	based on EPA8270C
PAH in sediment by GC/MS (Low Level)	8	2010/03/15	2010/03/20	ATL SOP 00102 R4	based on EPA8270C
PCB/DDT in Soil by GC-ECD	34	2010/03/15	2010/03/19	ATL SOP 00106 R3	Based EPA8082
VPH in Soil - Low Level	34	2010/03/15	2010/03/16	ATL SOP 00117 R4/00119 R6	Based on Atl. PIRI
Particle size in solids (pipette&sieve)	15	N/A	2010/03/18	ATL SOP 00012 R3	based on MSAMS-1978
Particle size in solids (pipette&sieve)	19	N/A	2010/03/22	ATL SOP 00012 R3	based on MSAMS-1978
Total Carbon in Solids by Ind.	34	2010/03/16	2010/03/16	ATL SOP 00044 R3/00045 R4	LECO 203-601-224
TIC in soil	32	2010/03/12	2010/03/16	ATL SOP 00044 R3/00045 R4	LECO 203-601-224
TIC in soil	2	2010/03/12	2010/03/19	ATL SOP 00044 R3/00045 R4	LECO 203-601-224
Total Organic Carbon in Soil	32	2010/03/15	2010/03/16	ATL SOP 00044 R3/00045 R4	LECO 203-601-224
Total Organic Carbon in Soil	1	2010/03/15	2010/03/18	ATL SOP 00044 R3/00045 R4	LECO 203-601-224
Total Organic Carbon in Soil	1	2010/03/17	2010/03/18	ATL SOP 00044 R3/00045 R4	LECO 203-601-224
ModTPH (T1) Calc. for Soil	34	2010/03/12	2010/03/17		Based on Atl. PIRI

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Maxxam Analytics Mississauga

../2

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Your Project #: 059570
Site: NORTH HEAD HARBOUR
Your C.O.C. #: B 121795

Attention: Neil Brodie
Conestoga-Rovers and Associates Ltd
Fredericton
466 Hodgson Rd
Fredericton , NB
E3C 2G5

Report Date: 2010/03/22

CERTIFICATE OF ANALYSIS

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

MICHELLE HILL, Project Manager
Email: Michelle.Hill@maxxamanalytics.com
Phone# (902) 420-0203

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 2

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6871	FH6871		FH6911		FH6912		
Sampling Date		2010/03/09	2010/03/09		2010/03/09		2010/03/09		
COC Number		B 121795	B 121795		B 121795		B 121795		
	Units	**10SED-1 (0-15CM)**	**10SED-1 (0-15CM) Lab-Dup**	**RDL**	**10SED-2 (0-15CM)**	**RDL**	**10SED-2 (30-45CM)**	**RDL**	**QC Batch**
Inorganics									
Moisture	%	63		1	58	1	51	1	2100049
Organic Carbon (TOC)	g/kg	36	33	1	25	1	30	0.6	2100895
< -4 Phi (16 mm)	%	100		0.1	100	0.1	100	0.1	2103067
< -3 Phi (8 mm)	%	100		0.1	100	0.1	100	0.1	2103067
< -2 Phi (4 mm)	%	100		0.1	100	0.1	100	0.1	2103067
< -1 Phi (2 mm)	%	98		0.1	100	0.1	98	0.1	2103067
< 0 Phi (1 mm)	%	91		0.1	96	0.1	92	0.1	2103067
< +1 Phi (0.5 mm)	%	86		0.1	92	0.1	88	0.1	2103067
< +2 Phi (0.25 mm)	%	81		0.1	87	0.1	83	0.1	2103067
< +3 Phi (0.12 mm)	%	76		0.1	80	0.1	75	0.1	2103067
< +4 Phi (0.062 mm)	%	71		0.1	71	0.1	65	0.1	2103067
< +5 Phi (0.031 mm)	%	69		0.1	67	0.1	62	0.1	2103067
< +6 Phi (0.016 mm)	%	57		0.1	53	0.1	50	0.1	2103067
< +7 Phi (0.0078 mm)	%	34		0.1	29	0.1	30	0.1	2103067
< +8 Phi (0.0039 mm)	%	27		0.1	23	0.1	25	0.1	2103067
< +9 Phi (0.0020 mm)	%	18		0.1	15	0.1	17	0.1	2103067
Gravel	%	2.4		0.1	0.4	0.1	2.3	0.1	2103067
Sand	%	27		0.1	29	0.1	33	0.1	2103067
Silt	%	44		0.1	48	0.1	40	0.1	2103067
Clay	%	27		0.1	23	0.1	25	0.1	2103067
Metals									
Mercury (Hg)	mg/kg	0.14		0.01	0.10	0.01	0.11	0.01	2100496
PCBs									
Total PCB	mg/kg	0.37		0.01	0.14	0.01	<0.05	0.05	2100303
Metals									
Available Aluminum (Al)	mg/kg	14000	12000	10	10000	10	12000	10	2101055
Available Antimony (Sb)	mg/kg	<2	<2	2	<2	2	<2	2	2101055
Available Arsenic (As)	mg/kg	22	21	2	21	2	18	2	2101055
Available Barium (Ba)	mg/kg	260	240	5	300	5	170	5	2101055
Available Beryllium (Be)	mg/kg	<2	<2	2	<2	2	<2	2	2101055
Available Bismuth (Bi)	mg/kg	<2	<2	2	<2	2	<2	2	2101055

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6871	FH6871		FH6911		FH6912		
Sampling Date		2010/03/09	2010/03/09		2010/03/09		2010/03/09		
COC Number		B 121795	B 121795		B 121795		B 121795		
	Units	**10SED-1 (0-15CM)**	**10SED-1 (0-15CM) Lab-Dup**	**RDL**	**10SED-2 (0-15CM)**	**RDL**	**10SED-2 (30-45CM)**	**RDL**	**QC Batch**
Available Boron (B)	mg/kg	51	46	5	38	5	43	5	2101055
Available Cadmium (Cd)	mg/kg	0.7	0.7	0.3	0.4	0.3	0.3	0.3	2101055
Available Chromium (Cr)	mg/kg	39	34	2	26	2	31	2	2101055
Available Cobalt (Co)	mg/kg	13	12	1	11	1	11	1	2101055
Available Copper (Cu)	mg/kg	79	71	2	53	2	81	2	2101055
Available Iron (Fe)	mg/kg	33000	29000	50	26000	50	27000	50	2101055
Available Lead (Pb)	mg/kg	110	81 (1)	0.5	70	0.5	79	0.5	2101055
Available Lithium (Li)	mg/kg	31	28	2	24	2	27	2	2101055
Available Manganese (Mn)	mg/kg	370	320	2	320	2	280	2	2101055
Available Molybdenum (Mo)	mg/kg	8	7	2	3	2	5	2	2101055
Available Nickel (Ni)	mg/kg	33	29	2	26	2	23	2	2101055
Available Rubidium (Rb)	mg/kg	15	14	2	11	2	11	2	2101055
Available Selenium (Se)	mg/kg	<5 (2)	<5 (2)	5	<2	2	<2	2	2101055
Available Silver (Ag)	mg/kg	<0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	2101055
Available Strontium (Sr)	mg/kg	76	93	5	46	5	55	5	2101055
Available Thallium (Tl)	mg/kg	0.2	0.2	0.1	0.1	0.1	0.1	0.1	2101055
Available Tin (Sn)	mg/kg	17	13	2	10	2	14	2	2101055
Available Uranium (U)	mg/kg	2.1	1.8	0.1	1.4	0.1	1.8	0.1	2101055
Available Vanadium (V)	mg/kg	53	47	2	37	2	47	2	2101055
Available Zinc (Zn)	mg/kg	260	200	5	140	5	160	5	2101055
Polyaromatic Hydrocarbons									
1-Methylnaphthalene	mg/kg	0.014		0.005	<0.005	0.005	0.044	0.005	2100081
2-Methylnaphthalene	mg/kg	0.039		0.005	0.022	0.005	0.23	0.005	2100081
Acenaphthene	mg/kg	0.070		0.005	0.032	0.005	0.26	0.005	2100081
Acenaphthylene	mg/kg	0.19		0.005	0.15	0.005	0.19	0.005	2100081
Anthracene	mg/kg	2.8		0.005	1.7	0.005	8.4	0.005	2100081
Benzo(a)anthracene	mg/kg	6.2		0.005	4.5	0.005	15 (3)	0.1	2100081
Benzo(a)pyrene	mg/kg	4.6		0.005	2.8	0.005	7.0	0.005	2100081
Benzo(b)fluoranthene	mg/kg	5.3		0.005	4.0	0.005	5.5	0.005	2100081
Benzo(g,h,i)perylene	mg/kg	2.2		0.005	1.3	0.005	2.1	0.005	2100081

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Poor duplicate agreement due to sample inhomogeneity.
(2) Elevated reporting limit due to sample matrix.
(3) Elevated PAH RDL(s) due to sample dilution.

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Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6871	FH6871		FH6911		FH6912		
Sampling Date		2010/03/09	2010/03/09		2010/03/09		2010/03/09		
COC Number		B 121795	B 121795		B 121795		B 121795		
	Units	**10SED-1 (0-15CM)**	**10SED-1 (0-15CM) Lab-Dup**	**RDL**	**10SED-2 (0-15CM)**	**RDL**	**10SED-2 (30-45CM)**	**RDL**	**QC Batch**
Benzo(k)fluoranthene	mg/kg	2.8		0.005	2.1	0.005	4.9	0.005	2100081
Chrysene	mg/kg	10		0.005	4.9	0.005	25 (1)	0.1	2100081
Dibenz(a,h)anthracene	mg/kg	0.74		0.005	0.43	0.005	0.75	0.005	2100081
Fluoranthene	mg/kg	5.7		0.005	17	0.005	140 (1)	0.1	2100081
Fluorene	mg/kg	0.57		0.005	0.37	0.005	6.5	0.005	2100081
Indeno(1,2,3-cd)pyrene	mg/kg	2.2		0.005	1.4	0.005	2.2	0.005	2100081
Naphthalene	mg/kg	0.051		0.005	0.023	0.005	0.11	0.005	2100081
Perylene	mg/kg	1.2		0.005	0.82	0.005	1.9	0.005	2100081
Phenanthrene	mg/kg	3.2		0.005	3.1	0.005	57 (1)	0.1	2100081
Pyrene	mg/kg	11		0.005	19	0.005	140 (1)	0.1	2100081
Petroleum Hydrocarbons									
Benzene	mg/kg	<0.003		0.003	<0.003	0.003	<0.003	0.003	2100428
Toluene	mg/kg	<0.03		0.03	<0.03	0.03	<0.03	0.03	2100428
Ethylbenzene	mg/kg	<0.01		0.01	<0.01	0.01	<0.01	0.01	2100428
Xylene (Total)	mg/kg	<0.05		0.05	<0.05	0.05	<0.05	0.05	2100428
C6 - C10 (less BTEX)	mg/kg	<3		3	<3	3	<3	3	2100428
>C10-C21 Hydrocarbons	mg/kg	310		15	140	15	200	15	2100651
>C21-<C32 Hydrocarbons	mg/kg	920		15	440	15	570	15	2100651
Modified TPH (Tier1)	mg/kg	1200		20	580	20	770	20	2098718
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%	97			85		80		2100651
n-Dotriacontane - Extractable	%	91 (2)			86 (2)		79 (2)		2100651
D10-Anthracene	%	88			89		88		2100081
D14-Terphenyl	%	88			92		82		2100081
D8-Acenaphthylene	%	77			76		77		2100081
Decachlorobiphenyl	%	89 (3)			93 (3)		95 (4)		2100303
Isobutylbenzene - Volatile	%	104			112		109		2100428

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Elevated PAH RDL(s) due to sample dilution.
(2) Lube oil fraction.
(3) Aroclor 1260.
(4) Elevated PCB RDL due to matrix / co-extractive interference.

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Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6912		FH6913	FH6913		FH6914		
Sampling Date		2010/03/09		2010/03/09	2010/03/09		2010/03/09		
COC Number		B 121795		B 121795	B 121795		B 121795		
	Units	**10SED-2 (30-45CM) Lab-Dup**	**RDL**	**10SED-3 (0-15CM)**	**10SED-3 (0-15CM) Lab-Dup**	**RDL**	**10SED-3 (40-50CM)**	**RDL**	**QC Batch**
Inorganics									
Moisture	%		1	62		1	54	1	2100049
Organic Carbon (TOC)	g/kg		0.6	39		0.7	34	0.7	2100895
< -4 Phi (16 mm)	%		0.1	100		0.1	100	0.1	2103067
< -3 Phi (8 mm)	%		0.1	100		0.1	100	0.1	2103067
< -2 Phi (4 mm)	%		0.1	100		0.1	100	0.1	2103067
< -1 Phi (2 mm)	%		0.1	100		0.1	98	0.1	2103067
< 0 Phi (1 mm)	%		0.1	91		0.1	93	0.1	2103067
< +1 Phi (0.5 mm)	%		0.1	86		0.1	86	0.1	2103067
< +2 Phi (0.25 mm)	%		0.1	80		0.1	74	0.1	2103067
< +3 Phi (0.12 mm)	%		0.1	74		0.1	58	0.1	2103067
< +4 Phi (0.062 mm)	%		0.1	67		0.1	45	0.1	2103067
< +5 Phi (0.031 mm)	%		0.1	65		0.1	43	0.1	2103067
< +6 Phi (0.016 mm)	%		0.1	53		0.1	35	0.1	2103067
< +7 Phi (0.0078 mm)	%		0.1	32		0.1	21	0.1	2103067
< +8 Phi (0.0039 mm)	%		0.1	26		0.1	17	0.1	2103067
< +9 Phi (0.0020 mm)	%		0.1	18		0.1	12	0.1	2103067
Gravel	%		0.1	0.2		0.1	1.8	0.1	2103067
Sand	%		0.1	33		0.1	53	0.1	2103067
Silt	%		0.1	41		0.1	28	0.1	2103067
Clay	%		0.1	26		0.1	17	0.1	2103067
Metals									
Mercury (Hg)	mg/kg		0.01	0.11		0.01	0.30	0.01	2100496
PCBs									
Total PCB	mg/kg		0.05	0.18		0.01	0.15	0.01	2100303
Metals									
Available Aluminum (Al)	mg/kg		10	11000		10	11000	10	2101055
Available Antimony (Sb)	mg/kg		2	<2		2	<2	2	2101055
Available Arsenic (As)	mg/kg		2	24		2	17	2	2101055
Available Barium (Ba)	mg/kg		5	210		5	180	5	2101055
Available Beryllium (Be)	mg/kg		2	<2		2	<2	2	2101055
Available Bismuth (Bi)	mg/kg		2	<2		2	<2	2	2101055

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6912		FH6913	FH6913		FH6914		
Sampling Date		2010/03/09		2010/03/09	2010/03/09		2010/03/09		
COC Number		B 121795		B 121795	B 121795		B 121795		
	Units	**10SED-2 (30-45CM) Lab-Dup**	**RDL**	**10SED-3 (0-15CM)**	**10SED-3 (0-15CM) Lab-Dup**	**RDL**	**10SED-3 (40-50CM)**	**RDL**	**QC Batch**
Available Boron (B)	mg/kg		5	47		5	42	5	2101055
Available Cadmium (Cd)	mg/kg		0.3	1.0		0.3	1.0	0.3	2101055
Available Chromium (Cr)	mg/kg		2	31		2	30	2	2101055
Available Cobalt (Co)	mg/kg		1	11		1	10	1	2101055
Available Copper (Cu)	mg/kg		2	72		2	69	2	2101055
Available Iron (Fe)	mg/kg		50	27000		50	27000	50	2101055
Available Lead (Pb)	mg/kg		0.5	81		0.5	86	0.5	2101055
Available Lithium (Li)	mg/kg		2	27		2	29	2	2101055
Available Manganese (Mn)	mg/kg		2	300		2	320	2	2101055
Available Molybdenum (Mo)	mg/kg		2	6		2	6	2	2101055
Available Nickel (Ni)	mg/kg		2	28		2	26	2	2101055
Available Rubidium (Rb)	mg/kg		2	13		2	9	2	2101055
Available Selenium (Se)	mg/kg		2	<5 (1)		5	<5 (1)	5	2101055
Available Silver (Ag)	mg/kg		0.5	<0.5		0.5	<0.5	0.5	2101055
Available Strontium (Sr)	mg/kg		5	57		5	55	5	2101055
Available Thallium (Tl)	mg/kg		0.1	0.2		0.1	0.2	0.1	2101055
Available Tin (Sn)	mg/kg		2	13		2	18	2	2101055
Available Uranium (U)	mg/kg		0.1	1.9		0.1	2.0	0.1	2101055
Available Vanadium (V)	mg/kg		2	46		2	39	2	2101055
Available Zinc (Zn)	mg/kg		5	220		5	250	5	2101055
Polyaromatic Hydrocarbons									
1-Methylnaphthalene	mg/kg		0.005	0.015		0.005	0.054	0.005	2100081
2-Methylnaphthalene	mg/kg		0.005	0.029		0.005	0.052	0.005	2100081
Acenaphthene	mg/kg		0.005	0.081		0.005	0.33	0.005	2100081
Acenaphthylene	mg/kg		0.005	0.31		0.005	0.33	0.005	2100081
Anthracene	mg/kg		0.005	1.5		0.005	2.1	0.005	2100081
Benzo(a)anthracene	mg/kg		0.1	3.5		0.005	6.5	0.005	2100081
Benzo(a)pyrene	mg/kg		0.005	3.5		0.005	4.6	0.005	2100081
Benzo(b)fluoranthene	mg/kg		0.005	4.6		0.005	4.7	0.005	2100081
Benzo(g,h,i)perylene	mg/kg		0.005	1.8		0.005	2.2	0.005	2100081
Benzo(k)fluoranthene	mg/kg		0.005	2.1		0.005	3.1	0.005	2100081

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Elevated reporting limit due to sample matrix.

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Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6912		FH6913	FH6913		FH6914		
Sampling Date		2010/03/09		2010/03/09	2010/03/09		2010/03/09		
COC Number		B 121795		B 121795	B 121795		B 121795		
	Units	**10SED-2 (30-45CM) Lab-Dup**	**RDL**	**10SED-3 (0-15CM)**	**10SED-3 (0-15CM) Lab-Dup**	**RDL**	**10SED-3 (40-50CM)**	**RDL**	**QC Batch**
Chrysene	mg/kg		0.1	5.1		0.005	7.7	0.005	2100081
Dibenz(a,h)anthracene	mg/kg		0.005	0.55		0.005	0.70	0.005	2100081
Fluoranthene	mg/kg		0.1	4.4		0.005	12 (1)	0.03	2100081
Fluorene	mg/kg		0.005	0.35		0.005	0.49	0.005	2100081
Indeno(1,2,3-cd)pyrene	mg/kg		0.005	1.8		0.005	2.3	0.005	2100081
Naphthalene	mg/kg		0.005	0.036		0.005	0.080	0.005	2100081
Perylene	mg/kg		0.005	0.95		0.005	1.2	0.005	2100081
Phenanthrene	mg/kg		0.1	1.9		0.005	2.0	0.005	2100081
Pyrene	mg/kg		0.1	6.5		0.005	12 (1)	0.03	2100081
Petroleum Hydrocarbons									
Benzene	mg/kg	<0.003	0.003	<0.003		0.003	<0.003	0.003	2100428
Toluene	mg/kg	<0.03	0.03	<0.03		0.03	<0.03	0.03	2100428
Ethylbenzene	mg/kg	<0.01	0.01	<0.01		0.01	<0.01	0.01	2100428
Xylene (Total)	mg/kg	<0.05	0.05	<0.05		0.05	<0.05	0.05	2100428
C6 - C10 (less BTEX)	mg/kg	<3	3	<3		3	<3	3	2100428
>C10-C21 Hydrocarbons	mg/kg		15	310	320	15	350	15	2100651
>C21-<C32 Hydrocarbons	mg/kg		15	890	950	15	910	15	2100651
Modified TPH (Tier1)	mg/kg		20	1200		20	1300	20	2098718
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%			87	83		97		2100651
n-Dotriacontane - Extractable	%			77 (2)	80		100 (3)		2100651
D10-Anthracene	%			81			83		2100081
D14-Terphenyl	%			83			82		2100081
D8-Acenaphthylene	%			70			78		2100081
Decachlorobiphenyl	%			87 (4)			83 (4)		2100303
Isobutylbenzene - Volatile	%	113		105			107		2100428

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Elevated PAH RDL(s) due to sample dilution.
(2) Lube oil fraction.
(3) One product in fuel / lube range. Lube oil fraction.
(4) Aroclor 1260.

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Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6915		FH6916			FH6917		
Sampling Date		2010/03/09		2010/03/09			2010/03/10		
COC Number		B 121795		B 121795			B 121795		
	Units	**10SED-4 (0-15CM)**	**RDL**	**10SED-5 (0-15CM)**	**RDL**	**QC Batch**	**10SED-6 (0-15CM)**	**RDL**	**QC Batch**
Inorganics									
Moisture	%	49	1	48	1	2100049	48	1	2100049
Organic Carbon (TOC)	g/kg	15	0.4	15	0.5	2100895	15	0.4	2100895
< -4 Phi (16 mm)	%	100	0.1	100	0.1	2103067	100	0.1	2103067
< -3 Phi (8 mm)	%	100	0.1	100	0.1	2103067	100	0.1	2103067
< -2 Phi (4 mm)	%	100	0.1	100	0.1	2103067	100	0.1	2103067
< -1 Phi (2 mm)	%	82	0.1	100	0.1	2103067	99	0.1	2103067
< 0 Phi (1 mm)	%	76	0.1	98	0.1	2103067	97	0.1	2103067
< +1 Phi (0.5 mm)	%	72	0.1	96	0.1	2103067	95	0.1	2103067
< +2 Phi (0.25 mm)	%	66	0.1	93	0.1	2103067	90	0.1	2103067
< +3 Phi (0.12 mm)	%	61	0.1	87	0.1	2103067	79	0.1	2103067
< +4 Phi (0.062 mm)	%	55	0.1	73	0.1	2103067	60	0.1	2103067
< +5 Phi (0.031 mm)	%	51	0.1	64	0.1	2103067	53	0.1	2103067
< +6 Phi (0.016 mm)	%	37	0.1	49	0.1	2103067	39	0.1	2103067
< +7 Phi (0.0078 mm)	%	20	0.1	22	0.1	2103067	21	0.1	2103067
< +8 Phi (0.0039 mm)	%	16	0.1	17	0.1	2103067	16	0.1	2103067
< +9 Phi (0.0020 mm)	%	11	0.1	11	0.1	2103067	10	0.1	2103067
Gravel	%	18	0.1	0.3	0.1	2103067	1.0	0.1	2103067
Sand	%	27	0.1	27	0.1	2103067	39	0.1	2103067
Silt	%	39	0.1	56	0.1	2103067	44	0.1	2103067
Clay	%	16	0.1	17	0.1	2103067	16	0.1	2103067
Metals									
Mercury (Hg)	mg/kg	0.05	0.01	0.09	0.01	2100496	0.09	0.01	2100496
PCBs									
Total PCB	mg/kg	<0.01	0.01	<0.03	0.03	2100303	<0.01	0.01	2100303
Metals									
Available Aluminum (Al)	mg/kg	8600	10	7700	10	2101055	6600	10	2101222
Available Antimony (Sb)	mg/kg	<2	2	2	2	2101055	3	2	2101222
Available Arsenic (As)	mg/kg	33	2	44	2	2101055	41	2	2101222
Available Barium (Ba)	mg/kg	590	5	550	5	2101055	520	5	2101222
Available Beryllium (Be)	mg/kg	<2	2	<2	2	2101055	<2	2	2101222
Available Bismuth (Bi)	mg/kg	<2	2	<2	2	2101055	<2	2	2101222
Available Boron (B)	mg/kg	28	5	26	5	2101055	24	5	2101222

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6915		FH6916			FH6917		
Sampling Date		2010/03/09		2010/03/09			2010/03/10		
COC Number		B 121795		B 121795			B 121795		
	Units	**10SED-4 (0-15CM)**	**RDL**	**10SED-5 (0-15CM)**	**RDL**	**QC Batch**	**10SED-6 (0-15CM)**	**RDL**	**QC Batch**
Available Cadmium (Cd)	mg/kg	<0.3	0.3	0.4	0.3	2101055	<0.3	0.3	2101222
Available Chromium (Cr)	mg/kg	21	2	27	2	2101055	17	2	2101222
Available Cobalt (Co)	mg/kg	14	1	17	1	2101055	16	1	2101222
Available Copper (Cu)	mg/kg	63	2	76	2	2101055	81	2	2101222
Available Iron (Fe)	mg/kg	29000	50	32000	50	2101055	30000	50	2101222
Available Lead (Pb)	mg/kg	100	0.5	93	0.5	2101055	93	0.5	2101222
Available Lithium (Li)	mg/kg	22	2	19	2	2101055	17	2	2101222
Available Manganese (Mn)	mg/kg	420	2	530	2	2101055	530	2	2101222
Available Molybdenum (Mo)	mg/kg	3	2	4	2	2101055	3	2	2101222
Available Nickel (Ni)	mg/kg	32	2	42	2	2101055	34	2	2101222
Available Rubidium (Rb)	mg/kg	9	2	8	2	2101055	7	2	2101222
Available Selenium (Se)	mg/kg	<2	2	<2	2	2101055	<2	2	2101222
Available Silver (Ag)	mg/kg	<0.5	0.5	<0.5	0.5	2101055	<0.5	0.5	2101222
Available Strontium (Sr)	mg/kg	48	5	53	5	2101055	55	5	2101222
Available Thallium (Tl)	mg/kg	<0.1	0.1	<0.1	0.1	2101055	0.1	0.1	2101222
Available Tin (Sn)	mg/kg	5	2	8	2	2101055	6	2	2101222
Available Uranium (U)	mg/kg	1.6	0.1	1.6	0.1	2101055	1.5	0.1	2101222
Available Vanadium (V)	mg/kg	31	2	26	2	2101055	24	2	2101222
Available Zinc (Zn)	mg/kg	120	5	130	5	2101055	110	5	2101222
Polyaromatic Hydrocarbons									
1-Methylnaphthalene	mg/kg	<0.005	0.005	0.014	0.005	2100081	0.015	0.005	2100081
2-Methylnaphthalene	mg/kg	0.012	0.005	0.022	0.005	2100081	0.025	0.005	2100081
Acenaphthene	mg/kg	0.017	0.005	0.028	0.005	2100081	0.082	0.005	2100081
Acenaphthylene	mg/kg	0.037	0.005	0.077	0.005	2100081	0.055	0.005	2100081
Anthracene	mg/kg	0.31	0.005	0.49	0.005	2100081	0.60	0.005	2100081
Benzo(a)anthracene	mg/kg	0.76	0.005	1.7	0.005	2100081	1.1	0.005	2100081
Benzo(a)pyrene	mg/kg	0.69	0.005	1.3	0.005	2100081	1.1	0.005	2100081
Benzo(b)fluoranthene	mg/kg	0.95	0.005	1.7	0.005	2100081	1.2	0.005	2100081
Benzo(g,h,i)perylene	mg/kg	0.45	0.005	0.77	0.005	2100081	0.61	0.005	2100081
Benzo(k)fluoranthene	mg/kg	0.59	0.005	0.86	0.005	2100081	0.71	0.005	2100081
Chrysene	mg/kg	1.2	0.005	2.0	0.005	2100081	1.5	0.005	2100081
Dibenz(a,h)anthracene	mg/kg	0.13	0.005	0.24	0.005	2100081	0.19	0.005	2100081
Fluoranthene	mg/kg	0.95	0.005	5.2	0.005	2100081	1.8	0.005	2100081

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6915		FH6916			FH6917		
Sampling Date		2010/03/09		2010/03/09			2010/03/10		
COC Number		B 121795		B 121795			B 121795		
	Units	**10SED-4 (0-15CM)**	**RDL**	**10SED-5 (0-15CM)**	**RDL**	**QC Batch**	**10SED-6 (0-15CM)**	**RDL**	**QC Batch**
Fluorene	mg/kg	0.071	0.005	0.12	0.005	2100081	0.18	0.005	2100081
Indeno(1,2,3-cd)pyrene	mg/kg	0.44	0.005	0.76	0.005	2100081	0.60	0.005	2100081
Naphthalene	mg/kg	0.013	0.005	0.024	0.005	2100081	0.033	0.005	2100081
Perylene	mg/kg	0.21	0.005	0.38	0.005	2100081	0.29	0.005	2100081
Phenanthrene	mg/kg	0.42	0.005	0.82	0.005	2100081	1.3	0.005	2100081
Pyrene	mg/kg	0.81	0.005	4.7	0.005	2100081	1.7	0.005	2100081
Petroleum Hydrocarbons									
Benzene	mg/kg	<0.003	0.003	<0.003	0.003	2100428	<0.003	0.003	2100428
Toluene	mg/kg	<0.03	0.03	<0.03	0.03	2100428	<0.03	0.03	2100428
Ethylbenzene	mg/kg	<0.01	0.01	<0.01	0.01	2100428	<0.01	0.01	2100428
Xylene (Total)	mg/kg	<0.05	0.05	<0.05	0.05	2100428	<0.05	0.05	2100428
C6 - C10 (less BTEX)	mg/kg	<3	3	<3	3	2100428	<3	3	2100428
>C10-C21 Hydrocarbons	mg/kg	84	15	110	15	2100651	95	15	2100651
>C21-<C32 Hydrocarbons	mg/kg	230	15	280	15	2100651	270	15	2100651
Modified TPH (Tier1)	mg/kg	320	20	390	20	2098718	360	20	2098718
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%	95		88		2100651	87		2100651
n-Dotriacontane - Extractable	%	106 (1)		99 (1)		2100651	98 (1)		2100651
D10-Anthracene	%	79		83		2100081	81		2100081
D14-Terphenyl	%	90		91		2100081	87		2100081
D8-Acenaphthylene	%	75		74		2100081	70		2100081
Decachlorobiphenyl	%	84		82 (2)		2100303	87		2100303
Isobutylbenzene - Volatile	%	117		119		2100428	117		2100428

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Lube oil fraction.
(2) Elevated PCB RDL due to matrix / co-extractive interference.

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Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6918		FH6919	FH6919		FH6920		
Sampling Date		2010/03/10		2010/03/10	2010/03/10		2010/03/10		
COC Number		B 121795		B 121795	B 121795		B 121795		
	Units	**10SED-7 (0-15CM)**	**RDL**	**10SED-7 (40-54CM)**	**10SED-7 (40-54CM) Lab-Dup**	**RDL**	**10SED-8 (0-15CM)**	**RDL**	**QC Batch**
Inorganics									
Moisture	%	56	1	51		1	64	1	2100049
Organic Carbon (TOC)	g/kg	29	0.7	28		0.5	40	0.9	2100895
< -4 Phi (16 mm)	%	100	0.1	100		0.1	100	0.1	2103067
< -3 Phi (8 mm)	%	100	0.1	100		0.1	100	0.1	2103067
< -2 Phi (4 mm)	%	100	0.1	100		0.1	100	0.1	2103067
< -1 Phi (2 mm)	%	100	0.1	99		0.1	99	0.1	2103067
< 0 Phi (1 mm)	%	97	0.1	97		0.1	95	0.1	2103067
< +1 Phi (0.5 mm)	%	94	0.1	95		0.1	90	0.1	2103067
< +2 Phi (0.25 mm)	%	90	0.1	92		0.1	84	0.1	2103067
< +3 Phi (0.12 mm)	%	85	0.1	86		0.1	78	0.1	2103067
< +4 Phi (0.062 mm)	%	75	0.1	73		0.1	65	0.1	2103067
< +5 Phi (0.031 mm)	%	68	0.1	66		0.1	57	0.1	2103067
< +6 Phi (0.016 mm)	%	53	0.1	52		0.1	42	0.1	2103067
< +7 Phi (0.0078 mm)	%	26	0.1	28		0.1	23	0.1	2103067
< +8 Phi (0.0039 mm)	%	20	0.1	21		0.1	19	0.1	2103067
< +9 Phi (0.0020 mm)	%	12	0.1	13		0.1	15	0.1	2103067
Gravel	%	0.3	0.1	0.7		0.1	0.5	0.1	2103067
Sand	%	25	0.1	26		0.1	34	0.1	2103067
Silt	%	55	0.1	52		0.1	46	0.1	2103067
Clay	%	20	0.1	21		0.1	19	0.1	2103067
Metals									
Mercury (Hg)	mg/kg	0.18	0.01	0.19		0.01	0.15	0.01	2100496
PCBs									
Total PCB	mg/kg	<0.01	0.01	<0.01	<0.01	0.01	<0.01	0.01	2100303
Metals									
Available Aluminum (Al)	mg/kg	11000	10	11000		10	11000	10	2101222
Available Antimony (Sb)	mg/kg	3	2	4		2	<2	2	2101222
Available Arsenic (As)	mg/kg	27	2	26		2	15	2	2101222
Available Barium (Ba)	mg/kg	270	5	220		5	170	5	2101222
Available Beryllium (Be)	mg/kg	<2	2	<2		2	<2	2	2101222
Available Bismuth (Bi)	mg/kg	<2	2	<2		2	<2	2	2101222

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6918		FH6919	FH6919		FH6920		
Sampling Date		2010/03/10		2010/03/10	2010/03/10		2010/03/10		
COC Number		B 121795		B 121795	B 121795		B 121795		
	Units	**10SED-7 (0-15CM)**	**RDL**	**10SED-7 (40-54CM)**	**10SED-7 (40-54CM) Lab-Dup**	**RDL**	**10SED-8 (0-15CM)**	**RDL**	**QC Batch**
Available Boron (B)	mg/kg	40	5	41		5	47	5	2101222
Available Cadmium (Cd)	mg/kg	0.6	0.3	0.6		0.3	0.6	0.3	2101222
Available Chromium (Cr)	mg/kg	26	2	27		2	28	2	2101222
Available Cobalt (Co)	mg/kg	14	1	14		1	10	1	2101222
Available Copper (Cu)	mg/kg	70	2	110		2	58	2	2101222
Available Iron (Fe)	mg/kg	31000	50	30000		50	25000	50	2101222
Available Lead (Pb)	mg/kg	120	0.5	120		0.5	83	0.5	2101222
Available Lithium (Li)	mg/kg	26	2	27		2	28	2	2101222
Available Manganese (Mn)	mg/kg	360	2	360		2	270	2	2101222
Available Molybdenum (Mo)	mg/kg	6	2	7		2	4	2	2101222
Available Nickel (Ni)	mg/kg	32	2	32		2	25	2	2101222
Available Rubidium (Rb)	mg/kg	11	2	11		2	12	2	2101222
Available Selenium (Se)	mg/kg	<2	2	<2		2	<5 (1)	5	2101222
Available Silver (Ag)	mg/kg	0.7	0.5	0.5		0.5	<0.5	0.5	2101222
Available Strontium (Sr)	mg/kg	74	5	79		5	60	5	2101222
Available Thallium (Tl)	mg/kg	0.2	0.1	0.2		0.1	0.2	0.1	2101222
Available Tin (Sn)	mg/kg	53	2	58		2	18	2	2101222
Available Uranium (U)	mg/kg	2.4	0.1	2.8		0.1	1.8	0.1	2101222
Available Vanadium (V)	mg/kg	39	2	42		2	42	2	2101222
Available Zinc (Zn)	mg/kg	220	5	250		5	150	5	2101222
Polyaromatic Hydrocarbons									
1-Methylnaphthalene	mg/kg	0.036	0.005	0.057		0.005	0.034	0.005	2100081
2-Methylnaphthalene	mg/kg	0.054	0.005	0.084		0.005	0.051	0.005	2100081
Acenaphthene	mg/kg	0.14	0.005	0.23		0.005	0.10	0.005	2100081
Acenaphthylene	mg/kg	0.28	0.005	0.39		0.005	0.12	0.005	2100081
Anthracene	mg/kg	1.2	0.005	1.6		0.005	0.65	0.005	2100081
Benzo(a)anthracene	mg/kg	3.5	0.005	5.9		0.005	2.6	0.005	2100081
Benzo(a)pyrene	mg/kg	3.8	0.005	5.7		0.005	2.3	0.005	2100081
Benzo(b)fluoranthene	mg/kg	3.4	0.005	5.2		0.005	2.1	0.005	2100081
Benzo(g,h,i)perylene	mg/kg	1.8	0.005	2.7		0.005	1.2	0.005	2100081
Benzo(k)fluoranthene	mg/kg	1.9	0.005	3.0		0.005	1.5	0.005	2100081

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Elevated reporting limit due to sample matrix.

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6918		FH6919	FH6919		FH6920		
Sampling Date		2010/03/10		2010/03/10	2010/03/10		2010/03/10		
COC Number		B 121795		B 121795	B 121795		B 121795		
	Units	**10SED-7 (0-15CM)**	**RDL**	**10SED-7 (40-54CM)**	**10SED-7 (40-54CM) Lab-Dup**	**RDL**	**10SED-8 (0-15CM)**	**RDL**	**QC Batch**
Chrysene	mg/kg	3.5	0.005	5.4		0.005	2.6	0.005	2100081
Dibenz(a,h)anthracene	mg/kg	0.55	0.005	0.80		0.005	0.37	0.005	2100081
Fluoranthene	mg/kg	7.0	0.005	10 (1)		0.03	5.0	0.005	2100081
Fluorene	mg/kg	0.33	0.005	0.53		0.005	0.23	0.005	2100081
Indeno(1,2,3-cd)pyrene	mg/kg	1.9	0.005	2.8		0.005	1.2	0.005	2100081
Naphthalene	mg/kg	0.12	0.005	0.18		0.005	0.12	0.005	2100081
Perylene	mg/kg	0.93	0.005	1.4		0.005	0.66	0.005	2100081
Phenanthrene	mg/kg	2.6	0.005	4.0		0.005	2.0	0.005	2100081
Pyrene	mg/kg	7.0	0.005	11 (1)		0.03	4.4	0.005	2100081
Petroleum Hydrocarbons									
Benzene	mg/kg	<0.003	0.003	<0.003		0.003	<0.003	0.003	2100428
Toluene	mg/kg	<0.03	0.03	<0.03		0.03	<0.03	0.03	2100428
Ethylbenzene	mg/kg	<0.01	0.01	<0.01		0.01	<0.01	0.01	2100428
Xylene (Total)	mg/kg	<0.05	0.05	<0.05		0.05	<0.05	0.05	2100428
C6 - C10 (less BTEX)	mg/kg	<3	3	<3		3	<3	3	2100428
>C10-C21 Hydrocarbons	mg/kg	170	15	260		15	170	15	2100651
>C21-<C32 Hydrocarbons	mg/kg	500	15	650		15	450	15	2100651
Modified TPH (Tier1)	mg/kg	670	20	910		20	620	20	2098718
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%	83		85			91		2100651
n-Dotriacontane - Extractable	%	105 (2)		70 (2)			86 (2)		2100651
D10-Anthracene	%	81		81			89		2100081
D14-Terphenyl	%	83		87			94		2100081
D8-Acenaphthylene	%	74		74			77		2100081
Decachlorobiphenyl	%	89		86	80		83		2100303
Isobutylbenzene - Volatile	%	110		103			114		2100428

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Elevated PAH RDL(s) due to sample dilution.
(2) Lube oil fraction.

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6920		FH6921		FH6922		
Sampling Date		2010/03/10		2010/03/10		2010/03/10		
COC Number		B 121795		B 121795		B 121795		
	Units	**10SED-8 (0-15CM) Lab-Dup**	**RDL**	**10SED9 (0-15CM)**	**RDL**	**10SED-10 (0-15CM)**	**RDL**	**QC Batch**
Inorganics								
Moisture	%		1	51	1	63	1	2100049
Organic Carbon (TOC)	g/kg		0.9	24	0.5	41	0.7	2100895
< -4 Phi (16 mm)	%		0.1	100	0.1	100	0.1	2103067
< -3 Phi (8 mm)	%		0.1	100	0.1	100	0.1	2103067
< -2 Phi (4 mm)	%		0.1	100	0.1	100	0.1	2103067
< -1 Phi (2 mm)	%		0.1	99	0.1	100	0.1	2103067
< 0 Phi (1 mm)	%		0.1	96	0.1	96	0.1	2103067
< +1 Phi (0.5 mm)	%		0.1	92	0.1	93	0.1	2103067
< +2 Phi (0.25 mm)	%		0.1	85	0.1	86	0.1	2103067
< +3 Phi (0.12 mm)	%		0.1	74	0.1	79	0.1	2103067
< +4 Phi (0.062 mm)	%		0.1	61	0.1	64	0.1	2103067
< +5 Phi (0.031 mm)	%		0.1	54	0.1	53	0.1	2103067
< +6 Phi (0.016 mm)	%		0.1	43	0.1	39	0.1	2103067
< +7 Phi (0.0078 mm)	%		0.1	24	0.1	27	0.1	2103067
< +8 Phi (0.0039 mm)	%		0.1	20	0.1	22	0.1	2103067
< +9 Phi (0.0020 mm)	%		0.1	14	0.1	16	0.1	2103067
Gravel	%		0.1	1.4	0.1	<0.1	0.1	2103067
Sand	%		0.1	38	0.1	36	0.1	2103067
Silt	%		0.1	41	0.1	41	0.1	2103067
Clay	%		0.1	20	0.1	22	0.1	2103067
Metals								
Mercury (Hg)	mg/kg		0.01	0.10	0.01	0.14	0.01	2100496
PCBs								
Total PCB	mg/kg		0.01	<0.01	0.01	<0.01	0.01	2100303
Metals								
Available Aluminum (Al)	mg/kg		10	10000	10	11000	10	2101222
Available Antimony (Sb)	mg/kg		2	4	2	<2	2	2101222
Available Arsenic (As)	mg/kg		2	23	2	15	2	2101222
Available Barium (Ba)	mg/kg		5	270	5	160	5	2101222
Available Beryllium (Be)	mg/kg		2	<2	2	<2	2	2101222
Available Bismuth (Bi)	mg/kg		2	<2	2	<2	2	2101222

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6920		FH6921		FH6922		
Sampling Date		2010/03/10		2010/03/10		2010/03/10		
COC Number		B 121795		B 121795		B 121795		
	Units	**10SED-8 (0-15CM) Lab-Dup**	**RDL**	**10SED9 (0-15CM)**	**RDL**	**10SED-10 (0-15CM)**	**RDL**	**QC Batch**
Available Boron (B)	mg/kg		5	33	5	50	5	2101222
Available Cadmium (Cd)	mg/kg		0.3	0.5	0.3	0.6	0.3	2101222
Available Chromium (Cr)	mg/kg		2	25	2	29	2	2101222
Available Cobalt (Co)	mg/kg		1	13	1	10	1	2101222
Available Copper (Cu)	mg/kg		2	74	2	68	2	2101222
Available Iron (Fe)	mg/kg		50	27000	50	25000	50	2101222
Available Lead (Pb)	mg/kg		0.5	97	0.5	69	0.5	2101222
Available Lithium (Li)	mg/kg		2	26	2	27	2	2101222
Available Manganese (Mn)	mg/kg		2	340	2	260	2	2101222
Available Molybdenum (Mo)	mg/kg		2	5	2	3	2	2101222
Available Nickel (Ni)	mg/kg		2	30	2	24	2	2101222
Available Rubidium (Rb)	mg/kg		2	11	2	11	2	2101222
Available Selenium (Se)	mg/kg		5	<2	2	<5 (1)	5	2101222
Available Silver (Ag)	mg/kg		0.5	<0.5	0.5	<0.5	0.5	2101222
Available Strontium (Sr)	mg/kg		5	66	5	66	5	2101222
Available Thallium (Tl)	mg/kg		0.1	0.2	0.1	0.2	0.1	2101222
Available Tin (Sn)	mg/kg		2	38	2	12	2	2101222
Available Uranium (U)	mg/kg		0.1	2.3	0.1	1.6	0.1	2101222
Available Vanadium (V)	mg/kg		2	37	2	41	2	2101222
Available Zinc (Zn)	mg/kg		5	180	5	150	5	2101222
Polyaromatic Hydrocarbons								
1-Methylnaphthalene	mg/kg	0.017 (2)	0.005	0.033	0.005	0.034	0.005	2100081
2-Methylnaphthalene	mg/kg	0.031 (3)	0.005	0.049	0.005	0.053	0.005	2100081
Acenaphthene	mg/kg	0.085	0.005	0.14	0.005	0.14	0.005	2100081
Acenaphthylene	mg/kg	0.14	0.005	0.20	0.005	0.16	0.005	2100081
Anthracene	mg/kg	0.67	0.005	0.99	0.005	0.92	0.005	2100081
Benzo(a)anthracene	mg/kg	2.3	0.005	2.8	0.005	2.5	0.005	2100081
Benzo(a)pyrene	mg/kg	2.0	0.005	2.6	0.005	2.1	0.005	2100081
Benzo(b)fluoranthene	mg/kg	1.9	0.005	2.3	0.005	1.9	0.005	2100081
Benzo(g,h,i)perylene	mg/kg	1.0	0.005	1.2	0.005	1.1	0.005	2100081

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Elevated reporting limit due to sample matrix.
(2) Duplicate: sample results are within 5x RDL.
(3) Duplicate: < 10 % of compounds in multi-component analysis in violation.

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6920		FH6921		FH6922		
Sampling Date		2010/03/10		2010/03/10		2010/03/10		
COC Number		B 121795		B 121795		B 121795		
	Units	**10SED-8 (0-15CM) Lab-Dup**	**RDL**	**10SED9 (0-15CM)**	**RDL**	**10SED-10 (0-15CM)**	**RDL**	**QC Batch**
Benzo(k)fluoranthene	mg/kg	1.2	0.005	1.3	0.005	1.2	0.005	2100081
Chrysene	mg/kg	2.4	0.005	2.7	0.005	2.6	0.005	2100081
Dibenz(a,h)anthracene	mg/kg	0.32	0.005	0.35	0.005	0.34	0.005	2100081
Fluoranthene	mg/kg	4.0	0.005	5.6	0.005	5.2	0.005	2100081
Fluorene	mg/kg	0.18	0.005	0.31	0.005	0.26	0.005	2100081
Indeno(1,2,3-cd)pyrene	mg/kg	1.1	0.005	1.2	0.005	1.2	0.005	2100081
Naphthalene	mg/kg	0.046 (1)	0.005	0.10	0.005	0.090	0.005	2100081
Perylene	mg/kg	0.58	0.005	0.65	0.005	0.62	0.005	2100081
Phenanthrene	mg/kg	1.6	0.005	2.4	0.005	2.4	0.005	2100081
Pyrene	mg/kg	3.6	0.005	5.7	0.005	4.4	0.005	2100081
Petroleum Hydrocarbons								
Benzene	mg/kg		0.003	<0.003	0.003	<0.003	0.003	2100428
Toluene	mg/kg		0.03	<0.03	0.03	<0.03	0.03	2100428
Ethylbenzene	mg/kg		0.01	<0.01	0.01	<0.01	0.01	2100428
Xylene (Total)	mg/kg		0.05	<0.05	0.05	<0.05	0.05	2100428
C6 - C10 (less BTEX)	mg/kg		3	<3	3	<3	3	2100428
>C10-C21 Hydrocarbons	mg/kg		15	160	15	160	15	2100651
>C21-<C32 Hydrocarbons	mg/kg		15	440	15	450	15	2100651
Modified TPH (Tier1)	mg/kg		20	610	20	610	20	2098718
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%			92		96		2100651
n-Dotriacontane - Extractable	%			106 (2)		98 (2)		2100651
D10-Anthracene	%	86		84		84		2100081
D14-Terphenyl	%	90		86		88		2100081
D8-Acenaphthylene	%	70		73		72		2100081
Decachlorobiphenyl	%			83		78		2100303
Isobutylbenzene - Volatile	%			110		109		2100428

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Duplicate: < 10 % of compounds in multi-component analysis in violation.
(2) Lube oil fraction.

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel:902-420-0203 Toll-free:800-565-7227 Fax:902-420-8612 www.maxxamanalytics.com

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6922			FH6923	FH6923		
Sampling Date		2010/03/10			2010/03/10	2010/03/10		
COC Number		B 121795			B 121795	B 121795		
	Units	**10SED-10 (0-15CM) Lab-Dup**	**RDL**	**QC Batch**	**10SED-11 (0-15CM)**	**10SED-11 (0-15CM) Lab-Dup**	**RDL**	**QC Batch**
Inorganics								
Moisture	%		1	2100049	63		1	2100049
Organic Carbon (TOC)	g/kg		0.7	2100895	24		0.5	2100895
< -4 Phi (16 mm)	%	100	0.1	2103067	100		0.1	2103067
< -3 Phi (8 mm)	%	100	0.1	2103067	100		0.1	2103067
< -2 Phi (4 mm)	%	100	0.1	2103067	100		0.1	2103067
< -1 Phi (2 mm)	%	100	0.1	2103067	100		0.1	2103067
< 0 Phi (1 mm)	%	97	0.1	2103067	97		0.1	2103067
< +1 Phi (0.5 mm)	%	93	0.1	2103067	93		0.1	2103067
< +2 Phi (0.25 mm)	%	87	0.1	2103067	89		0.1	2103067
< +3 Phi (0.12 mm)	%	80	0.1	2103067	85		0.1	2103067
< +4 Phi (0.062 mm)	%	63	0.1	2103067	78		0.1	2103067
< +5 Phi (0.031 mm)	%	55	0.1	2103067	74		0.1	2103067
< +6 Phi (0.016 mm)	%	41	0.1	2103067	58		0.1	2103067
< +7 Phi (0.0078 mm)	%	27	0.1	2103067	35		0.1	2103067
< +8 Phi (0.0039 mm)	%	23	0.1	2103067	28		0.1	2103067
< +9 Phi (0.0020 mm)	%	17	0.1	2103067	20		0.1	2103067
Gravel	%	0.1	0.1	2103067	0.2		0.1	2103067
Sand	%	36	0.1	2103067	22		0.1	2103067
Silt	%	41	0.1	2103067	50		0.1	2103067
Clay	%	23	0.1	2103067	28		0.1	2103067
Metals								
Mercury (Hg)	mg/kg		0.01	2100496	0.08	0.06	0.01	2102059
PCBs								
Total PCB	mg/kg		0.01	2100303	<0.01		0.01	2100303
Metals								
Available Aluminum (Al)	mg/kg		10	2101222	13000		10	2101222
Available Antimony (Sb)	mg/kg		2	2101222	<2		2	2101222
Available Arsenic (As)	mg/kg		2	2101222	21		2	2101222
Available Barium (Ba)	mg/kg		5	2101222	280		5	2101222
Available Beryllium (Be)	mg/kg		2	2101222	<2		2	2101222
Available Bismuth (Bi)	mg/kg		2	2101222	<2		2	2101222

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6922			FH6923	FH6923		
Sampling Date		2010/03/10			2010/03/10	2010/03/10		
COC Number		B 121795			B 121795	B 121795		
	Units	**10SED-10 (0-15CM) Lab-Dup**	**RDL**	**QC Batch**	**10SED-11 (0-15CM)**	**10SED-11 (0-15CM) Lab-Dup**	**RDL**	**QC Batch**
Available Boron (B)	mg/kg		5	2101222	48		5	2101222
Available Cadmium (Cd)	mg/kg		0.3	2101222	0.7		0.3	2101222
Available Chromium (Cr)	mg/kg		2	2101222	33		2	2101222
Available Cobalt (Co)	mg/kg		1	2101222	13		1	2101222
Available Copper (Cu)	mg/kg		2	2101222	92		2	2101222
Available Iron (Fe)	mg/kg		50	2101222	29000		50	2101222
Available Lead (Pb)	mg/kg		0.5	2101222	67		0.5	2101222
Available Lithium (Li)	mg/kg		2	2101222	30		2	2101222
Available Manganese (Mn)	mg/kg		2	2101222	340		2	2101222
Available Molybdenum (Mo)	mg/kg		2	2101222	3		2	2101222
Available Nickel (Ni)	mg/kg		2	2101222	30		2	2101222
Available Rubidium (Rb)	mg/kg		2	2101222	14		2	2101222
Available Selenium (Se)	mg/kg		5	2101222	<5 (1)		5	2101222
Available Silver (Ag)	mg/kg		0.5	2101222	<0.5		0.5	2101222
Available Strontium (Sr)	mg/kg		5	2101222	57		5	2101222
Available Thallium (Tl)	mg/kg		0.1	2101222	0.2		0.1	2101222
Available Tin (Sn)	mg/kg		2	2101222	9		2	2101222
Available Uranium (U)	mg/kg		0.1	2101222	1.5		0.1	2101222
Available Vanadium (V)	mg/kg		2	2101222	46		2	2101222
Available Zinc (Zn)	mg/kg		5	2101222	180		5	2101222
Polyaromatic Hydrocarbons								
1-Methylnaphthalene	mg/kg		0.005	2100081	0.016		0.005	2100081
2-Methylnaphthalene	mg/kg		0.005	2100081	0.021		0.005	2100081
Acenaphthene	mg/kg		0.005	2100081	0.041		0.005	2100081
Acenaphthylene	mg/kg		0.005	2100081	0.14		0.005	2100081
Anthracene	mg/kg		0.005	2100081	0.47		0.005	2100081
Benzo(a)anthracene	mg/kg		0.005	2100081	1.6		0.005	2100081
Benzo(a)pyrene	mg/kg		0.005	2100081	1.5		0.005	2100081
Benzo(b)fluoranthene	mg/kg		0.005	2100081	1.3		0.005	2100081
Benzo(g,h,i)perylene	mg/kg		0.005	2100081	0.85		0.005	2100081
Benzo(k)fluoranthene	mg/kg		0.005	2100081	0.95		0.005	2100081

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Elevated reporting limit due to sample matrix.

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6922			FH6923	FH6923		
Sampling Date		2010/03/10			2010/03/10	2010/03/10		
COC Number		B 121795			B 121795	B 121795		
	Units	**10SED-10 (0-15CM) Lab-Dup**	**RDL**	**QC Batch**	**10SED-11 (0-15CM)**	**10SED-11 (0-15CM) Lab-Dup**	**RDL**	**QC Batch**
Chrysene	mg/kg		0.005	2100081	1.8		0.005	2100081
Dibenz(a,h)anthracene	mg/kg		0.005	2100081	0.26		0.005	2100081
Fluoranthene	mg/kg		0.005	2100081	2.5		0.005	2100081
Fluorene	mg/kg		0.005	2100081	0.11		0.005	2100081
Indeno(1,2,3-cd)pyrene	mg/kg		0.005	2100081	0.88		0.005	2100081
Naphthalene	mg/kg		0.005	2100081	0.027		0.005	2100081
Perylene	mg/kg		0.005	2100081	0.45		0.005	2100081
Phenanthrene	mg/kg		0.005	2100081	0.89		0.005	2100081
Pyrene	mg/kg		0.005	2100081	2.1		0.005	2100081
Petroleum Hydrocarbons								
Benzene	mg/kg		0.003	2100428	<0.003		0.003	2100428
Toluene	mg/kg		0.03	2100428	<0.03		0.03	2100428
Ethylbenzene	mg/kg		0.01	2100428	<0.01		0.01	2100428
Xylene (Total)	mg/kg		0.05	2100428	<0.05		0.05	2100428
C6 - C10 (less BTEX)	mg/kg		3	2100428	<3		3	2100428
>C10-C21 Hydrocarbons	mg/kg		15	2100651	160		15	2100651
>C21-<C32 Hydrocarbons	mg/kg		15	2100651	420		15	2100651
Modified TPH (Tier1)	mg/kg		20	2098718	590		20	2098718
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%			2100651	98			2100651
n-Dotriacontane - Extractable	%			2100651	106 (1)			2100651
D10-Anthracene	%			2100081	87			2100081
D14-Terphenyl	%			2100081	92			2100081
D8-Acenaphthylene	%			2100081	70			2100081
Decachlorobiphenyl	%			2100303	89			2100303
Isobutylbenzene - Volatile	%			2100428	109			2100428

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Lube oil fraction.

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6924			FH6925		FH6926		
Sampling Date		2010/03/10			2010/03/10		2010/03/10		
COC Number		B 121795			B 121795		B 121795		
	Units	**10SED-11 (45-60CM)**	**RDL**	**QC Batch**	**10SED-12 (0-15CM)**	**RDL**	**10SED-13 (0-15CM)**	**RDL**	**QC Batch**
Inorganics									
Moisture	%	49	1	2100049	36	1	34	1	2100049
Organic Carbon (TOC)	g/kg	15	0.4	2100895	22	0.3	8.2	0.2	2100895
< -4 Phi (16 mm)	%	100	0.1	2103067	100	0.1	100	0.1	2105727
< -3 Phi (8 mm)	%	100	0.1	2103067	100	0.1	100	0.1	2105727
< -2 Phi (4 mm)	%	100	0.1	2103067	100	0.1	100	0.1	2105727
< -1 Phi (2 mm)	%	97 (1)	0.1	2103067	81	0.1	100	0.1	2105727
< 0 Phi (1 mm)	%	92	0.1	2103067	71	0.1	99	0.1	2105727
< +1 Phi (0.5 mm)	%	89	0.1	2103067	65	0.1	98	0.1	2105727
< +2 Phi (0.25 mm)	%	87	0.1	2103067	52	0.1	97	0.1	2105727
< +3 Phi (0.12 mm)	%	84	0.1	2103067	41	0.1	70	0.1	2105727
< +4 Phi (0.062 mm)	%	76	0.1	2103067	23	0.1	24	0.1	2105727
< +5 Phi (0.031 mm)	%	71	0.1	2103067	20	0.1	22	0.1	2105727
< +6 Phi (0.016 mm)	%	56	0.1	2103067	17	0.1	16	0.1	2105727
< +7 Phi (0.0078 mm)	%	27	0.1	2103067	12	0.1	12	0.1	2105727
< +8 Phi (0.0039 mm)	%	20	0.1	2103067	11	0.1	11	0.1	2105727
< +9 Phi (0.0020 mm)	%	13	0.1	2103067	7.9	0.1	8.4	0.1	2105727
Gravel	%	2.9	0.1	2103067	19	0.1	0.4	0.1	2105727
Sand	%	22	0.1	2103067	58	0.1	75	0.1	2105727
Silt	%	55	0.1	2103067	11	0.1	13	0.1	2105727
Clay	%	20	0.1	2103067	11	0.1	11	0.1	2105727
Metals									
Mercury (Hg)	mg/kg	0.08	0.01	2102059	0.15	0.01	0.04	0.01	2102059
PCBs									
Total PCB	mg/kg	<0.01	0.01	2100303	<0.01	0.01	<0.01	0.01	2100303
Metals									
Available Aluminum (Al)	mg/kg	11000	10	2101222	9700	10	9600	10	2101222
Available Antimony (Sb)	mg/kg	3	2	2101222	<2	2	<2	2	2101222
Available Arsenic (As)	mg/kg	34	2	2101222	13	2	5	2	2101222
Available Barium (Ba)	mg/kg	370	5	2101222	190	5	86	5	2101222
Available Beryllium (Be)	mg/kg	<2	2	2101222	<2	2	<2	2	2101222
Available Bismuth (Bi)	mg/kg	<2	2	2101222	<2	2	<2	2	2101222

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Small stick noted in PHI-1 fraction.

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6924			FH6925		FH6926		
Sampling Date		2010/03/10			2010/03/10		2010/03/10		
COC Number		B 121795			B 121795		B 121795		
	Units	**10SED-11 (45-60CM)**	**RDL**	**QC Batch**	**10SED-12 (0-15CM)**	**RDL**	**10SED-13 (0-15CM)**	**RDL**	**QC Batch**
Available Boron (B)	mg/kg	27	5	2101222	27	5	19	5	2101222
Available Cadmium (Cd)	mg/kg	0.3	0.3	2101222	0.4	0.3	<0.3	0.3	2101222
Available Chromium (Cr)	mg/kg	27	2	2101222	23	2	18	2	2101222
Available Cobalt (Co)	mg/kg	19	1	2101222	9	1	7	1	2101222
Available Copper (Cu)	mg/kg	1200	2	2101222	94	2	14	2	2101222
Available Iron (Fe)	mg/kg	34000	50	2101222	23000	50	18000	50	2101222
Available Lead (Pb)	mg/kg	74	0.5	2101222	82	0.5	19	0.5	2101222
Available Lithium (Li)	mg/kg	27	2	2101222	23	2	26	2	2101222
Available Manganese (Mn)	mg/kg	560	2	2101222	210	2	190	2	2101222
Available Molybdenum (Mo)	mg/kg	3	2	2101222	4	2	<2	2	2101222
Available Nickel (Ni)	mg/kg	37	2	2101222	22	2	17	2	2101222
Available Rubidium (Rb)	mg/kg	11	2	2101222	6	2	6	2	2101222
Available Selenium (Se)	mg/kg	<2	2	2101222	<2	2	<2	2	2101222
Available Silver (Ag)	mg/kg	0.5	0.5	2101222	<0.5	0.5	<0.5	0.5	2101222
Available Strontium (Sr)	mg/kg	50	5	2101222	48	5	32	5	2101222
Available Thallium (Tl)	mg/kg	0.1	0.1	2101222	<0.1	0.1	<0.1	0.1	2101222
Available Tin (Sn)	mg/kg	9	2	2101222	12	2	3	2	2101222
Available Uranium (U)	mg/kg	1.6	0.1	2101222	1.7	0.1	0.7	0.1	2101222
Available Vanadium (V)	mg/kg	35	2	2101222	32	2	27	2	2101222
Available Zinc (Zn)	mg/kg	130	5	2101222	190	5	63	5	2101222
Polyaromatic Hydrocarbons									
1-Methylnaphthalene	mg/kg	0.015	0.005	2100081	0.056	0.005	0.014	0.005	2100081
2-Methylnaphthalene	mg/kg	0.019	0.005	2100081	0.077	0.005	0.016	0.005	2100081
Acenaphthene	mg/kg	0.042	0.005	2100081	0.082	0.005	0.055	0.005	2100081
Acenaphthylene	mg/kg	0.082	0.005	2100081	0.26	0.005	0.083	0.005	2100081
Anthracene	mg/kg	0.37	0.005	2100081	0.70	0.005	0.39	0.005	2100081
Benzo(a)anthracene	mg/kg	1.2	0.005	2100081	1.8	0.005	1.1	0.005	2100081
Benzo(a)pyrene	mg/kg	1.2	0.005	2100081	1.7	0.005	0.88	0.005	2100081
Benzo(b)fluoranthene	mg/kg	1.3	0.005	2100081	1.7	0.005	0.78	0.005	2100081
Benzo(g,h,i)perylene	mg/kg	0.73	0.005	2100081	0.95	0.005	0.48	0.005	2100081
Benzo(k)fluoranthene	mg/kg	0.72	0.005	2100081	0.82	0.005	0.53	0.005	2100081
Chrysene	mg/kg	1.3	0.005	2100081	2.0	0.005	1.1	0.005	2100081
Dibenz(a,h)anthracene	mg/kg	0.21	0.005	2100081	0.28	0.005	0.14	0.005	2100081

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6924			FH6925		FH6926		
Sampling Date		2010/03/10			2010/03/10		2010/03/10		
COC Number		B 121795			B 121795		B 121795		
	Units	**10SED-11 (45-60CM)**	**RDL**	**QC Batch**	**10SED-12 (0-15CM)**	**RDL**	**10SED-13 (0-15CM)**	**RDL**	**QC Batch**
Fluoranthene	mg/kg	1.8	0.005	2100081	4.4	0.005	1.9	0.005	2100081
Fluorene	mg/kg	0.091	0.005	2100081	0.23	0.005	0.11	0.005	2100081
Indeno(1,2,3-cd)pyrene	mg/kg	0.75	0.005	2100081	0.98	0.005	0.47	0.005	2100081
Naphthalene	mg/kg	0.034	0.005	2100081	0.13	0.005	0.023	0.005	2100081
Perylene	mg/kg	0.36	0.005	2100081	0.45	0.005	0.25	0.005	2100081
Phenanthrene	mg/kg	0.72	0.005	2100081	2.6	0.005	0.92	0.005	2100081
Pyrene	mg/kg	1.9	0.005	2100081	3.8	0.005	1.7	0.005	2100081
Petroleum Hydrocarbons									
Benzene	mg/kg	<0.003	0.003	2100428	<0.003	0.003	<0.003	0.003	2100428
Toluene	mg/kg	<0.03	0.03	2100428	<0.03	0.03	<0.03	0.03	2100428
Ethylbenzene	mg/kg	<0.01	0.01	2100428	<0.01	0.01	<0.01	0.01	2100428
Xylene (Total)	mg/kg	<0.05	0.05	2100428	<0.05	0.05	<0.05	0.05	2100428
C6 - C10 (less BTEX)	mg/kg	<3	3	2100428	<3	3	<3	3	2100428
>C10-C21 Hydrocarbons	mg/kg	110	15	2100651	100	15	32	15	2100651
>C21-<C32 Hydrocarbons	mg/kg	360	15	2100651	270	15	75	15	2100651
Modified TPH (Tier1)	mg/kg	470	20	2098718	370	20	110	20	2098718
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%	98		2100651	89		86		2100651
n-Dotriacontane - Extractable	%	105 (1)		2100651	101 (1)		79 (1)		2100651
D10-Anthracene	%	86		2100081	89		83		2100081
D14-Terphenyl	%	87		2100081	87		90		2100081
D8-Acenaphthylene	%	71		2100081	70		71		2100081
Decachlorobiphenyl	%	87		2100303	81		86		2100303
Isobutylbenzene - Volatile	%	107		2100428	115		113		2100428

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Lube oil fraction.

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel:902-420-0203 Toll-free:800-565-7227 Fax:902-420-8612 www.maxxamanalytics.com

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6926		FH6927		FH6928	FH6929		
Sampling Date		2010/03/10		2010/03/10		2010/03/10	2010/03/10		
COC Number		B 121795		B 121795		B 121795	B 121795		
	Units	**10SED-13 (0-15CM) Lab-Dup**	**QC Batch**	**10SED-13 (30-41CM)**	**QC Batch**	**10SED-14 (0-15CM)**	**10SED-15 (0-15CM)**	**RDL**	**QC Batch**
Inorganics									
Moisture	%		2100049	23	2100049	35	35	1	2100049
Organic Carbon (TOC)	g/kg		2100895	8.6	2100895	9.4	9.0	0.2	2100895
< -4 Phi (16 mm)	%		2105727	100	2105727	100	100	0.1	2105727
< -3 Phi (8 mm)	%		2105727	100	2105727	100	100	0.1	2105727
< -2 Phi (4 mm)	%		2105727	100	2105727	100	100	0.1	2105727
< -1 Phi (2 mm)	%		2105727	98	2105727	100	99	0.1	2105727
< 0 Phi (1 mm)	%		2105727	97	2105727	99	98	0.1	2105727
< +1 Phi (0.5 mm)	%		2105727	96	2105727	98	97	0.1	2105727
< +2 Phi (0.25 mm)	%		2105727	94	2105727	95	97	0.1	2105727
< +3 Phi (0.12 mm)	%		2105727	64	2105727	68	63	0.1	2105727
< +4 Phi (0.062 mm)	%		2105727	26	2105727	27	27	0.1	2105727
< +5 Phi (0.031 mm)	%		2105727	23	2105727	23	23	0.1	2105727
< +6 Phi (0.016 mm)	%		2105727	18	2105727	19	18	0.1	2105727
< +7 Phi (0.0078 mm)	%		2105727	13	2105727	14	14	0.1	2105727
< +8 Phi (0.0039 mm)	%		2105727	12	2105727	12	11	0.1	2105727
< +9 Phi (0.0020 mm)	%		2105727	8.8	2105727	9.0	9.0	0.1	2105727
Gravel	%		2105727	2.0	2105727	0.3	0.7	0.1	2105727
Sand	%		2105727	72	2105727	72	72	0.1	2105727
Silt	%		2105727	15	2105727	15	16	0.1	2105727
Clay	%		2105727	12	2105727	12	11	0.1	2105727
Metals									
Mercury (Hg)	mg/kg		2102059	0.04	2102059	0.02	0.02	0.01	2102059
PCBs									
Total PCB	mg/kg		2100303	<0.01	2100303	<0.01	<0.01	0.01	2100623
Metals									
Available Aluminum (Al)	mg/kg	9900	2101222	9500	2101222	9100	9600	10	2101222
Available Antimony (Sb)	mg/kg	<2	2101222	<2	2101222	<2	<2	2	2101222
Available Arsenic (As)	mg/kg	5	2101222	5	2101222	6	6	2	2101222
Available Barium (Ba)	mg/kg	92	2101222	78	2101222	86	110	5	2101222
Available Beryllium (Be)	mg/kg	<2	2101222	<2	2101222	<2	<2	2	2101222
Available Bismuth (Bi)	mg/kg	<2	2101222	<2	2101222	<2	<2	2	2101222

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6926		FH6927		FH6928	FH6929		
Sampling Date		2010/03/10		2010/03/10		2010/03/10	2010/03/10		
COC Number		B 121795		B 121795		B 121795	B 121795		
	Units	**10SED-13 (0-15CM) Lab-Dup**	**QC Batch**	**10SED-13 (30-41CM)**	**QC Batch**	**10SED-14 (0-15CM)**	**10SED-15 (0-15CM)**	**RDL**	**QC Batch**
Available Boron (B)	mg/kg	19	2101222	17	2101222	19	21	5	2101222
Available Cadmium (Cd)	mg/kg	<0.3	2101222	<0.3	2101222	<0.3	<0.3	0.3	2101222
Available Chromium (Cr)	mg/kg	17	2101222	18	2101222	17	19	2	2101222
Available Cobalt (Co)	mg/kg	7	2101222	7	2101222	7	7	1	2101222
Available Copper (Cu)	mg/kg	15	2101222	14	2101222	15	15	2	2101222
Available Iron (Fe)	mg/kg	19000	2101222	18000	2101222	18000	19000	50	2101222
Available Lead (Pb)	mg/kg	21	2101222	25	2101222	19	21	0.5	2101222
Available Lithium (Li)	mg/kg	27	2101222	25	2101222	24	26	2	2101222
Available Manganese (Mn)	mg/kg	180	2101222	180	2101222	190	200	2	2101222
Available Molybdenum (Mo)	mg/kg	<2	2101222	<2	2101222	<2	<2	2	2101222
Available Nickel (Ni)	mg/kg	18	2101222	18	2101222	17	18	2	2101222
Available Rubidium (Rb)	mg/kg	6	2101222	6	2101222	6	6	2	2101222
Available Selenium (Se)	mg/kg	<2	2101222	<2	2101222	<2	<2	2	2101222
Available Silver (Ag)	mg/kg	<0.5	2101222	<0.5	2101222	<0.5	<0.5	0.5	2101222
Available Strontium (Sr)	mg/kg	41	2101222	29	2101222	41	36	5	2101222
Available Thallium (Tl)	mg/kg	<0.1	2101222	<0.1	2101222	<0.1	<0.1	0.1	2101222
Available Tin (Sn)	mg/kg	5	2101222	7	2101222	4	4	2	2101222
Available Uranium (U)	mg/kg	0.8	2101222	0.9	2101222	0.8	0.7	0.1	2101222
Available Vanadium (V)	mg/kg	27	2101222	28	2101222	28	29	2	2101222
Available Zinc (Zn)	mg/kg	65	2101222	66	2101222	63	65	5	2101222
Polyaromatic Hydrocarbons									
1-Methylnaphthalene	mg/kg		2100081	0.013	2100119	0.017	0.009	0.005	2100119
2-Methylnaphthalene	mg/kg		2100081	0.012	2100119	0.021	0.010	0.005	2100119
Acenaphthene	mg/kg		2100081	0.029	2100119	0.042	0.023	0.005	2100119
Acenaphthylene	mg/kg		2100081	0.021	2100119	0.020	0.024	0.005	2100119
Anthracene	mg/kg		2100081	0.24	2100119	0.22	0.31	0.005	2100119
Benzo(a)anthracene	mg/kg		2100081	1.1	2100119	0.92	1.1	0.005	2100119
Benzo(a)pyrene	mg/kg		2100081	1.0	2100119	0.88	0.95	0.005	2100119
Benzo(b)fluoranthene	mg/kg		2100081	0.85	2100119	0.70	0.85	0.005	2100119
Benzo(g,h,i)perylene	mg/kg		2100081	0.51	2100119	0.43	0.49	0.005	2100119
Benzo(k)fluoranthene	mg/kg		2100081	0.44	2100119	0.40	0.36	0.005	2100119
Chrysene	mg/kg		2100081	1.1	2100119	0.90	1.1	0.005	2100119

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B029595
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Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6926		FH6927		FH6928	FH6929		
Sampling Date		2010/03/10		2010/03/10		2010/03/10	2010/03/10		
COC Number		B 121795		B 121795		B 121795	B 121795		
	Units	**10SED-13 (0-15CM) Lab-Dup**	**QC Batch**	**10SED-13 (30-41CM)**	**QC Batch**	**10SED-14 (0-15CM)**	**10SED-15 (0-15CM)**	**RDL**	**QC Batch**
Dibenz(a,h)anthracene	mg/kg		2100081	0.14	2100119	0.12	0.14	0.005	2100119
Fluoranthene	mg/kg		2100081	2.4	2100119	1.6	2.0	0.005	2100119
Fluorene	mg/kg		2100081	0.094	2100119	0.073	0.080	0.005	2100119
Indeno(1,2,3-cd)pyrene	mg/kg		2100081	0.51	2100119	0.42	0.48	0.005	2100119
Naphthalene	mg/kg		2100081	0.018	2100119	0.037	0.019	0.005	2100119
Perylene	mg/kg		2100081	0.26	2100119	0.22	0.26	0.005	2100119
Phenanthrene	mg/kg		2100081	1.0	2100119	0.72	0.99	0.005	2100119
Pyrene	mg/kg		2100081	2.5	2100119	1.5	1.9	0.005	2100119
Petroleum Hydrocarbons									
Benzene	mg/kg		2100428	<0.003	2100428	<0.003	<0.003	0.003	2100428
Toluene	mg/kg		2100428	<0.03	2100428	<0.03	<0.03	0.03	2100428
Ethylbenzene	mg/kg		2100428	<0.01	2100428	<0.01	<0.01	0.01	2100428
Xylene (Total)	mg/kg		2100428	<0.05	2100428	<0.05	<0.05	0.05	2100428
C6 - C10 (less BTEX)	mg/kg		2100428	<3	2100428	<3	<3	3	2100428
>C10-C21 Hydrocarbons	mg/kg		2100651	110	2100651	31	34	15	2100651
>C21-<C32 Hydrocarbons	mg/kg		2100651	360	2100651	72	78	15	2100651
Modified TPH (Tier1)	mg/kg		2098718	470	2098718	100	110	20	2098718
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%		2100651	89	2100651	96	85		2100651
n-Dotriacontane - Extractable	%		2100651	103 (1)	2100651	107 (1)	80 (1)		2100651
D10-Anthracene	%		2100081	89	2100119	94	92		2100119
D14-Terphenyl	%		2100081	98	2100119	97	99		2100119
D8-Acenaphthylene	%		2100081	74	2100119	86	90		2100119
Decachlorobiphenyl	%		2100303	89	2100303	93	90		2100623
Isobutylbenzene - Volatile	%		2100428	105	2100428	118	115		2100428

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Lube oil fraction.

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6930	FH6930	FH6931	FH6932	FH6933	FH6933		
Sampling Date		2010/03/10	2010/03/10	2010/03/10	2010/03/10	2010/03/10	2010/03/10		
COC Number		B 121795	B 121795	B 121795	B 121795	B 121795	B 121795		
	Units	**10SED-16 (0-15CM)**	**10SED-16 (0-15CM) Lab-Dup**	**10SED-17 (0-15CM)**	**10SED-18 (0-15CM)**	**10SED-19 (0-15CM)**	**10SED-19 (0-15CM) Lab-Dup**	**RDL**	**QC Batch**
Inorganics									
Moisture	%	41		45	31	35		1	2100049
Organic Carbon (TOC)	g/kg	12	11	12	7.6	7.1		0.2	2100896
< -4 Phi (16 mm)	%	100		100	100	100		0.1	2105727
< -3 Phi (8 mm)	%	100		100	100	100		0.1	2105727
< -2 Phi (4 mm)	%	100		100	100	100		0.1	2105727
< -1 Phi (2 mm)	%	94 (1)		100	100	98		0.1	2105727
< 0 Phi (1 mm)	%	93		98	99	97		0.1	2105727
< +1 Phi (0.5 mm)	%	93		97	99	94		0.1	2105727
< +2 Phi (0.25 mm)	%	91		94	97	87		0.1	2105727
< +3 Phi (0.12 mm)	%	69		75	69	58		0.1	2105727
< +4 Phi (0.062 mm)	%	31		43	27	24		0.1	2105727
< +5 Phi (0.031 mm)	%	26		36	20	20		0.1	2105727
< +6 Phi (0.016 mm)	%	20		28	17	16		0.1	2105727
< +7 Phi (0.0078 mm)	%	14		18	12	11		0.1	2105727
< +8 Phi (0.0039 mm)	%	12		17	11	10		0.1	2105727
< +9 Phi (0.0020 mm)	%	9.7		13	8.4	8.1		0.1	2105727
Gravel	%	5.6		<0.1	<0.1	1.7		0.1	2105727
Sand	%	63		56	73	75		0.1	2105727
Silt	%	19		27	16	13		0.1	2105727
Clay	%	12		17	11	10		0.1	2105727
Metals									
Mercury (Hg)	mg/kg	0.03		0.05	0.07	0.02		0.01	2102059
PCBs									
Total PCB	mg/kg	<0.01		<0.01	<0.01	<0.01		0.01	2100623
Metals									
Available Aluminum (Al)	mg/kg	9800		11000	9500	9300		10	2101222
Available Antimony (Sb)	mg/kg	<2		<2	<2	<2		2	2101222
Available Arsenic (As)	mg/kg	7		7	5	5		2	2101222
Available Barium (Ba)	mg/kg	110		100	110	96		5	2101222
Available Beryllium (Be)	mg/kg	<2		<2	<2	<2		2	2101222

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Small rock noted in -1PHI fraction.

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6930	FH6930	FH6931	FH6932	FH6933	FH6933		
Sampling Date		2010/03/10	2010/03/10	2010/03/10	2010/03/10	2010/03/10	2010/03/10		
COC Number		B 121795	B 121795	B 121795	B 121795	B 121795	B 121795		
	Units	**10SED-16 (0-15CM)**	**10SED-16 (0-15CM) Lab-Dup**	**10SED-17 (0-15CM)**	**10SED-18 (0-15CM)**	**10SED-19 (0-15CM)**	**10SED-19 (0-15CM) Lab-Dup**	**RDL**	**QC Batch**
Available Bismuth (Bi)	mg/kg	<2		<2	<2	<2		2	2101222
Available Boron (B)	mg/kg	23		26	18	19		5	2101222
Available Cadmium (Cd)	mg/kg	<0.3		<0.3	<0.3	<0.3		0.3	2101222
Available Chromium (Cr)	mg/kg	20		21	18	19		2	2101222
Available Cobalt (Co)	mg/kg	7		8	7	7		1	2101222
Available Copper (Cu)	mg/kg	19		20	15	19		2	2101222
Available Iron (Fe)	mg/kg	19000		20000	18000	18000		50	2101222
Available Lead (Pb)	mg/kg	25		26	21	18		0.5	2101222
Available Lithium (Li)	mg/kg	27		28	25	25		2	2101222
Available Manganese (Mn)	mg/kg	190		200	190	190		2	2101222
Available Molybdenum (Mo)	mg/kg	<2		<2	<2	<2		2	2101222
Available Nickel (Ni)	mg/kg	19		20	17	18		2	2101222
Available Rubidium (Rb)	mg/kg	7		8	6	6		2	2101222
Available Selenium (Se)	mg/kg	<2		<2	<2	<2		2	2101222
Available Silver (Ag)	mg/kg	<0.5		<0.5	<0.5	<0.5		0.5	2101222
Available Strontium (Sr)	mg/kg	33		38	33	32		5	2101222
Available Thallium (Tl)	mg/kg	<0.1		<0.1	0.1	0.1		0.1	2101222
Available Tin (Sn)	mg/kg	4		5	5	2		2	2101222
Available Uranium (U)	mg/kg	0.7		0.9	0.8	0.7		0.1	2101222
Available Vanadium (V)	mg/kg	31		33	28	27		2	2101222
Available Zinc (Zn)	mg/kg	70		79	67	64		5	2101222
Polyaromatic Hydrocarbons									
1-Methylnaphthalene	mg/kg	0.006		<0.005	<0.005	0.008		0.005	2100119
2-Methylnaphthalene	mg/kg	0.009		0.012	0.007	0.012		0.005	2100119
Acenaphthene	mg/kg	0.019		0.028	0.013	0.022		0.005	2100119
Acenaphthylene	mg/kg	0.012		0.012	0.017	0.020		0.005	2100119
Anthracene	mg/kg	0.14		0.42	0.22	0.18		0.005	2100119
Benzo(a)anthracene	mg/kg	1.2		1.2	1.2	1.6		0.005	2100119
Benzo(a)pyrene	mg/kg	0.92		0.93	0.87	1.0		0.005	2100119
Benzo(b)fluoranthene	mg/kg	0.94		0.95	0.84	1.2		0.005	2100119
Benzo(g,h,i)perylene	mg/kg	0.48		0.53	0.41	0.40		0.005	2100119
Benzo(k)fluoranthene	mg/kg	0.40		0.55	0.47	0.81		0.005	2100119

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6930	FH6930	FH6931	FH6932	FH6933	FH6933		
Sampling Date		2010/03/10	2010/03/10	2010/03/10	2010/03/10	2010/03/10	2010/03/10		
COC Number		B 121795	B 121795	B 121795	B 121795	B 121795	B 121795		
	Units	**10SED-16 (0-15CM)**	**10SED-16 (0-15CM) Lab-Dup**	**10SED-17 (0-15CM)**	**10SED-18 (0-15CM)**	**10SED-19 (0-15CM)**	**10SED-19 (0-15CM) Lab-Dup**	**RDL**	**QC Batch**
Chrysene	mg/kg	1.2		1.3	1.1	1.6		0.005	2100119
Dibenz(a,h)anthracene	mg/kg	0.13		0.17	0.11	0.11		0.005	2100119
Fluoranthene	mg/kg	1.5		1.8	1.4	1.8		0.005	2100119
Fluorene	mg/kg	0.045		0.077	0.058	0.062		0.005	2100119
Indeno(1,2,3-cd)pyrene	mg/kg	0.46		0.51	0.39	0.41		0.005	2100119
Naphthalene	mg/kg	0.015		0.017	0.011	0.025		0.005	2100119
Perylene	mg/kg	0.26		0.29	0.23	0.28		0.005	2100119
Phenanthrene	mg/kg	0.49		0.70	0.60	0.49		0.005	2100119
Pyrene	mg/kg	1.4		1.7	1.3	2.1		0.005	2100119
Petroleum Hydrocarbons									
Benzene	mg/kg	<0.003	<0.003	<0.003	<0.003	<0.003		0.003	2101459
Toluene	mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03		0.03	2101459
Ethylbenzene	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01		0.01	2101459
Xylene (Total)	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05		0.05	2101459
C6 - C10 (less BTEX)	mg/kg	<3	<3	<3	<3	<3		3	2101459
>C10-C21 Hydrocarbons	mg/kg	41		42	24	26	<15	15	2100655
>C21-<C32 Hydrocarbons	mg/kg	120		120	67	78	67	15	2100655
Modified TPH (Tier1)	mg/kg	160		160	91	100		20	2098718
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%	85		85	83	86	85		2100655
n-Dotriacontane - Extractable	%	82 (1)		70 (1)	72 (1)	90 (1)	78		2100655
D10-Anthracene	%	93		97	92	95			2100119
D14-Terphenyl	%	103		102	102	96			2100119
D8-Acenaphthylene	%	82		88	86	84			2100119
Decachlorobiphenyl	%	84		83	86	90			2100623
Isobutylbenzene - Volatile	%	116	114	112	114	114			2101459

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Lube oil fraction.

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6934		FH6935	FH6935		FH6936	FH6937		
Sampling Date		2010/03/10		2010/03/10	2010/03/10		2010/03/10	2010/03/10		
COC Number		B 121795		B 121795	B 121795		B 121795	B 121795		
	Units	**10SED-20 (0-15CM)**	**QC Batch**	**10SED-21 (0-15CM)**	**10SED-21 (0-15CM) Lab-Dup**	**QC Batch**	**10SED-22 (0-15CM)**	**10SED-23 (0-15CM)**	**RDL**	**QC Batch**
Inorganics										
Moisture	%	30	2100049	28		2100049	35	37	1	2100049
Organic Carbon (TOC)	g/kg	3.8	2100896	6.3	6.1	2102878	8.4	11	0.2	2100896
< -4 Phi (16 mm)	%	100	2105727	100		2105727	100	100	0.1	2105727
< -3 Phi (8 mm)	%	100	2105727	100		2105727	100	100	0.1	2105727
< -2 Phi (4 mm)	%	100	2105727	100		2105727	100	100	0.1	2105727
< -1 Phi (2 mm)	%	95	2105727	100		2105727	99	91	0.1	2105727
< 0 Phi (1 mm)	%	93	2105727	99		2105727	99	88	0.1	2105727
< +1 Phi (0.5 mm)	%	90	2105727	98		2105727	98	84	0.1	2105727
< +2 Phi (0.25 mm)	%	83	2105727	92		2105727	96	78	0.1	2105727
< +3 Phi (0.12 mm)	%	20	2105727	34		2105727	62	50	0.1	2105727
< +4 Phi (0.062 mm)	%	6.7	2105727	12		2105727	23	26	0.1	2105727
< +5 Phi (0.031 mm)	%	6.2	2105727	11		2105727	21	25	0.1	2105727
< +6 Phi (0.016 mm)	%	5.3	2105727	9.5		2105727	17	20	0.1	2105727
< +7 Phi (0.0078 mm)	%	4.2	2105727	7.1		2105727	12	15	0.1	2105727
< +8 Phi (0.0039 mm)	%	3.9	2105727	6.3		2105727	11	14	0.1	2105727
< +9 Phi (0.0020 mm)	%	3.2	2105727	5.0		2105727	8.5	10	0.1	2105727
Gravel	%	5.4	2105727	0.1		2105727	0.6	9.3	0.1	2105727
Sand	%	88	2105727	88		2105727	76	65	0.1	2105727
Silt	%	2.9	2105727	5.7		2105727	12	12	0.1	2105727
Clay	%	3.9	2105727	6.3		2105727	11	14	0.1	2105727
Metals										
Mercury (Hg)	mg/kg	0.01	2102059	0.02		2102059	0.02	0.02	0.01	2102059
PCBs										
Total PCB	mg/kg	<0.01	2100623	<0.01		2100623	<0.01	<0.01	0.01	2100623
Metals										
Available Aluminum (Al)	mg/kg	7400	2101222	9600	9400	2101250	9200	9400	10	2101222
Available Antimony (Sb)	mg/kg	<2	2101222	<2	<2	2101250	<2	<2	2	2101222
Available Arsenic (As)	mg/kg	5	2101222	5	5	2101250	6	7	2	2101222
Available Barium (Ba)	mg/kg	44	2101222	110	110	2101250	94	83	5	2101222
Available Beryllium (Be)	mg/kg	<2	2101222	<2	<2	2101250	<2	<2	2	2101222
Available Bismuth (Bi)	mg/kg	<2	2101222	<2	<2	2101250	<2	<2	2	2101222

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6934		FH6935	FH6935		FH6936	FH6937		
Sampling Date		2010/03/10		2010/03/10	2010/03/10		2010/03/10	2010/03/10		
COC Number		B 121795		B 121795	B 121795		B 121795	B 121795		
	Units	**10SED-20 (0-15CM)**	**QC Batch**	**10SED-21 (0-15CM)**	**10SED-21 (0-15CM) Lab-Dup**	**QC Batch**	**10SED-22 (0-15CM)**	**10SED-23 (0-15CM)**	**RDL**	**QC Batch**
Available Boron (B)	mg/kg	10	2101222	13	13	2101250	19	24	5	2101222
Available Cadmium (Cd)	mg/kg	<0.3	2101222	<0.3	<0.3	2101250	<0.3	<0.3	0.3	2101222
Available Chromium (Cr)	mg/kg	13	2101222	18	16	2101250	17	17	2	2101222
Available Cobalt (Co)	mg/kg	5	2101222	6	6	2101250	7	7	1	2101222
Available Copper (Cu)	mg/kg	8	2101222	11	11	2101250	16	18	2	2101222
Available Iron (Fe)	mg/kg	15000	2101222	20000	19000	2101250	18000	19000	50	2101222
Available Lead (Pb)	mg/kg	11	2101222	16	15	2101250	18	22	0.5	2101222
Available Lithium (Li)	mg/kg	23	2101222	27	27	2101250	27	26	2	2101222
Available Manganese (Mn)	mg/kg	130	2101222	160	160	2101250	180	200	2	2101222
Available Molybdenum (Mo)	mg/kg	<2	2101222	<2	<2	2101250	<2	<2	2	2101222
Available Nickel (Ni)	mg/kg	14	2101222	18	17	2101250	18	18	2	2101222
Available Rubidium (Rb)	mg/kg	3	2101222	5	4	2101250	6	6	2	2101222
Available Selenium (Se)	mg/kg	<2	2101222	<2	<2	2101250	<2	<2	2	2101222
Available Silver (Ag)	mg/kg	<0.5	2101222	<0.5	<0.5	2101250	<0.5	<0.5	0.5	2101222
Available Strontium (Sr)	mg/kg	27	2101222	26	26	2101250	34	33	5	2101222
Available Thallium (Tl)	mg/kg	<0.1	2101222	<0.1	<0.1	2101250	<0.1	<0.1	0.1	2101222
Available Tin (Sn)	mg/kg	2	2101222	7	4	2101250	4	5	2	2101222
Available Uranium (U)	mg/kg	0.3	2101222	0.6	0.5	2101250	0.7	0.9	0.1	2101222
Available Vanadium (V)	mg/kg	23	2101222	30	28	2101250	28	30	2	2101222
Available Zinc (Zn)	mg/kg	45	2101222	59	56	2101250	61	64	5	2101222
Polyaromatic Hydrocarbons										
1-Methylnaphthalene	mg/kg	<0.005	2100119	<0.005	<0.005	2100119	<0.005	<0.005	0.005	2100119
2-Methylnaphthalene	mg/kg	<0.005	2100119	<0.005	<0.005	2100119	0.009	0.012	0.005	2100119
Acenaphthene	mg/kg	<0.005	2100119	<0.005	<0.005	2100119	0.013	0.022	0.005	2100119
Acenaphthylene	mg/kg	<0.005	2100119	<0.005	<0.005	2100119	0.017	0.021	0.005	2100119
Anthracene	mg/kg	0.019	2100119	0.042	0.033	2100119	0.13	0.11	0.005	2100119
Benzo(a)anthracene	mg/kg	0.15	2100119	0.15	0.14	2100119	0.54	0.53	0.005	2100119
Benzo(a)pyrene	mg/kg	0.16	2100119	0.17	0.15	2100119	0.58	0.57	0.005	2100119
Benzo(b)fluoranthene	mg/kg	0.12	2100119	0.14	0.13	2100119	0.49	0.44	0.005	2100119
Benzo(g,h,i)perylene	mg/kg	0.094	2100119	0.087	0.076	2100119	0.33	0.32	0.005	2100119
Benzo(k)fluoranthene	mg/kg	0.097	2100119	0.090	0.063	2100119	0.38	0.35	0.005	2100119
Chrysene	mg/kg	0.18	2100119	0.17	0.17	2100119	0.59	0.60	0.005	2100119

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6934		FH6935	FH6935		FH6936	FH6937		
Sampling Date		2010/03/10		2010/03/10	2010/03/10		2010/03/10	2010/03/10		
COC Number		B 121795		B 121795	B 121795		B 121795	B 121795		
	Units	**10SED-20 (0-15CM)**	**QC Batch**	**10SED-21 (0-15CM)**	**10SED-21 (0-15CM) Lab-Dup**	**QC Batch**	**10SED-22 (0-15CM)**	**10SED-23 (0-15CM)**	**RDL**	**QC Batch**
Dibenz(a,h)anthracene	mg/kg	0.025	2100119	0.032	0.023	2100119	0.085	0.081	0.005	2100119
Fluoranthene	mg/kg	0.33	2100119	0.31	0.30	2100119	1.0	1.1	0.005	2100119
Fluorene	mg/kg	<0.005	2100119	0.010	0.008	2100119	0.033	0.039	0.005	2100119
Indeno(1,2,3-cd)pyrene	mg/kg	0.097	2100119	0.083	0.075	2100119	0.30	0.35	0.005	2100119
Naphthalene	mg/kg	<0.005	2100119	0.006	<0.005	2100119	0.017	0.018	0.005	2100119
Perylene	mg/kg	0.048	2100119	0.057	0.049	2100119	0.17	0.18	0.005	2100119
Phenanthrene	mg/kg	0.091	2100119	0.14	0.10	2100119	0.40	0.33	0.005	2100119
Pyrene	mg/kg	0.28	2100119	0.27	0.25	2100119	0.97	1.0	0.005	2100119
Petroleum Hydrocarbons										
Benzene	mg/kg	<0.003	2101459	<0.003		2101459	<0.003	<0.003	0.003	2101459
Toluene	mg/kg	<0.03	2101459	<0.03		2101459	<0.03	<0.03	0.03	2101459
Ethylbenzene	mg/kg	<0.01	2101459	<0.01		2101459	<0.01	<0.01	0.01	2101459
Xylene (Total)	mg/kg	<0.05	2101459	<0.05		2101459	<0.05	<0.05	0.05	2101459
C6 - C10 (less BTEX)	mg/kg	<3	2101459	<3		2101459	<3	<3	3	2101459
>C10-C21 Hydrocarbons	mg/kg	<15	2100655	<15		2100655	37	32	15	2100655
>C21-<C32 Hydrocarbons	mg/kg	38	2100655	44		2100655	86	89	15	2100655
Modified TPH (Tier1)	mg/kg	38	2098718	44		2098718	120	120	20	2098718
Surrogate Recovery (%)										
Isobutylbenzene - Extractable	%	86	2100655	84		2100655	84	81		2100655
n-Dotriacontane - Extractable	%	72 (1)	2100655	76 (1)		2100655	87 (1)	92 (1)		2100655
D10-Anthracene	%	92	2100119	95	92	2100119	93	90		2100119
D14-Terphenyl	%	89	2100119	94	97	2100119	95	95		2100119
D8-Acenaphthylene	%	87	2100119	82	73	2100119	90	93		2100119
Decachlorobiphenyl	%	92	2100623	95		2100623	88	87		2100623
Isobutylbenzene - Volatile	%	113	2101459	110		2101459	110	111		2101459

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Lube oil fraction.

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6937		FH6938			FH6939		
Sampling Date		2010/03/10		2010/03/10			2010/03/10		
COC Number		B 121795		B 121795			B 121795		
	Units	**10SED-23 (0-15CM) Lab-Dup**	**RDL**	**10SED-24 (0-15CM)**	**RDL**	**QC Batch**	**10SED-25 (0-15CM)**	**RDL**	**QC Batch**
Inorganics									
Moisture	%		1	62	1	2100049	47	1	2100049
Organic Carbon (TOC)	g/kg		0.2	32	0.5	2100896	16	0.2	2100896
< -4 Phi (16 mm)	%		0.1	100	0.1	2105727	100	0.1	2105727
< -3 Phi (8 mm)	%		0.1	100	0.1	2105727	100	0.1	2105727
< -2 Phi (4 mm)	%		0.1	100	0.1	2105727	100	0.1	2105727
< -1 Phi (2 mm)	%		0.1	96	0.1	2105727	92	0.1	2105727
< 0 Phi (1 mm)	%		0.1	91	0.1	2105727	85	0.1	2105727
< +1 Phi (0.5 mm)	%		0.1	89	0.1	2105727	80	0.1	2105727
< +2 Phi (0.25 mm)	%		0.1	85	0.1	2105727	76	0.1	2105727
< +3 Phi (0.12 mm)	%		0.1	78	0.1	2105727	57	0.1	2105727
< +4 Phi (0.062 mm)	%		0.1	64	0.1	2105727	33	0.1	2105727
< +5 Phi (0.031 mm)	%		0.1	60	0.1	2105727	29	0.1	2105727
< +6 Phi (0.016 mm)	%		0.1	47	0.1	2105727	25	0.1	2105727
< +7 Phi (0.0078 mm)	%		0.1	33	0.1	2105727	19	0.1	2105727
< +8 Phi (0.0039 mm)	%		0.1	28	0.1	2105727	16	0.1	2105727
< +9 Phi (0.0020 mm)	%		0.1	21	0.1	2105727	12	0.1	2105727
Gravel	%		0.1	4.3	0.1	2105727	8.2	0.1	2105727
Sand	%		0.1	31	0.1	2105727	59	0.1	2105727
Silt	%		0.1	37	0.1	2105727	17	0.1	2105727
Clay	%		0.1	28	0.1	2105727	16	0.1	2105727
Metals									
Mercury (Hg)	mg/kg		0.01	0.04	0.01	2102059	0.03	0.01	2102059
PCBs									
Total PCB	mg/kg	<0.01	0.01	<0.01	0.01	2100623	<0.01	0.01	2100623
Metals									
Available Aluminum (Al)	mg/kg		10	11000	10	2101222	11000	10	2101250
Available Antimony (Sb)	mg/kg		2	<2	2	2101222	<2	2	2101250
Available Arsenic (As)	mg/kg		2	10	2	2101222	11	2	2101250
Available Barium (Ba)	mg/kg		5	100	5	2101222	89	5	2101250
Available Beryllium (Be)	mg/kg		2	<2	2	2101222	<2	2	2101250
Available Bismuth (Bi)	mg/kg		2	<2	2	2101222	<2	2	2101250

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6937		FH6938			FH6939		
Sampling Date		2010/03/10		2010/03/10			2010/03/10		
COC Number		B 121795		B 121795			B 121795		
	Units	**10SED-23 (0-15CM) Lab-Dup**	**RDL**	**10SED-24 (0-15CM)**	**RDL**	**QC Batch**	**10SED-25 (0-15CM)**	**RDL**	**QC Batch**
Available Boron (B)	mg/kg		5	53	5	2101222	30	5	2101250
Available Cadmium (Cd)	mg/kg		0.3	0.4	0.3	2101222	<0.3	0.3	2101250
Available Chromium (Cr)	mg/kg		2	25	2	2101222	21	2	2101250
Available Cobalt (Co)	mg/kg		1	9	1	2101222	8	1	2101250
Available Copper (Cu)	mg/kg		2	31	2	2101222	23	2	2101250
Available Iron (Fe)	mg/kg		50	22000	50	2101222	26000	50	2101250
Available Lead (Pb)	mg/kg		0.5	34	0.5	2101222	27	0.5	2101250
Available Lithium (Li)	mg/kg		2	28	2	2101222	31	2	2101250
Available Manganese (Mn)	mg/kg		2	240	2	2101222	310	2	2101250
Available Molybdenum (Mo)	mg/kg		2	2	2	2101222	<2	2	2101250
Available Nickel (Ni)	mg/kg		2	22	2	2101222	22	2	2101250
Available Rubidium (Rb)	mg/kg		2	10	2	2101222	8	2	2101250
Available Selenium (Se)	mg/kg		2	<5 (1)	5	2101222	<2	2	2101250
Available Silver (Ag)	mg/kg		0.5	<0.5	0.5	2101222	<0.5	0.5	2101250
Available Strontium (Sr)	mg/kg		5	66	5	2101222	41	5	2101250
Available Thallium (Tl)	mg/kg		0.1	0.1	0.1	2101222	<0.1	0.1	2101250
Available Tin (Sn)	mg/kg		2	6	2	2101222	5	2	2101250
Available Uranium (U)	mg/kg		0.1	1.3	0.1	2101222	1.1	0.1	2101250
Available Vanadium (V)	mg/kg		2	39	2	2101222	33	2	2101250
Available Zinc (Zn)	mg/kg		5	87	5	2101222	82	5	2101250
Polyaromatic Hydrocarbons									
1-Methylnaphthalene	mg/kg		0.005	<0.005	0.005	2100119	<0.005	0.005	2100119
2-Methylnaphthalene	mg/kg		0.005	0.013	0.005	2100119	0.012	0.005	2100119
Acenaphthene	mg/kg		0.005	0.034	0.005	2100119	0.031	0.005	2100119
Acenaphthylene	mg/kg		0.005	0.030	0.005	2100119	0.022	0.005	2100119
Anthracene	mg/kg		0.005	0.31	0.005	2100119	0.17	0.005	2100119
Benzo(a)anthracene	mg/kg		0.005	1.6	0.005	2100119	0.98	0.005	2100119
Benzo(a)pyrene	mg/kg		0.005	1.4	0.005	2100119	0.96	0.005	2100119
Benzo(b)fluoranthene	mg/kg		0.005	1.4	0.005	2100119	0.79	0.005	2100119
Benzo(g,h,i)perylene	mg/kg		0.005	0.71	0.005	2100119	0.51	0.005	2100119
Benzo(k)fluoranthene	mg/kg		0.005	0.92	0.005	2100119	0.64	0.005	2100119

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Elevated reporting limit due to sample matrix.

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6937		FH6938			FH6939		
Sampling Date		2010/03/10		2010/03/10			2010/03/10		
COC Number		B 121795		B 121795			B 121795		
	Units	**10SED-23 (0-15CM) Lab-Dup**	**RDL**	**10SED-24 (0-15CM)**	**RDL**	**QC Batch**	**10SED-25 (0-15CM)**	**RDL**	**QC Batch**
Chrysene	mg/kg		0.005	1.7	0.005	2100119	0.88	0.005	2100119
Dibenz(a,h)anthracene	mg/kg		0.005	0.20	0.005	2100119	0.14	0.005	2100119
Fluoranthene	mg/kg		0.005	2.7	0.005	2100119	1.8	0.005	2100119
Fluorene	mg/kg		0.005	0.095	0.005	2100119	0.051	0.005	2100119
Indeno(1,2,3-cd)pyrene	mg/kg		0.005	0.68	0.005	2100119	0.49	0.005	2100119
Naphthalene	mg/kg		0.005	0.018	0.005	2100119	0.018	0.005	2100119
Perylene	mg/kg		0.005	0.45	0.005	2100119	0.29	0.005	2100119
Phenanthrene	mg/kg		0.005	0.84	0.005	2100119	0.55	0.005	2100119
Pyrene	mg/kg		0.005	2.6	0.005	2100119	1.5	0.005	2100119
Petroleum Hydrocarbons									
Benzene	mg/kg		0.003	<0.003	0.003	2101459	<0.003	0.003	2101459
Toluene	mg/kg		0.03	<0.03	0.03	2101459	<0.03	0.03	2101459
Ethylbenzene	mg/kg		0.01	<0.01	0.01	2101459	<0.01	0.01	2101459
Xylene (Total)	mg/kg		0.05	<0.05	0.05	2101459	<0.05	0.05	2101459
C6 - C10 (less BTEX)	mg/kg		3	<3	3	2101459	<3	3	2101459
>C10-C21 Hydrocarbons	mg/kg		15	80	15	2100655	53	15	2100655
>C21-<C32 Hydrocarbons	mg/kg		15	220	15	2100655	130	15	2100655
Modified TPH (Tier1)	mg/kg		20	300	20	2098718	180	20	2098718
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%			84		2100655	86		2100655
n-Dotriacontane - Extractable	%			99 (1)		2100655	90 (1)		2100655
D10-Anthracene	%			95		2100119	94		2100119
D14-Terphenyl	%			97		2100119	96		2100119
D8-Acenaphthylene	%			85		2100119	93		2100119
Decachlorobiphenyl	%	80		98		2100623	84		2100623
Isobutylbenzene - Volatile	%			107		2101459	119		2101459

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Lube oil fraction.

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Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6940		FH6941		FH6942		
Sampling Date		2010/03/10		2010/03/09		2010/03/10		
COC Number		B 121795		B 121795		B 121795		
	Units	**10SED-26 (0-15CM)**	**RDL**	**QA/QC-1 (0-15CM)**	**RDL**	**QA/QC-2 (0-15CM)**	**RDL**	**QC Batch**
Inorganics								
Moisture	%	58	1	51	1	64	1	2100049
Organic Carbon (TOC)	g/kg	28	0.5	13	0.4	35	0.4	2100896
< -4 Phi (16 mm)	%	100	0.1	100	0.1	100	0.1	2105727
< -3 Phi (8 mm)	%	100	0.1	100	0.1	100	0.1	2105727
< -2 Phi (4 mm)	%	100	0.1	100	0.1	100	0.1	2105727
< -1 Phi (2 mm)	%	100	0.1	77	0.1	95	0.1	2105727
< 0 Phi (1 mm)	%	94	0.1	73	0.1	91	0.1	2105727
< +1 Phi (0.5 mm)	%	91	0.1	71	0.1	87	0.1	2105727
< +2 Phi (0.25 mm)	%	86	0.1	67	0.1	82	0.1	2105727
< +3 Phi (0.12 mm)	%	79	0.1	63	0.1	76	0.1	2105727
< +4 Phi (0.062 mm)	%	62	0.1	57	0.1	64	0.1	2105727
< +5 Phi (0.031 mm)	%	56	0.1	53	0.1	59	0.1	2105727
< +6 Phi (0.016 mm)	%	44	0.1	42	0.1	45	0.1	2105727
< +7 Phi (0.0078 mm)	%	32	0.1	25	0.1	28	0.1	2105727
< +8 Phi (0.0039 mm)	%	26	0.1	21	0.1	24	0.1	2105727
< +9 Phi (0.0020 mm)	%	20	0.1	14	0.1	19	0.1	2105727
Gravel	%	0.1	0.1	23	0.1	4.6	0.1	2105727
Sand	%	38	0.1	20	0.1	31	0.1	2105727
Silt	%	36	0.1	36	0.1	39	0.1	2105727
Clay	%	26	0.1	21	0.1	24	0.1	2105727
Metals								
Mercury (Hg)	mg/kg	0.04	0.01	0.08	0.01	0.27	0.01	2102059
PCBs								
Total PCB	mg/kg	<0.01	0.01	<0.01	0.01	<0.01	0.01	2100623
Metals								
Available Aluminum (Al)	mg/kg	12000	10	8000	10	12000	10	2101250
Available Antimony (Sb)	mg/kg	<2	2	<2	2	<2	2	2101250
Available Arsenic (As)	mg/kg	10	2	39	2	16	2	2101250
Available Barium (Ba)	mg/kg	110	5	720	5	180	5	2101250
Available Beryllium (Be)	mg/kg	<2	2	<2	2	<2	2	2101250
Available Bismuth (Bi)	mg/kg	<2	2	<2	2	<2	2	2101250
Available Boron (B)	mg/kg	49	5	27	5	48	5	2101250

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6940		FH6941		FH6942		
Sampling Date		2010/03/10		2010/03/09		2010/03/10		
COC Number		B 121795		B 121795		B 121795		
	Units	**10SED-26 (0-15CM)**	**RDL**	**QA/QC-1 (0-15CM)**	**RDL**	**QA/QC-2 (0-15CM)**	**RDL**	**QC Batch**
Available Cadmium (Cd)	mg/kg	0.4	0.3	0.3	0.3	0.7	0.3	2101250
Available Chromium (Cr)	mg/kg	27	2	20	2	32	2	2101250
Available Cobalt (Co)	mg/kg	10	1	16	1	11	1	2101250
Available Copper (Cu)	mg/kg	31	2	76	2	60	2	2101250
Available Iron (Fe)	mg/kg	24000	50	30000	50	27000	50	2101250
Available Lead (Pb)	mg/kg	35	0.5	120	0.5	81	0.5	2101250
Available Lithium (Li)	mg/kg	32	2	21	2	30	2	2101250
Available Manganese (Mn)	mg/kg	250	2	480	2	280	2	2101250
Available Molybdenum (Mo)	mg/kg	3	2	3	2	4	2	2101250
Available Nickel (Ni)	mg/kg	25	2	36	2	27	2	2101250
Available Rubidium (Rb)	mg/kg	11	2	9	2	13	2	2101250
Available Selenium (Se)	mg/kg	<2	2	<2	2	<5 (1)	5	2101250
Available Silver (Ag)	mg/kg	<0.5	0.5	<0.5	0.5	<0.5	0.5	2101250
Available Strontium (Sr)	mg/kg	53	5	52	5	60	5	2101250
Available Thallium (Tl)	mg/kg	0.1	0.1	<0.1	0.1	0.2	0.1	2101250
Available Tin (Sn)	mg/kg	6	2	6	2	19	2	2101250
Available Uranium (U)	mg/kg	1.5	0.1	1.7	0.1	1.9	0.1	2101250
Available Vanadium (V)	mg/kg	43	2	29	2	47	2	2101250
Available Zinc (Zn)	mg/kg	91	5	130	5	170	5	2101250
Polyaromatic Hydrocarbons								
1-Methylnaphthalene	mg/kg	0.006	0.005	<0.005	0.005	0.025	0.005	2100119
2-Methylnaphthalene	mg/kg	<0.005	0.005	0.015	0.005	0.035	0.005	2100119
Acenaphthene	mg/kg	0.021	0.005	0.016	0.005	0.099	0.005	2100119
Acenaphthylene	mg/kg	0.023	0.005	0.021	0.005	0.061	0.005	2100119
Anthracene	mg/kg	0.20	0.005	0.36	0.005	0.66	0.005	2100119
Benzo(a)anthracene	mg/kg	0.93	0.005	0.88	0.005	2.6	0.005	2100119
Benzo(a)pyrene	mg/kg	0.90	0.005	1.0	0.005	2.2	0.005	2100119
Benzo(b)fluoranthene	mg/kg	0.84	0.005	1.2	0.005	2.1	0.005	2100119
Benzo(g,h,i)perylene	mg/kg	0.50	0.005	0.66	0.005	1.1	0.005	2100119
Benzo(k)fluoranthene	mg/kg	0.40	0.005	0.68	0.005	1.3	0.005	2100119
Chrysene	mg/kg	0.97	0.005	1.7	0.005	2.8	0.005	2100119
Dibenz(a,h)anthracene	mg/kg	0.14	0.005	0.18	0.005	0.34	0.005	2100119

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Elevated reporting limit due to sample matrix.

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6940		FH6941		FH6942		
Sampling Date		2010/03/10		2010/03/09		2010/03/10		
COC Number		B 121795		B 121795		B 121795		
	Units	**10SED-26 (0-15CM)**	**RDL**	**QA/QC-1 (0-15CM)**	**RDL**	**QA/QC-2 (0-15CM)**	**RDL**	**QC Batch**
Fluoranthene	mg/kg	1.5	0.005	1.4	0.005	5.6	0.005	2100119
Fluorene	mg/kg	0.049	0.005	0.082	0.005	0.20	0.005	2100119
Indeno(1,2,3-cd)pyrene	mg/kg	0.48	0.005	0.59	0.005	1.1	0.005	2100119
Naphthalene	mg/kg	0.019	0.005	<0.005	0.005	0.074	0.005	2100119
Perylene	mg/kg	0.29	0.005	0.31	0.005	0.65	0.005	2100119
Phenanthrene	mg/kg	0.54	0.005	0.56	0.005	1.8	0.005	2100119
Pyrene	mg/kg	1.6	0.005	1.2	0.005	4.7	0.005	2100119
Petroleum Hydrocarbons								
Benzene	mg/kg	<0.003	0.003	<0.003	0.003	<0.003	0.003	2101459
Toluene	mg/kg	<0.03	0.03	<0.03	0.03	<0.03	0.03	2101459
Ethylbenzene	mg/kg	<0.01	0.01	<0.01	0.01	<0.01	0.01	2101459
Xylene (Total)	mg/kg	<0.05	0.05	<0.05	0.05	<0.05	0.05	2101459
C6 - C10 (less BTEX)	mg/kg	<3	3	<3	3	<3	3	2101459
>C10-C21 Hydrocarbons	mg/kg	65	15	65	15	130	15	2100655
>C21-<C32 Hydrocarbons	mg/kg	170	15	180	15	350	15	2100655
Modified TPH (Tier1)	mg/kg	240	20	240	20	480	20	2098718
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%	85		89		89		2100655
n-Dotriacontane - Extractable	%	88 (1)		71 (1)		87 (1)		2100655
D10-Anthracene	%	103		100		91		2100119
D14-Terphenyl	%	95		96		97		2100119
D8-Acenaphthylene	%	84		85		84		2100119
Decachlorobiphenyl	%	81		84		88		2100623
Isobutylbenzene - Volatile	%	100		102		98		2101459

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Lube oil fraction.

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6942			FH6943	FH6943		
Sampling Date		2010/03/10			2010/03/10	2010/03/10		
COC Number		B 121795			B 121795	B 121795		
	Units	**QA/QC-2 (0-15CM) Lab-Dup**	**RDL**	**QC Batch**	**QA/QC-3 (0-15CM)**	**QA/QC-3 (0-15CM) Lab-Dup**	**RDL**	**QC Batch**
Inorganics								
Moisture	%		1	2100049	39		1	2100049
Organic Carbon (TOC)	g/kg		0.4	2100896	13		0.3	2102878
< -4 Phi (16 mm)	%	100	0.1	2105727	100		0.1	2105727
< -3 Phi (8 mm)	%	100	0.1	2105727	100		0.1	2105727
< -2 Phi (4 mm)	%	100	0.1	2105727	100		0.1	2105727
< -1 Phi (2 mm)	%	100	0.1	2105727	92		0.1	2105727
< 0 Phi (1 mm)	%	95	0.1	2105727	89		0.1	2105727
< +1 Phi (0.5 mm)	%	91	0.1	2105727	84		0.1	2105727
< +2 Phi (0.25 mm)	%	86	0.1	2105727	77		0.1	2105727
< +3 Phi (0.12 mm)	%	81	0.1	2105727	48		0.1	2105727
< +4 Phi (0.062 mm)	%	70	0.1	2105727	26		0.1	2105727
< +5 Phi (0.031 mm)	%	64	0.1	2105727	23		0.1	2105727
< +6 Phi (0.016 mm)	%	47	0.1	2105727	20		0.1	2105727
< +7 Phi (0.0078 mm)	%	30	0.1	2105727	14		0.1	2105727
< +8 Phi (0.0039 mm)	%	25	0.1	2105727	13		0.1	2105727
< +9 Phi (0.0020 mm)	%	19	0.1	2105727	9.9		0.1	2105727
Gravel	%	0.2 (1)	0.1	2105727	8.2		0.1	2105727
Sand	%	30	0.1	2105727	66		0.1	2105727
Silt	%	44	0.1	2105727	13		0.1	2105727
Clay	%	25	0.1	2105727	13		0.1	2105727
Metals								
Mercury (Hg)	mg/kg		0.01	2102059	0.03	0.04	0.01	2102060
PCBs								
Total PCB	mg/kg		0.01	2100623	<0.01		0.01	2100623
Metals								
Available Aluminum (Al)	mg/kg		10	2101250	11000		10	2101250
Available Antimony (Sb)	mg/kg		2	2101250	19		2	2101250
Available Arsenic (As)	mg/kg		2	2101250	7		2	2101250
Available Barium (Ba)	mg/kg		5	2101250	92		5	2101250
Available Beryllium (Be)	mg/kg		2	2101250	<2		2	2101250

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) %RPD violation not applicable. Absolute values agree within 10%.

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ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6942			FH6943	FH6943		
Sampling Date		2010/03/10			2010/03/10	2010/03/10		
COC Number		B 121795			B 121795	B 121795		
	Units	**QA/QC-2 (0-15CM) Lab-Dup**	**RDL**	**QC Batch**	**QA/QC-3 (0-15CM)**	**QA/QC-3 (0-15CM) Lab-Dup**	**RDL**	**QC Batch**
Available Bismuth (Bi)	mg/kg		2	2101250	<2		2	2101250
Available Boron (B)	mg/kg		5	2101250	23		5	2101250
Available Cadmium (Cd)	mg/kg		0.3	2101250	<0.3		0.3	2101250
Available Chromium (Cr)	mg/kg		2	2101250	20		2	2101250
Available Cobalt (Co)	mg/kg		1	2101250	8		1	2101250
Available Copper (Cu)	mg/kg		2	2101250	17		2	2101250
Available Iron (Fe)	mg/kg		50	2101250	22000		50	2101250
Available Lead (Pb)	mg/kg		0.5	2101250	340		0.5	2101250
Available Lithium (Li)	mg/kg		2	2101250	30		2	2101250
Available Manganese (Mn)	mg/kg		2	2101250	220		2	2101250
Available Molybdenum (Mo)	mg/kg		2	2101250	<2		2	2101250
Available Nickel (Ni)	mg/kg		2	2101250	21		2	2101250
Available Rubidium (Rb)	mg/kg		2	2101250	7		2	2101250
Available Selenium (Se)	mg/kg		5	2101250	<2		2	2101250
Available Silver (Ag)	mg/kg		0.5	2101250	<0.5		0.5	2101250
Available Strontium (Sr)	mg/kg		5	2101250	33		5	2101250
Available Thallium (Tl)	mg/kg		0.1	2101250	<0.1		0.1	2101250
Available Tin (Sn)	mg/kg		2	2101250	9		2	2101250
Available Uranium (U)	mg/kg		0.1	2101250	1.0		0.1	2101250
Available Vanadium (V)	mg/kg		2	2101250	33		2	2101250
Available Zinc (Zn)	mg/kg		5	2101250	72		5	2101250
Polyaromatic Hydrocarbons								
1-Methylnaphthalene	mg/kg		0.005	2100119	<0.005		0.005	2100119
2-Methylnaphthalene	mg/kg		0.005	2100119	0.011		0.005	2100119
Acenaphthene	mg/kg		0.005	2100119	0.027		0.005	2100119
Acenaphthylene	mg/kg		0.005	2100119	0.018		0.005	2100119
Anthracene	mg/kg		0.005	2100119	0.17		0.005	2100119
Benzo(a)anthracene	mg/kg		0.005	2100119	0.55		0.005	2100119
Benzo(a)pyrene	mg/kg		0.005	2100119	0.58		0.005	2100119
Benzo(b)fluoranthene	mg/kg		0.005	2100119	0.43		0.005	2100119
Benzo(g,h,i)perylene	mg/kg		0.005	2100119	0.35		0.005	2100119
Benzo(k)fluoranthene	mg/kg		0.005	2100119	0.35		0.005	2100119

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Project name: NORTH HEAD HARBOUR

ATLANTIC ODCA PUBLIC WORKS (SOIL)

Maxxam ID		FH6942			FH6943	FH6943		
Sampling Date		2010/03/10			2010/03/10	2010/03/10		
COC Number		B 121795			B 121795	B 121795		
	Units	**QA/QC-2 (0-15CM) Lab-Dup**	**RDL**	**QC Batch**	**QA/QC-3 (0-15CM)**	**QA/QC-3 (0-15CM) Lab-Dup**	**RDL**	**QC Batch**
Chrysene	mg/kg		0.005	2100119	0.62		0.005	2100119
Dibenz(a,h)anthracene	mg/kg		0.005	2100119	0.081		0.005	2100119
Fluoranthene	mg/kg		0.005	2100119	1.2		0.005	2100119
Fluorene	mg/kg		0.005	2100119	0.052		0.005	2100119
Indeno(1,2,3-cd)pyrene	mg/kg		0.005	2100119	0.30		0.005	2100119
Naphthalene	mg/kg		0.005	2100119	0.015		0.005	2100119
Perylene	mg/kg		0.005	2100119	0.18		0.005	2100119
Phenanthrene	mg/kg		0.005	2100119	0.48		0.005	2100119
Pyrene	mg/kg		0.005	2100119	1.1		0.005	2100119
Petroleum Hydrocarbons								
Benzene	mg/kg		0.003	2101459	<0.003		0.003	2101459
Toluene	mg/kg		0.03	2101459	<0.03		0.03	2101459
Ethylbenzene	mg/kg		0.01	2101459	<0.01		0.01	2101459
Xylene (Total)	mg/kg		0.05	2101459	<0.05		0.05	2101459
C6 - C10 (less BTEX)	mg/kg		3	2101459	<3		3	2101459
>C10-C21 Hydrocarbons	mg/kg		15	2100655	29		15	2100655
>C21-<C32 Hydrocarbons	mg/kg		15	2100655	68		15	2100655
Modified TPH (Tier1)	mg/kg		20	2098718	98		20	2098797
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%			2100655	84			2100655
n-Dotriacontane - Extractable	%			2100655	73 (1)			2100655
D10-Anthracene	%			2100119	99			2100119
D14-Terphenyl	%			2100119	103			2100119
D8-Acenaphthylene	%			2100119	90			2100119
Decachlorobiphenyl	%			2100623	93			2100623
Isobutylbenzene - Volatile	%			2101459	112			2101459

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Lube oil fraction.

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RESULTS OF ANALYSES OF SOIL

Maxxam ID		FH6871	FH6871		FH6911		FH6912		
Sampling Date		2010/03/09	2010/03/09		2010/03/09		2010/03/09		
COC Number		B 121795	B 121795		B 121795		B 121795		
	Units	**10SED-1 (0-15CM)**	**10SED-1 (0-15CM) Lab-Dup**	**RDL**	**10SED-2 (0-15CM)**	**RDL**	**10SED-2 (30-45CM)**	**RDL**	**QC Batch**
Inorganics									
Total Inorganic Carbon (C)	g/kg	7		1	4	1	6.2	0.9	2098796
Total Carbon-combustion IR	g/kg	43	41	1	28	0.8	36	0.9	2101863

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		FH6913		FH6914		FH6915		
Sampling Date		2010/03/09		2010/03/09		2010/03/09		
COC Number		B 121795		B 121795		B 121795		
	Units	**10SED-3 (0-15CM)**	**RDL**	**10SED-3 (40-50CM)**	**RDL**	**10SED-4 (0-15CM)**	**RDL**	**QC Batch**
Inorganics								
Total Inorganic Carbon (C)	g/kg	4.7	0.8	7.7	0.7	5.2	0.6	2098796
Total Carbon-combustion IR	g/kg	43	0.8	42	0.7	21	0.6	2101863

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		FH6916		FH6917		FH6918		
Sampling Date		2010/03/09		2010/03/10		2010/03/10		
COC Number		B 121795		B 121795		B 121795		
	Units	**10SED-5 (0-15CM)**	**RDL**	**10SED-6 (0-15CM)**	**RDL**	**10SED-7 (0-15CM)**	**RDL**	**QC Batch**
Inorganics								
Total Inorganic Carbon (C)	g/kg	4.6	0.8	10	0.7	4.7	0.9	2098796
Total Carbon-combustion IR	g/kg	19	0.8	25	0.7	34	0.9	2101863

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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RESULTS OF ANALYSES OF SOIL

Maxxam ID		FH6919		FH6920		FH6921		
Sampling Date		2010/03/10		2010/03/10		2010/03/10		
COC Number		B 121795		B 121795		B 121795		
	Units	**10SED-7 (40-54CM)**	**RDL**	**10SED-8 (0-15CM)**	**RDL**	**10SED9 (0-15CM)**	**RDL**	**QC Batch**
Inorganics								
Total Inorganic Carbon (C)	g/kg	7.4	0.6	2.1	0.9	4.5	0.5	2098796
Total Carbon-combustion IR	g/kg	35	0.6	43	0.8	29	0.5	2101863

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		FH6922		FH6923		FH6924		
Sampling Date		2010/03/10		2010/03/10		2010/03/10		
COC Number		B 121795		B 121795		B 121795		
	Units	**10SED-10 (0-15CM)**	**RDL**	**10SED-11 (0-15CM)**	**RDL**	**10SED-11 (45-60CM)**	**RDL**	**QC Batch**
Inorganics								
Total Inorganic Carbon (C)	g/kg	3.7	0.7	4.7	0.5	2.3	0.4	2098796
Total Carbon-combustion IR	g/kg	45	0.4	29	0.4	17	0.4	2101863

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		FH6925		FH6926	FH6927	FH6928	FH6929		
Sampling Date		2010/03/10		2010/03/10	2010/03/10	2010/03/10	2010/03/10		
COC Number		B 121795		B 121795	B 121795	B 121795	B 121795		
	Units	**10SED-12 (0-15CM)**	**RDL**	**10SED-13 (0-15CM)**	**10SED-13 (30-41CM)**	**10SED-14 (0-15CM)**	**10SED-15 (0-15CM)**	**RDL**	**QC Batch**
Inorganics									
Total Inorganic Carbon (C)	g/kg	6.4	0.7	2.9	2.2	1.9	2.6	0.2	2098796
Total Carbon-combustion IR	g/kg	29	0.7	11	11	11	12	0.2	2101863

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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RESULTS OF ANALYSES OF SOIL

Maxxam ID		FH6930	FH6930	FH6931	FH6932	FH6933	FH6934	FH6935		
Sampling Date		2010/03/10	2010/03/10	2010/03/10	2010/03/10	2010/03/10	2010/03/10	2010/03/10		
COC Number		B 121795	B 121795	B 121795	B 121795	B 121795	B 121795	B 121795		
	Units	**10SED-16 (0-15CM)**	**10SED-16 (0-15CM) Lab-Dup**	**10SED-17 (0-15CM)**	**10SED-18 (0-15CM)**	**10SED-19 (0-15CM)**	**10SED-20 (0-15CM)**	**10SED-21 (0-15CM)**	**RDL**	**QC Batch**
Inorganics										
Total Inorganic Carbon (C)	g/kg	3.0		4.0	1.7	3.4	2.4	2.6	0.2	2098796
Total Carbon-combustion IR	g/kg	15	16	16	9.2	11	6.2	8.9	0.2	2101869

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		FH6936	FH6937		FH6938		FH6939		
Sampling Date		2010/03/10	2010/03/10		2010/03/10		2010/03/10		
COC Number		B 121795	B 121795		B 121795		B 121795		
	Units	**10SED-22 (0-15CM)**	**10SED-23 (0-15CM)**	**RDL**	**10SED-24 (0-15CM)**	**RDL**	**10SED-25 (0-15CM)**	**RDL**	**QC Batch**
Inorganics									
Total Inorganic Carbon (C)	g/kg	2.9	3.6	0.2	1.5	0.5	5.7	0.2	2098796
Total Carbon-combustion IR	g/kg	11	15	0.2	33	0.4	22	0.2	2101869

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		FH6940		FH6941	FH6942		
Sampling Date		2010/03/10		2010/03/09	2010/03/10		
COC Number		B 121795		B 121795	B 121795		
	Units	**10SED-26 (0-15CM)**	**RDL**	**QA/QC-1 (0-15CM)**	**QA/QC-2 (0-15CM)**	**RDL**	**QC Batch**
Inorganics							
Total Inorganic Carbon (C)	g/kg	2.4	0.5	4.3	3.0	0.4	2098796
Total Carbon-combustion IR	g/kg	31	0.2	17	38	0.3	2101869

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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RESULTS OF ANALYSES OF SOIL

Maxxam ID		FH6943		
Sampling Date		2010/03/10		
COC Number		B 121795		
	Units	**QA/QC-3 (0-15CM)**	**RDL**	**QC Batch**
Inorganics				
Total Inorganic Carbon (C)	g/kg	2.4	0.3	2098796
Total Carbon-combustion IR	g/kg	16	0.2	2101869

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (SOIL)

Maxxam ID		FH6871	FH6911		FH6912		FH6913	FH6914		
Sampling Date		2010/03/09	2010/03/09		2010/03/09		2010/03/09	2010/03/09		
COC Number		B 121795	B 121795		B 121795		B 121795	B 121795		
	Units	**10SED-1 (0-15CM)**	**10SED-2 (0-15CM)**	**RDL**	**10SED-2 (30-45CM)**	**RDL**	**10SED-3 (0-15CM)**	**10SED-3 (40-50CM)**	**RDL**	**QC Batch**
Metals										
Total Aluminum (Al)	mg/kg	57000	62000	100	68000	100	63000	55000	100	2101574
Total Antimony (Sb)	mg/kg	2.1	2.0	2.0	<2.0	2.0	<2.0	<2.0	2.0	2101574
Total Arsenic (As)	mg/kg	21	23	2.0	16	2.0	22	13	2.0	2101574
Total Barium (Ba)	mg/kg	960	1300	5.0	630	5.0	930	720	5.0	2101574
Total Beryllium (Be)	mg/kg	<2.0	<2.0	2.0	<2.0	2.0	2.0	<2.0	2.0	2101574
Total Cadmium (Cd)	mg/kg	0.77	0.43	0.15	0.40	0.15	0.95	1.1	0.15	2101574
Total Chromium (Cr)	mg/kg	79	78	2.0	91	2.0	79	72	2.0	2101574
Total Cobalt (Co)	mg/kg	15	15	1.0	17	1.0	14	14	1.0	2101574
Total Copper (Cu)	mg/kg	89	58	2.0	96	20	74	70	2.0	2101574
Total Iron (Fe)	mg/kg	36000	34000	50	36000	50	34000	32000	50	2101574
Total Lead (Pb)	mg/kg	99	80	0.50	79	0.50	97	98	0.50	2101574
Total Manganese (Mn)	mg/kg	410	420	2.0	460	2.0	390	380	2.0	2101574
Total Molybdenum (Mo)	mg/kg	8.5	3.7	2.0	5.9	2.0	6.0	6.8	2.0	2101574
Total Nickel (Ni)	mg/kg	36	35	2.0	35	2.0	33	33	2.0	2101574
Total Selenium (Se)	mg/kg	<2.0	<2.0	2.0	<2.0	2.0	<2.0	<2.0	2.0	2101574
Total Strontium (Sr)	mg/kg	140	120	5.0	130	5.0	120	110	5.0	2101574
Total Thallium (Tl)	mg/kg	0.65	0.62	0.10	0.58	0.10	0.73	0.66	0.10	2101574
Total Tin (Sn)	mg/kg	18	15	2.0	18	2.0	16	21	2.0	2101574
Total Uranium (U)	mg/kg	3.1	2.7	0.10	3.0	0.10	3.1	2.9	0.10	2101574
Total Vanadium (V)	mg/kg	110	110	2.0	120	2.0	110	110	2.0	2101574
Total Zinc (Zn)	mg/kg	220	160	5.0	170	5.0	230	240	5.0	2101574

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (SOIL)

Maxxam ID		FH6915	FH6916	FH6917		FH6918	FH6919	FH6920		
Sampling Date		2010/03/09	2010/03/09	2010/03/10		2010/03/10	2010/03/10	2010/03/10		
COC Number		B 121795	B 121795	B 121795		B 121795	B 121795	B 121795		
	Units	**10SED-4 (0-15CM)**	**10SED-5 (0-15CM)**	**10SED-6 (0-15CM)**	**RDL**	**10SED-7 (0-15CM)**	**10SED-7 (40-54CM)**	**10SED-8 (0-15CM)**	**RDL**	**QC Batch**
Metals										
Total Aluminum (Al)	mg/kg	73000	68000	81000	100	69000	65000	57000	100	2101574
Total Antimony (Sb)	mg/kg	2.6	3.0	4.3	2.0	4.0	4.7	<2.0	2.0	2101574
Total Arsenic (As)	mg/kg	36	38	36	2.0	20	18	13	2.0	2101574
Total Barium (Ba)	mg/kg	4100	6900	4300	50	1100	1100	630	5.0	2101574
Total Beryllium (Be)	mg/kg	2.5	2.7	3.0	2.0	2.1	2.1	<2.0	2.0	2101574
Total Cadmium (Cd)	mg/kg	0.38	0.31	0.30	0.15	0.65	0.85	0.72	0.15	2101574
Total Chromium (Cr)	mg/kg	80	89	89	2.0	78	79	72	2.0	2101574
Total Cobalt (Co)	mg/kg	16	18	17	1.0	16	16	13	1.0	2101574
Total Copper (Cu)	mg/kg	68	120	87	2.0	80	95	69	20	2101574
Total Iron (Fe)	mg/kg	34000	33000	36000	50	36000	36000	32000	50	2101574
Total Lead (Pb)	mg/kg	110	89	94	0.50	110	96	78	0.50	2101574
Total Manganese (Mn)	mg/kg	480	490	570	2.0	410	430	390	2.0	2101574
Total Molybdenum (Mo)	mg/kg	2.9	2.7	2.7	2.0	5.7	7.2	4.0	2.0	2101574
Total Nickel (Ni)	mg/kg	39	42	38	2.0	37	37	30	2.0	2101574
Total Selenium (Se)	mg/kg	<2.0	<2.0	<2.0	2.0	<2.0	<2.0	<2.0	2.0	2101574
Total Strontium (Sr)	mg/kg	150	180	150	50	120	140	110	5.0	2101574
Total Thallium (Tl)	mg/kg	0.76	0.81	0.82	0.10	0.69	0.69	0.61	0.10	2101574
Total Tin (Sn)	mg/kg	8.4	11	8.1	2.0	53	57	19	2.0	2101574
Total Uranium (U)	mg/kg	2.9	3.2	3.0	0.10	3.2	3.8	2.6	0.10	2101574
Total Vanadium (V)	mg/kg	110	120	110	2.0	110	110	100	2.0	2101574
Total Zinc (Zn)	mg/kg	140	130	130	5.0	220	240	170	5.0	2101574

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (SOIL)

Maxxam ID		FH6921	FH6921		FH6922		FH6923		
Sampling Date		2010/03/10	2010/03/10		2010/03/10		2010/03/10		
COC Number		B 121795	B 121795		B 121795		B 121795		
	Units	**10SED9 (0-15CM)**	**10SED9 (0-15CM) Lab-Dup**	**RDL**	**10SED-10 (0-15CM)**	**RDL**	**10SED-11 (0-15CM)**	**RDL**	**QC Batch**
Metals									
Total Aluminum (Al)	mg/kg	63000	56000	100	61000	100	69000	100	2101574
Total Antimony (Sb)	mg/kg	4.0	3.9	2.0	<2.0	2.0	2.1	2.0	2101574
Total Arsenic (As)	mg/kg	20	18	2.0	12	2.0	19	2.0	2101574
Total Barium (Ba)	mg/kg	1300	1000	5.0	650	5.0	820	5.0	2101574
Total Beryllium (Be)	mg/kg	<2.0	2.1	2.0	<2.0	2.0	2.0	2.0	2101574
Total Cadmium (Cd)	mg/kg	0.46	0.52	0.15	0.56	0.15	0.61	0.15	2101574
Total Chromium (Cr)	mg/kg	77	76	2.0	79	2.0	82	2.0	2101574
Total Cobalt (Co)	mg/kg	15	14	1.0	13	1.0	15	1.0	2101574
Total Copper (Cu)	mg/kg	75	65	20	77	20	66	2.0	2101574
Total Iron (Fe)	mg/kg	34000	32000	50	32000	50	34000	50	2101574
Total Lead (Pb)	mg/kg	85	83	0.50	73	0.50	63	0.50	2101574
Total Manganese (Mn)	mg/kg	440	410	2.0	390	2.0	430	2.0	2101574
Total Molybdenum (Mo)	mg/kg	4.8	4.9	2.0	3.4	2.0	3.0	2.0	2101574
Total Nickel (Ni)	mg/kg	34	34	2.0	31	2.0	34	2.0	2101574
Total Selenium (Se)	mg/kg	<2.0	<2.0	2.0	<2.0	2.0	<2.0	2.0	2101574
Total Strontium (Sr)	mg/kg	130	120	5.0	140	50	110	5.0	2101574
Total Thallium (Tl)	mg/kg	0.69	0.68	0.10	0.58	0.10	0.68	0.10	2101574
Total Tin (Sn)	mg/kg	43	34	2.0	22	2.0	11	2.0	2101574
Total Uranium (U)	mg/kg	3.4	3.3	0.10	2.3	0.10	2.4	0.10	2101574
Total Vanadium (V)	mg/kg	110	110	2.0	110	2.0	120	2.0	2101574
Total Zinc (Zn)	mg/kg	180	180	5.0	180	5.0	180	5.0	2101574

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ELEMENTS BY ICP/MS (SOIL)

Maxxam ID		FH6924		FH6925		FH6926		FH6927		
Sampling Date		2010/03/10		2010/03/10		2010/03/10		2010/03/10		
COC Number		B 121795		B 121795		B 121795		B 121795		
	Units	**10SED-11 (45-60CM)**	**RDL**	**10SED-12 (0-15CM)**	**RDL**	**10SED-13 (0-15CM)**	**RDL**	**10SED-13 (30-41CM)**	**RDL**	**QC Batch**
Metals										
Total Aluminum (Al)	mg/kg	68000	100	50000	100	54000	100	59000	100	2101574
Total Antimony (Sb)	mg/kg	4.0	2.0	4.4	2.0	<2.0	2.0	<2.0	2.0	2101574
Total Arsenic (As)	mg/kg	30	2.0	11	2.0	6.6	2.0	5.4	2.0	2101574
Total Barium (Ba)	mg/kg	1200	5.0	640	5.0	410	5.0	410	5.0	2101574
Total Beryllium (Be)	mg/kg	2.4	2.0	<2.0	2.0	<2.0	2.0	<2.0	2.0	2101574
Total Cadmium (Cd)	mg/kg	0.34	0.15	0.37	0.15	<0.15	0.15	<0.15	0.15	2101574
Total Chromium (Cr)	mg/kg	79	2.0	78	2.0	63	2.0	64	2.0	2101574
Total Cobalt (Co)	mg/kg	19	1.0	12	1.0	10	1.0	10	1.0	2101574
Total Copper (Cu)	mg/kg	750	20	95	2.0	16	2.0	17	2.0	2101574
Total Iron (Fe)	mg/kg	38000	50	30000	50	25000	50	25000	50	2101574
Total Lead (Pb)	mg/kg	71	0.50	95	0.50	21	0.50	27	0.50	2101574
Total Manganese (Mn)	mg/kg	620	2.0	380	20	310	2.0	330	20	2101574
Total Molybdenum (Mo)	mg/kg	2.9	2.0	3.9	2.0	<2.0	2.0	<2.0	2.0	2101574
Total Nickel (Ni)	mg/kg	39	2.0	28	2.0	24	2.0	27	2.0	2101574
Total Selenium (Se)	mg/kg	<2.0	2.0	<2.0	2.0	<2.0	2.0	<2.0	2.0	2101574
Total Strontium (Sr)	mg/kg	110	5.0	110	5.0	99	5.0	100	5.0	2101574
Total Thallium (Tl)	mg/kg	0.70	0.10	0.46	0.10	0.45	0.10	0.46	0.10	2101574
Total Tin (Sn)	mg/kg	11	2.0	23	2.0	6.3	2.0	7.1	2.0	2101574
Total Uranium (U)	mg/kg	2.6	0.10	2.3	0.10	1.3	0.10	1.5	0.10	2101574
Total Vanadium (V)	mg/kg	110	2.0	93	2.0	85	2.0	87	2.0	2101574
Total Zinc (Zn)	mg/kg	130	5.0	210	5.0	76	5.0	81	5.0	2101574

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ELEMENTS BY ICP/MS (SOIL)

Maxxam ID		FH6928	FH6929			FH6930	FH6931		
Sampling Date		2010/03/10	2010/03/10			2010/03/10	2010/03/10		
COC Number		B 121795	B 121795			B 121795	B 121795		
	Units	**10SED-14 (0-15CM)**	**10SED-15 (0-15CM)**	**RDL**	**QC Batch**	**10SED-16 (0-15CM)**	**10SED-17 (0-15CM)**	**RDL**	**QC Batch**
Metals									
Total Aluminum (Al)	mg/kg	58000	57000	100	2101574	62000	60000	100	2103058
Total Antimony (Sb)	mg/kg	<2.0	<2.0	2.0	2101574	<2.0	<2.0	2.0	2103058
Total Arsenic (As)	mg/kg	7.3	6.6	2.0	2101574	7.9	7.4	2.0	2103058
Total Barium (Ba)	mg/kg	440	460	5.0	2101574	470	440	5.0	2103058
Total Beryllium (Be)	mg/kg	<2.0	<2.0	2.0	2101574	<2.0	<2.0	2.0	2103058
Total Cadmium (Cd)	mg/kg	<0.15	0.16	0.15	2101574	0.28	0.23	0.15	2103058
Total Chromium (Cr)	mg/kg	71	66	2.0	2101574	67	68	2.0	2103058
Total Cobalt (Co)	mg/kg	11	11	1.0	2101574	11	11	1.0	2103058
Total Copper (Cu)	mg/kg	16	20	2.0	2101574	21	22	2.0	2103058
Total Iron (Fe)	mg/kg	26000	26000	50	2101574	26000	27000	50	2103058
Total Lead (Pb)	mg/kg	23	24	0.50	2101574	26	37	0.50	2103058
Total Manganese (Mn)	mg/kg	350	340	2.0	2101574	380	380	20	2103058
Total Molybdenum (Mo)	mg/kg	<2.0	<2.0	2.0	2101574	<2.0	<2.0	2.0	2103058
Total Nickel (Ni)	mg/kg	25	25	2.0	2101574	27	29	20	2103058
Total Selenium (Se)	mg/kg	<2.0	<2.0	2.0	2101574	<2.0	<2.0	2.0	2103058
Total Strontium (Sr)	mg/kg	110	110	5.0	2101574	100	100	5.0	2103058
Total Thallium (Tl)	mg/kg	0.49	0.47	0.10	2101574	0.53	0.51	0.10	2103058
Total Tin (Sn)	mg/kg	5.5	4.0	2.0	2101574	7.1	8.2	2.0	2103058
Total Uranium (U)	mg/kg	1.4	1.4	0.10	2101574	1.6	1.7	0.10	2103058
Total Vanadium (V)	mg/kg	88	86	2.0	2101574	85	91	2.0	2103058
Total Zinc (Zn)	mg/kg	81	82	5.0	2101574	110	100	5.0	2103058

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ELEMENTS BY ICP/MS (SOIL)

Maxxam ID		FH6932		FH6933		FH6934		FH6935		
Sampling Date		2010/03/10		2010/03/10		2010/03/10		2010/03/10		
COC Number		B 121795		B 121795		B 121795		B 121795		
	Units	**10SED-18 (0-15CM)**	**RDL**	**10SED-19 (0-15CM)**	**RDL**	**10SED-20 (0-15CM)**	**RDL**	**10SED-21 (0-15CM)**	**RDL**	**QC Batch**
Metals										
Total Aluminum (Al)	mg/kg	60000	100	59000	100	56000	100	58000	100	2103058
Total Antimony (Sb)	mg/kg	<2.0	2.0	<2.0	2.0	<2.0	2.0	<2.0	2.0	2103058
Total Arsenic (As)	mg/kg	6.2	2.0	6.8	2.0	6.7	2.0	6.7	2.0	2103058
Total Barium (Ba)	mg/kg	460	5.0	440	5.0	420	5.0	520	5.0	2103058
Total Beryllium (Be)	mg/kg	<2.0	2.0	<2.0	2.0	<2.0	2.0	<2.0	2.0	2103058
Total Cadmium (Cd)	mg/kg	<0.15	0.15	<0.15	0.15	<0.15	0.15	<0.15	0.15	2103058
Total Chromium (Cr)	mg/kg	71	2.0	64	2.0	63	20	61	2.0	2103058
Total Cobalt (Co)	mg/kg	11	1.0	11	1.0	8.1	1.0	8.4	1.0	2103058
Total Copper (Cu)	mg/kg	23	2.0	17	2.0	10	2.0	12	2.0	2103058
Total Iron (Fe)	mg/kg	27000	50	25000	50	24000	50	25000	50	2103058
Total Lead (Pb)	mg/kg	26	0.50	21	0.50	16	0.50	19	0.50	2103058
Total Manganese (Mn)	mg/kg	370	2.0	330	2.0	270	2.0	320	20	2103058
Total Molybdenum (Mo)	mg/kg	<2.0	2.0	<2.0	2.0	<2.0	2.0	<2.0	2.0	2103058
Total Nickel (Ni)	mg/kg	28	20	25	2.0	23	20	27	20	2103058
Total Selenium (Se)	mg/kg	<2.0	2.0	<2.0	2.0	<2.0	2.0	<2.0	2.0	2103058
Total Strontium (Sr)	mg/kg	100	5.0	98	5.0	93	5.0	94	5.0	2103058
Total Thallium (Tl)	mg/kg	0.50	0.10	0.52	0.10	0.43	0.10	0.44	0.10	2103058
Total Tin (Sn)	mg/kg	6.0	2.0	4.2	2.0	3.9	2.0	4.4	2.0	2103058
Total Uranium (U)	mg/kg	1.5	0.10	1.4	0.10	1.0	0.10	1.1	0.10	2103058
Total Vanadium (V)	mg/kg	86	2.0	83	2.0	77	20	88	20	2103058
Total Zinc (Zn)	mg/kg	81	5.0	78	5.0	61	5.0	65	5.0	2103058

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ELEMENTS BY ICP/MS (SOIL)

Maxxam ID		FH6936		FH6937		FH6938		FH6939		
Sampling Date		2010/03/10		2010/03/10		2010/03/10		2010/03/10		
COC Number		B 121795		B 121795		B 121795		B 121795		
	Units	**10SED-22 (0-15CM)**	**RDL**	**10SED-23 (0-15CM)**	**RDL**	**10SED-24 (0-15CM)**	**RDL**	**10SED-25 (0-15CM)**	**RDL**	**QC Batch**
Metals										
Total Aluminum (Al)	mg/kg	66000	100	61000	100	63000	100	67000	100	2103058
Total Antimony (Sb)	mg/kg	<2.0	2.0	<2.0	2.0	<2.0	2.0	<2.0	2.0	2103058
Total Arsenic (As)	mg/kg	6.7	2.0	8.5	2.0	11	2.0	9.7	2.0	2103058
Total Barium (Ba)	mg/kg	500	5.0	460	5.0	420	5.0	440	5.0	2103058
Total Beryllium (Be)	mg/kg	<2.0	2.0	<2.0	2.0	<2.0	2.0	<2.0	2.0	2103058
Total Cadmium (Cd)	mg/kg	<0.15	0.15	<0.15	0.15	0.38	0.15	0.26	0.15	2103058
Total Chromium (Cr)	mg/kg	64	2.0	65	2.0	79	20	67	2.0	2103058
Total Cobalt (Co)	mg/kg	9.9	1.0	10	1.0	13	10	11	1.0	2103058
Total Copper (Cu)	mg/kg	16	2.0	17	2.0	39	20	25	2.0	2103058
Total Iron (Fe)	mg/kg	26000	50	27000	50	30000	50	30000	50	2103058
Total Lead (Pb)	mg/kg	22	0.50	27	5.0	39	0.50	34	5.0	2103058
Total Manganese (Mn)	mg/kg	360	20	360	20	430	20	420	20	2103058
Total Molybdenum (Mo)	mg/kg	<2.0	2.0	<2.0	2.0	2.6	2.0	2.0	2.0	2103058
Total Nickel (Ni)	mg/kg	24	2.0	25	2.0	28	2.0	30	20	2103058
Total Selenium (Se)	mg/kg	<2.0	2.0	<2.0	2.0	<2.0	2.0	<2.0	2.0	2103058
Total Strontium (Sr)	mg/kg	100	5.0	97	5.0	120	5.0	99	5.0	2103058
Total Thallium (Tl)	mg/kg	0.48	0.10	0.42	0.10	0.52	0.10	0.49	0.10	2103058
Total Tin (Sn)	mg/kg	5.2	2.0	8.8	2.0	8.0	2.0	7.2	2.0	2103058
Total Uranium (U)	mg/kg	1.3	0.10	1.5	0.10	2.0	0.10	1.8	0.10	2103058
Total Vanadium (V)	mg/kg	86	2.0	87	2.0	110	20	91	2.0	2103058
Total Zinc (Zn)	mg/kg	77	5.0	80	5.0	110	5.0	96	5.0	2103058

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ELEMENTS BY ICP/MS (SOIL)

Maxxam ID		FH6940		FH6941		FH6942	FH6942		
Sampling Date		2010/03/10		2010/03/09		2010/03/10	2010/03/10		
COC Number		B 121795		B 121795		B 121795	B 121795		
	Units	**10SED-26 (0-15CM)**	**RDL**	**QA/QC-1 (0-15CM)**	**RDL**	**QA/QC-2 (0-15CM)**	**QA/QC-2 (0-15CM) Lab-Dup**	**RDL**	**QC Batch**
Metals									
Total Aluminum (Al)	mg/kg	69000	100	100000	100	65000	67000	100	2103058
Total Antimony (Sb)	mg/kg	<2.0	2.0	3.0	2.0	<2.0	<2.0	2.0	2103058
Total Arsenic (As)	mg/kg	10	2.0	35	2.0	14	15	2.0	2103058
Total Barium (Ba)	mg/kg	460	5.0	7300	50	630	630	5.0	2103058
Total Beryllium (Be)	mg/kg	<2.0	2.0	3.1	2.0	<2.0	2.2	2.0	2103058
Total Cadmium (Cd)	mg/kg	0.31	0.15	0.30	0.15	0.66	0.95 (1)	0.15	2103058
Total Chromium (Cr)	mg/kg	76	2.0	90	2.0	75	74	2.0	2103058
Total Cobalt (Co)	mg/kg	13	1.0	19	10	14	13	1.0	2103058
Total Copper (Cu)	mg/kg	34	2.0	92	20	61	68	20	2103058
Total Iron (Fe)	mg/kg	30000	50	36000	50	32000	33000	50	2103058
Total Lead (Pb)	mg/kg	36	0.50	130	0.50	84	83	5.0	2103058
Total Manganese (Mn)	mg/kg	440	20	570	20	440	440	20	2103058
Total Molybdenum (Mo)	mg/kg	2.7	2.0	3.0	2.0	4.1	4.1	2.0	2103058
Total Nickel (Ni)	mg/kg	32	2.0	44	20	32	32	2.0	2103058
Total Selenium (Se)	mg/kg	<2.0	2.0	<2.0	2.0	<2.0	<2.0	2.0	2103058
Total Strontium (Sr)	mg/kg	130	5.0	190	50	140	140	50	2103058
Total Thallium (Tl)	mg/kg	0.53	0.10	0.81	0.10	0.62	0.62	0.10	2103058
Total Tin (Sn)	mg/kg	7.5	2.0	9.6	2.0	22	24	2.0	2103058
Total Uranium (U)	mg/kg	2.2	0.10	3.2	0.10	2.8	2.9	0.10	2103058
Total Vanadium (V)	mg/kg	110	2.0	120	2.0	110	110	2.0	2103058
Total Zinc (Zn)	mg/kg	100	5.0	130	5.0	170	200	5.0	2103058

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Poor RPD due to sample inhomogeneity.

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Report Date: 2010/03/22

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Project name: NORTH HEAD HARBOUR

ELEMENTS BY ICP/MS (SOIL)

Maxxam ID		FH6943		
Sampling Date		2010/03/10		
COC Number		B 121795		
	Units	**QA/QC-3 (0-15CM)**	**RDL**	**QC Batch**
Metals				
Total Aluminum (Al)	mg/kg	71000	100	2103058
Total Antimony (Sb)	mg/kg	<2.0	2.0	2103058
Total Arsenic (As)	mg/kg	8.4	2.0	2103058
Total Barium (Ba)	mg/kg	490	5.0	2103058
Total Beryllium (Be)	mg/kg	<2.0	2.0	2103058
Total Cadmium (Cd)	mg/kg	<0.15	0.15	2103058
Total Chromium (Cr)	mg/kg	70	2.0	2103058
Total Cobalt (Co)	mg/kg	11	1.0	2103058
Total Copper (Cu)	mg/kg	21	20	2103058
Total Iron (Fe)	mg/kg	28000	50	2103058
Total Lead (Pb)	mg/kg	37	0.50	2103058
Total Manganese (Mn)	mg/kg	370	20	2103058
Total Molybdenum (Mo)	mg/kg	<2.0	2.0	2103058
Total Nickel (Ni)	mg/kg	27	2.0	2103058
Total Selenium (Se)	mg/kg	<2.0	2.0	2103058
Total Strontium (Sr)	mg/kg	98	5.0	2103058
Total Thallium (Tl)	mg/kg	0.48	0.10	2103058
Total Tin (Sn)	mg/kg	15	2.0	2103058
Total Uranium (U)	mg/kg	1.6	0.10	2103058
Total Vanadium (V)	mg/kg	92	2.0	2103058
Total Zinc (Zn)	mg/kg	83	5.0	2103058

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		FH6871			FH6911	FH6912	FH6913	FH6914	FH6915		
Sampling Date		2010/03/09			2010/03/09	2010/03/09	2010/03/09	2010/03/09	2010/03/09		
COC Number		B 121795			B 121795	B 121795	B 121795	B 121795	B 121795		
	Units	**10SED-1 (0-15CM)**	**RDL**	**QC Batch**	**10SED-2 (0-15CM)**	**10SED-2 (30-45CM)**	**10SED-3 (0-15CM)**	**10SED-3 (40-50CM)**	**10SED-4 (0-15CM)**	**RDL**	**QC Batch**
Metals											
Chromium (VI)	ug/g	<0.4 (1)	0.4	2102328	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	2102278

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sample contained a high amount of moisture. Reporting limits were adjusted for dry weight of sample.

Maxxam ID		FH6916		FH6917	FH6918	FH6919	FH6920		FH6921		
Sampling Date		2010/03/09		2010/03/10	2010/03/10	2010/03/10	2010/03/10		2010/03/10		
COC Number		B 121795		B 121795	B 121795	B 121795	B 121795		B 121795		
	Units	**10SED-5 (0-15CM)**	**RDL**	**10SED-6 (0-15CM)**	**10SED-7 (0-15CM)**	**10SED-7 (40-54CM)**	**10SED-8 (0-15CM)**	**RDL**	**10SED9 (0-15CM)**	**RDL**	**QC Batch**
Metals											
Chromium (VI)	ug/g	<0.2	0.2	<0.4 (1)	<0.4 (1)	<0.4 (1)	<0.4 (1)	0.4	<0.2	0.2	2102278

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sample contained a high amount of moisture. Reporting limits were adjusted for dry weight of sample.

Maxxam ID		FH6922	FH6923	FH6924		FH6925		FH6926	FH6927		
Sampling Date		2010/03/10	2010/03/10	2010/03/10		2010/03/10		2010/03/10	2010/03/10		
COC Number		B 121795	B 121795	B 121795		B 121795		B 121795	B 121795		
	Units	**10SED-10 (0-15CM)**	**10SED-11 (0-15CM)**	**10SED-11 (45-60CM)**	**RDL**	**10SED-12 (0-15CM)**	**RDL**	**10SED-13 (0-15CM)**	**10SED-13 (30-41CM)**	**RDL**	**QC Batch**
Metals											
Chromium (VI)	ug/g	<0.2	<0.2	<0.2	0.2	<0.4 (1)	0.4	<0.2	<0.2	0.2	2102278

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sample contained a high amount of moisture. Reporting limits were adjusted for dry weight of sample.

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Maxxam Job #: B029595
Report Date: 2010/03/22

Conestoga-Rovers and Associates Ltd
Client Project #: 059570
Project name: NORTH HEAD HARBOUR

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		FH6928		FH6929		FH6930	FH6931		FH6932		
Sampling Date		2010/03/10		2010/03/10		2010/03/10	2010/03/10		2010/03/10		
COC Number		B 121795		B 121795		B 121795	B 121795		B 121795		
	Units	**10SED-14 (0-15CM)**	**RDL**	**10SED-15 (0-15CM)**	**QC Batch**	**10SED-16 (0-15CM)**	**10SED-17 (0-15CM)**	**RDL**	**10SED-18 (0-15CM)**	**RDL**	**QC Batch**
Metals											
Chromium (VI)	ug/g	<0.2	0.2	<0.4 (1)	2102278	<0.4 (1)	<0.4 (1)	0.4	<0.2	0.2	2102328

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sample contained a high amount of moisture. Reporting limits were adjusted for dry weight of sample.

Maxxam ID		FH6933	FH6934	FH6935	FH6936	FH6937		
Sampling Date		2010/03/10	2010/03/10	2010/03/10	2010/03/10	2010/03/10		
COC Number		B 121795	B 121795	B 121795	B 121795	B 121795		
	Units	**10SED-19 (0-15CM)**	**10SED-20 (0-15CM)**	**10SED-21 (0-15CM)**	**10SED-22 (0-15CM)**	**10SED-23 (0-15CM)**	**RDL**	**QC Batch**
Metals								
Chromium (VI)	ug/g	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	2102328

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		FH6938			FH6939	FH6939			FH6940		
Sampling Date		2010/03/10			2010/03/10	2010/03/10			2010/03/10		
COC Number		B 121795			B 121795	B 121795			B 121795		
	Units	**10SED-24 (0-15CM)**	**RDL**	**QC Batch**	**10SED-25 (0-15CM)**	**10SED-25 (0-15CM) Lab-Dup**	**RDL**	**QC Batch**	**10SED-26 (0-15CM)**	**RDL**	**QC Batch**
Metals											
Chromium (VI)	ug/g	<0.8 (1)	0.8	2102328	<0.4 (1)	<0.4 (1)	0.4	2102278	<0.2	0.2	2102328

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sample contained a high amount of moisture. Reporting limits were adjusted for dry weight of sample.

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Conestoga-Rovers and Associates Ltd
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ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		FH6941	FH6941	FH6942	FH6943		
Sampling Date		2010/03/09	2010/03/09	2010/03/10	2010/03/10		
COC Number		B 121795	B 121795	B 121795	B 121795		
	Units	**QA/QC-1 (0-15CM)**	**QA/QC-1 (0-15CM) Lab-Dup**	**QA/QC-2 (0-15CM)**	**QA/QC-3 (0-15CM)**	**RDL**	**QC Batch**
Metals							
Chromium (VI)	ug/g	<0.2	<0.2	<0.2	<0.2	0.2	2102328

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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GENERAL COMMENTS

Uranium recovery from the applicable digested reference material is 70 % for worksheet # 2101574 and 2103058.

Results relate only to the items tested.

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Attention: Neil Brodie
Client Project #: 059570
P.O. #:
Project name: NORTH HEAD HARBOUR

Quality Assurance Report

Maxxam Job Number: DB029595

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2100081	DCF	Matrix Spike						
		[FH6920-01]	D10-Anthracene	2010/03/19		85	%	30 - 130
			D14-Terphenyl	2010/03/19		89	%	30 - 130
			D8-Acenaphthylene	2010/03/19		75	%	30 - 130
			1-Methylnaphthalene	2010/03/19		70	%	30 - 130
			2-Methylnaphthalene	2010/03/19		72	%	30 - 130
			Acenaphthene	2010/03/19		NC	%	30 - 130
			Acenaphthylene	2010/03/19		NC	%	30 - 130
			Anthracene	2010/03/19		NC	%	30 - 130
			Benzo(a)anthracene	2010/03/19		NC	%	30 - 130
			Benzo(a)pyrene	2010/03/19		NC	%	30 - 130
			Benzo(b)fluoranthene	2010/03/19		NC	%	30 - 130
			Benzo(g,h,i)perylene	2010/03/19		NC	%	30 - 130
			Benzo(k)fluoranthene	2010/03/19		NC	%	30 - 130
			Chrysene	2010/03/19		NC	%	30 - 130
			Dibenz(a,h)anthracene	2010/03/19		NC	%	30 - 130
			Fluoranthene	2010/03/19		NC	%	30 - 130
			Fluorene	2010/03/19		NC	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2010/03/19		NC	%	30 - 130
			Naphthalene	2010/03/19		NC	%	30 - 130
			Perylene	2010/03/19		NC	%	30 - 130
			Phenanthrene	2010/03/19		NC	%	30 - 130
			Pyrene	2010/03/19		NC	%	30 - 130
		Spiked Blank	D10-Anthracene	2010/03/19		77	%	30 - 130
			D14-Terphenyl	2010/03/19		88	%	30 - 130
			D8-Acenaphthylene	2010/03/19		70	%	30 - 130
			1-Methylnaphthalene	2010/03/19		65 (1)	%	30 - 130
			2-Methylnaphthalene	2010/03/19		68 (1)	%	30 - 130
			Acenaphthene	2010/03/19		74	%	30 - 130
			Acenaphthylene	2010/03/19		71	%	30 - 130
			Anthracene	2010/03/19		86	%	30 - 130
			Benzo(a)anthracene	2010/03/19		90	%	30 - 130
			Benzo(a)pyrene	2010/03/19		100	%	30 - 130
			Benzo(b)fluoranthene	2010/03/19		107	%	30 - 130
			Benzo(g,h,i)perylene	2010/03/19		94	%	30 - 130
			Benzo(k)fluoranthene	2010/03/19		112	%	30 - 130
			Chrysene	2010/03/19		95	%	30 - 130
			Dibenz(a,h)anthracene	2010/03/19		89	%	30 - 130
			Fluoranthene	2010/03/19		91	%	30 - 130
			Fluorene	2010/03/19		75	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2010/03/19		90	%	30 - 130
			Naphthalene	2010/03/19		71	%	30 - 130
			Perylene	2010/03/19		98	%	30 - 130
			Phenanthrene	2010/03/19		83	%	30 - 130
			Pyrene	2010/03/19		90	%	30 - 130
		Method Blank	D10-Anthracene	2010/03/19		78	%	30 - 130
			D14-Terphenyl	2010/03/19		92	%	30 - 130
			D8-Acenaphthylene	2010/03/19		74	%	30 - 130
			1-Methylnaphthalene	2010/03/19	<0.005		mg/kg	
			2-Methylnaphthalene	2010/03/19	<0.005		mg/kg	
			Acenaphthene	2010/03/19	<0.005		mg/kg	
			Acenaphthylene	2010/03/19	<0.005		mg/kg	
			Anthracene	2010/03/19	<0.005		mg/kg	
			Benzo(a)anthracene	2010/03/19	<0.005		mg/kg	
			Benzo(a)pyrene	2010/03/19	<0.005		mg/kg	

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Conestoga-Rovers and Associates Ltd
Attention: Neil Brodie
Client Project #: 059570
P.O. #:
Project name: NORTH HEAD HARBOUR

Quality Assurance Report (Continued)

Maxxam Job Number: DB029595

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2100081	DCF	Method Blank	Benzo(b)fluoranthene	2010/03/19	<0.005		mg/kg	
			Benzo(g,h,i)perylene	2010/03/19	<0.005		mg/kg	
			Benzo(k)fluoranthene	2010/03/19	<0.005		mg/kg	
			Chrysene	2010/03/19	<0.005		mg/kg	
			Dibenz(a,h)anthracene	2010/03/19	<0.005		mg/kg	
			Fluoranthene	2010/03/19	<0.005		mg/kg	
			Fluorene	2010/03/19	<0.005		mg/kg	
			Indeno(1,2,3-cd)pyrene	2010/03/19	<0.005		mg/kg	
			Naphthalene	2010/03/19	<0.005		mg/kg	
			Perylene	2010/03/19	<0.005		mg/kg	
			Phenanthrene	2010/03/19	<0.005		mg/kg	
			Pyrene	2010/03/19	<0.005		mg/kg	
		RPD [FH6920-01]	1-Methylnaphthalene	2010/03/19	NC (2)		%	50
			2-Methylnaphthalene	2010/03/19	50.2 (3)		%	50
			Acenaphthene	2010/03/19	18.8		%	50
			Acenaphthylene	2010/03/19	14.2		%	50
			Anthracene	2010/03/19	3.1		%	50
			Benzo(a)anthracene	2010/03/19	11.0		%	50
			Benzo(a)pyrene	2010/03/19	16.3		%	50
			Benzo(b)fluoranthene	2010/03/19	8.6		%	50
			Benzo(g,h,i)perylene	2010/03/19	11.7		%	50
			Benzo(k)fluoranthene	2010/03/19	19.9		%	50
			Chrysene	2010/03/19	9.8		%	50
			Dibenz(a,h)anthracene	2010/03/19	12.9		%	50
			Fluoranthene	2010/03/19	21.6		%	50
			Fluorene	2010/03/19	23.5		%	50
			Indeno(1,2,3-cd)pyrene	2010/03/19	11.8		%	50
			Naphthalene	2010/03/19	92.4 (3)		%	50
			Perylene	2010/03/19	12.8		%	50
			Phenanthrene	2010/03/19	22.5		%	50
			Pyrene	2010/03/19	19.4		%	50
2100119	RST	Matrix Spike [FH6935-01]	D10-Anthracene	2010/03/20		92	%	30 - 130
			D14-Terphenyl	2010/03/20		96	%	30 - 130
			D8-Acenaphthylene	2010/03/20		110	%	30 - 130
			1-Methylnaphthalene	2010/03/20		95	%	30 - 130
			2-Methylnaphthalene	2010/03/20		98	%	30 - 130
			Acenaphthene	2010/03/20		90	%	30 - 130
			Acenaphthylene	2010/03/20		104	%	30 - 130
			Anthracene	2010/03/20		124	%	30 - 130
			Benzo(a)anthracene	2010/03/20		NC	%	30 - 130
			Benzo(a)pyrene	2010/03/20		NC	%	30 - 130
			Benzo(b)fluoranthene	2010/03/20		NC	%	30 - 130
			Benzo(g,h,i)perylene	2010/03/20		NC	%	30 - 130
			Benzo(k)fluoranthene	2010/03/20		NC	%	30 - 130
			Chrysene	2010/03/20		NC	%	30 - 130
			Dibenz(a,h)anthracene	2010/03/20		100	%	30 - 130
			Fluoranthene	2010/03/20		NC	%	30 - 130
			Fluorene	2010/03/20		91	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2010/03/20		NC	%	30 - 130
			Naphthalene	2010/03/20		76	%	30 - 130
			Perylene	2010/03/20		140 (4)	%	30 - 130
			Phenanthrene	2010/03/20		NC	%	30 - 130
			Pyrene	2010/03/20		NC	%	30 - 130
		Spiked Blank	D10-Anthracene	2010/03/19		87	%	30 - 130

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Quality Assurance Report (Continued)

Maxxam Job Number: DB029595

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2100119	RST	Spiked Blank	D14-Terphenyl	2010/03/19		100	%	30 - 130
			D8-Acenaphthylene	2010/03/19		83	%	30 - 130
			1-Methylnaphthalene	2010/03/19		69	%	30 - 130
			2-Methylnaphthalene	2010/03/19		73	%	30 - 130
			Acenaphthene	2010/03/19		81	%	30 - 130
			Acenaphthylene	2010/03/19		72	%	30 - 130
			Anthracene	2010/03/19		97	%	30 - 130
			Benzo(a)anthracene	2010/03/19		110	%	30 - 130
			Benzo(a)pyrene	2010/03/19		108	%	30 - 130
			Benzo(b)fluoranthene	2010/03/19		94	%	30 - 130
			Benzo(g,h,i)perylene	2010/03/19		102	%	30 - 130
			Benzo(k)fluoranthene	2010/03/19		103	%	30 - 130
			Chrysene	2010/03/19		115	%	30 - 130
			Dibenz(a,h)anthracene	2010/03/19		92	%	30 - 130
			Fluoranthene	2010/03/19		108	%	30 - 130
			Fluorene	2010/03/19		83	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2010/03/19		101	%	30 - 130
			Naphthalene	2010/03/19		79	%	30 - 130
			Perylene	2010/03/19		112	%	30 - 130
			Phenanthrene	2010/03/19		93	%	30 - 130
			Pyrene	2010/03/19		110	%	30 - 130
		Method Blank	D10-Anthracene	2010/03/19		114	%	30 - 130
			D14-Terphenyl	2010/03/19		95	%	30 - 130
			D8-Acenaphthylene	2010/03/19		73	%	30 - 130
			1-Methylnaphthalene	2010/03/19	<0.005		mg/kg	
			2-Methylnaphthalene	2010/03/19	<0.005		mg/kg	
			Acenaphthene	2010/03/19	<0.005		mg/kg	
			Acenaphthylene	2010/03/19	<0.005		mg/kg	
			Anthracene	2010/03/19	<0.005		mg/kg	
			Benzo(a)anthracene	2010/03/19	<0.005		mg/kg	
			Benzo(a)pyrene	2010/03/19	<0.005		mg/kg	
			Benzo(b)fluoranthene	2010/03/19	<0.005		mg/kg	
			Benzo(g,h,i)perylene	2010/03/19	<0.005		mg/kg	
			Benzo(k)fluoranthene	2010/03/19	<0.005		mg/kg	
			Chrysene	2010/03/19	<0.005		mg/kg	
			Dibenz(a,h)anthracene	2010/03/19	<0.005		mg/kg	
			Fluoranthene	2010/03/19	<0.005		mg/kg	
			Fluorene	2010/03/19	<0.005		mg/kg	
			Indeno(1,2,3-cd)pyrene	2010/03/19	<0.005		mg/kg	
			Naphthalene	2010/03/19	<0.005		mg/kg	
			Perylene	2010/03/19	<0.005		mg/kg	
			Phenanthrene	2010/03/19	<0.005		mg/kg	
			Pyrene	2010/03/19	<0.005		mg/kg	
		RPD [FH6935-01]	1-Methylnaphthalene	2010/03/20	NC		%	50
			2-Methylnaphthalene	2010/03/20	NC		%	50
			Acenaphthene	2010/03/20	NC		%	50
			Acenaphthylene	2010/03/20	NC		%	50
			Anthracene	2010/03/20	23.9		%	50
			Benzo(a)anthracene	2010/03/20	5.9		%	50
			Benzo(a)pyrene	2010/03/20	11.1		%	50
			Benzo(b)fluoranthene	2010/03/20	10		%	50
			Benzo(g,h,i)perylene	2010/03/20	14.4		%	50
			Benzo(k)fluoranthene	2010/03/20	36.1		%	50
			Chrysene	2010/03/20	1.7		%	50
			Dibenz(a,h)anthracene	2010/03/20	NC		%	50

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Quality Assurance Report (Continued)

Maxxam Job Number: DB029595

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2100119	RST	RPD [FH6935-01]	Fluoranthene	2010/03/20	3.0		%	50
			Fluorene	2010/03/20	NC		%	50
			Indeno(1,2,3-cd)pyrene	2010/03/20	9.9		%	50
			Naphthalene	2010/03/20	NC		%	50
			Perylene	2010/03/20	14.3		%	50
			Phenanthrene	2010/03/20	34.6		%	50
			Pyrene	2010/03/20	7.1		%	50
2100303	RST	Matrix Spike						
		[FH6919-01]	Decachlorobiphenyl	2010/03/19		88	%	70 - 130
			Total PCB	2010/03/19		84	%	70 - 130
		Spiked Blank	Decachlorobiphenyl	2010/03/19		97	%	70 - 130
			Total PCB	2010/03/19		92	%	70 - 130
		Method Blank	Decachlorobiphenyl	2010/03/19		102	%	70 - 130
			Total PCB	2010/03/19	<0.01		mg/kg	
		RPD [FH6919-01]	Total PCB	2010/03/19	NC		%	50
2100428	GTH	Matrix Spike						
		[FH6912-01]	Isobutylbenzene - Volatile	2010/03/16		76	%	60 - 140
			Benzene	2010/03/16		73	%	60 - 140
			Toluene	2010/03/16		104	%	60 - 140
			Ethylbenzene	2010/03/16		89	%	60 - 140
			Xylene (Total)	2010/03/16		98	%	60 - 140
		Spiked Blank	Isobutylbenzene - Volatile	2010/03/16		108	%	60 - 140
			Benzene	2010/03/16		98	%	60 - 140
			Toluene	2010/03/16		98	%	60 - 140
			Ethylbenzene	2010/03/16		94	%	60 - 140
			Xylene (Total)	2010/03/16		100	%	60 - 140
		Method Blank	Isobutylbenzene - Volatile	2010/03/16		101	%	60 - 140
			Benzene	2010/03/16	<0.003		mg/kg	
			Toluene	2010/03/16	<0.03		mg/kg	
			Ethylbenzene	2010/03/16	<0.01		mg/kg	
			Xylene (Total)	2010/03/16	<0.05		mg/kg	
			C6 - C10 (less BTEX)	2010/03/16	<3		mg/kg	
		RPD [FH6912-01]	Benzene	2010/03/16	NC		%	50
			Toluene	2010/03/16	NC		%	50
			Ethylbenzene	2010/03/16	NC		%	50
			Xylene (Total)	2010/03/16	NC		%	50
			C6 - C10 (less BTEX)	2010/03/16	NC		%	50
2100496	JRC	Matrix Spike	Mercury (Hg)	2010/03/15		NC	%	75 - 125
		QC Standard	Mercury (Hg)	2010/03/15		104	%	N/A
		Spiked Blank	Mercury (Hg)	2010/03/15		130	%	N/A
		Method Blank	Mercury (Hg)	2010/03/15	<0.01		mg/kg	
		RPD	Mercury (Hg)	2010/03/15	16.6		%	35
2100623	RST	Matrix Spike						
		[FH6937-01]	Decachlorobiphenyl	2010/03/19		81	%	70 - 130
			Total PCB	2010/03/19		76	%	70 - 130
		Spiked Blank	Decachlorobiphenyl	2010/03/19		94	%	70 - 130
			Total PCB	2010/03/19		84	%	70 - 130
		Method Blank	Decachlorobiphenyl	2010/03/19		90	%	70 - 130
			Total PCB	2010/03/19	<0.01		mg/kg	
		RPD [FH6937-01]	Total PCB	2010/03/19	NC		%	50
2100651	SHR	Matrix Spike						
		[FH6913-01]	Isobutylbenzene - Extractable	2010/03/16		86	%	30 - 130
			n-Dotriacontane - Extractable	2010/03/16		80	%	30 - 130
			>C10-C21 Hydrocarbons	2010/03/16		91	%	30 - 130
			>C21-<C32 Hydrocarbons	2010/03/16		NC	%	30 - 130

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Conestoga-Rovers and Associates Ltd
Attention: Neil Brodie
Client Project #: 059570
P.O. #:
Project name: NORTH HEAD HARBOUR

Quality Assurance Report (Continued)

Maxxam Job Number: DB029595

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2100651	SHR	Spiked Blank	Isobutylbenzene - Extractable	2010/03/16		90	%	30 - 130
			n-Dotriacontane - Extractable	2010/03/16		88	%	30 - 130
			>C10-C21 Hydrocarbons	2010/03/16		92	%	30 - 130
			>C21-<C32 Hydrocarbons	2010/03/16		101	%	30 - 130
		Method Blank	Isobutylbenzene - Extractable	2010/03/16		93	%	30 - 130
			n-Dotriacontane - Extractable	2010/03/16		98	%	30 - 130
			>C10-C21 Hydrocarbons	2010/03/16	<15		mg/kg	
			>C21-<C32 Hydrocarbons	2010/03/16	<15		mg/kg	
		RPD [FH6913-01]	>C10-C21 Hydrocarbons	2010/03/16	2.6		%	50
			>C21-<C32 Hydrocarbons	2010/03/16	6.4		%	50
2100655	LMU	Matrix Spike						
		[FH6933-01]	Isobutylbenzene - Extractable	2010/03/16		86	%	30 - 130
			n-Dotriacontane - Extractable	2010/03/16		91	%	30 - 130
			>C10-C21 Hydrocarbons	2010/03/16		90	%	30 - 130
			>C21-<C32 Hydrocarbons	2010/03/16		113	%	30 - 130
		Spiked Blank	Isobutylbenzene - Extractable	2010/03/16		83	%	30 - 130
			n-Dotriacontane - Extractable	2010/03/16		85	%	30 - 130
			>C10-C21 Hydrocarbons	2010/03/16		85	%	30 - 130
			>C21-<C32 Hydrocarbons	2010/03/16		105	%	30 - 130
		Method Blank	Isobutylbenzene - Extractable	2010/03/16		85	%	30 - 130
			n-Dotriacontane - Extractable	2010/03/16		68	%	30 - 130
			>C10-C21 Hydrocarbons	2010/03/16	<15		mg/kg	
			>C21-<C32 Hydrocarbons	2010/03/16	<15		mg/kg	
		RPD [FH6933-01]	>C10-C21 Hydrocarbons	2010/03/16	NC		%	50
			>C21-<C32 Hydrocarbons	2010/03/16	NC		%	50
2100895	JPU	QC Standard	Organic Carbon (TOC)	2010/03/16		108	%	75 - 125
		Method Blank	Organic Carbon (TOC)	2010/03/16	<0.2		g/kg	
		RPD [FH6871-01]	Organic Carbon (TOC)	2010/03/16	8.5		%	35
2100896	JPU	QC Standard	Organic Carbon (TOC)	2010/03/16		93	%	75 - 125
		Method Blank	Organic Carbon (TOC)	2010/03/16	<0.2		g/kg	
		RPD [FH6930-01]	Organic Carbon (TOC)	2010/03/16	4.3		%	35
2101055	KGU	Matrix Spike						
		[FH6871-01]	Available Aluminum (Al)	2010/03/15		NC	%	75 - 125
			Available Antimony (Sb)	2010/03/15		78	%	75 - 125
			Available Arsenic (As)	2010/03/15		NC	%	75 - 125
			Available Barium (Ba)	2010/03/15		NC	%	75 - 125
			Available Beryllium (Be)	2010/03/15		98	%	75 - 125
			Available Bismuth (Bi)	2010/03/15		88	%	75 - 125
			Available Boron (B)	2010/03/15		NC	%	75 - 125
			Available Cadmium (Cd)	2010/03/15		95	%	75 - 125
			Available Chromium (Cr)	2010/03/15		NC	%	75 - 125
			Available Cobalt (Co)	2010/03/15		NC	%	75 - 125
			Available Copper (Cu)	2010/03/15		NC	%	75 - 125
			Available Iron (Fe)	2010/03/15		NC	%	75 - 125
			Available Lead (Pb)	2010/03/15		NC	%	75 - 125
			Available Lithium (Li)	2010/03/15		NC	%	75 - 125
			Available Manganese (Mn)	2010/03/15		NC	%	75 - 125
			Available Molybdenum (Mo)	2010/03/15		94	%	75 - 125
			Available Nickel (Ni)	2010/03/15		NC	%	75 - 125
			Available Rubidium (Rb)	2010/03/15		NC	%	75 - 125
			Available Selenium (Se)	2010/03/15		100	%	75 - 125
			Available Silver (Ag)	2010/03/15		92	%	75 - 125
			Available Strontium (Sr)	2010/03/15		NC	%	75 - 125
			Available Thallium (Tl)	2010/03/15		91	%	75 - 125
			Available Tin (Sn)	2010/03/15		NC	%	75 - 125

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Conestoga-Rovers and Associates Ltd
Attention: Neil Brodie
Client Project #: 059570
P.O. #:
Project name: NORTH HEAD HARBOUR

Quality Assurance Report (Continued)

Maxxam Job Number: DB029595

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2101055	KGU	Matrix Spike						
		[FH6871-01]	Available Uranium (U)	2010/03/15		93	%	75 - 125
			Available Vanadium (V)	2010/03/15		NC	%	75 - 125
			Available Zinc (Zn)	2010/03/15		81	%	75 - 125
		QC Standard	Available Aluminum (Al)	2010/03/15		84	%	75 - 125
			Available Arsenic (As)	2010/03/15		106	%	75 - 125
			Available Barium (Ba)	2010/03/15		109	%	75 - 125
			Available Chromium (Cr)	2010/03/15		90	%	75 - 125
			Available Cobalt (Co)	2010/03/15		96	%	75 - 125
			Available Copper (Cu)	2010/03/15		91	%	75 - 125
			Available Iron (Fe)	2010/03/15		90	%	75 - 125
			Available Lead (Pb)	2010/03/15		93	%	75 - 125
			Available Manganese (Mn)	2010/03/15		102	%	75 - 125
			Available Nickel (Ni)	2010/03/15		101	%	75 - 125
			Available Strontium (Sr)	2010/03/15		85	%	75 - 125
			Available Vanadium (V)	2010/03/15		107	%	75 - 125
			Available Zinc (Zn)	2010/03/15		101	%	75 - 125
		Spiked Blank	Available Aluminum (Al)	2010/03/15		94	%	75 - 125
			Available Antimony (Sb)	2010/03/15		98	%	75 - 125
			Available Arsenic (As)	2010/03/15		90	%	75 - 125
			Available Barium (Ba)	2010/03/15		92	%	75 - 125
			Available Beryllium (Be)	2010/03/15		93	%	75 - 125
			Available Bismuth (Bi)	2010/03/15		92	%	75 - 125
			Available Boron (B)	2010/03/15		96	%	75 - 125
			Available Cadmium (Cd)	2010/03/15		92	%	75 - 125
			Available Chromium (Cr)	2010/03/15		92	%	75 - 125
			Available Cobalt (Co)	2010/03/15		92	%	75 - 125
			Available Copper (Cu)	2010/03/15		92	%	75 - 125
			Available Iron (Fe)	2010/03/15		96	%	75 - 125
			Available Lead (Pb)	2010/03/15		95	%	75 - 125
			Available Lithium (Li)	2010/03/15		96	%	75 - 125
			Available Manganese (Mn)	2010/03/15		100	%	75 - 125
			Available Molybdenum (Mo)	2010/03/15		90	%	75 - 125
			Available Nickel (Ni)	2010/03/15		91	%	75 - 125
			Available Rubidium (Rb)	2010/03/15		93	%	75 - 125
			Available Selenium (Se)	2010/03/15		96	%	75 - 125
			Available Silver (Ag)	2010/03/15		91	%	75 - 125
			Available Strontium (Sr)	2010/03/15		95	%	75 - 125
			Available Thallium (Tl)	2010/03/15		91	%	75 - 125
			Available Tin (Sn)	2010/03/15		88	%	75 - 125
			Available Uranium (U)	2010/03/15		91	%	75 - 125
			Available Vanadium (V)	2010/03/15		95	%	75 - 125
			Available Zinc (Zn)	2010/03/15		92	%	75 - 125
		Method Blank	Available Aluminum (Al)	2010/03/15	<10		mg/kg	
			Available Antimony (Sb)	2010/03/15	<2		mg/kg	
			Available Arsenic (As)	2010/03/15	<2		mg/kg	
			Available Barium (Ba)	2010/03/15	<5		mg/kg	
			Available Beryllium (Be)	2010/03/15	<2		mg/kg	
			Available Bismuth (Bi)	2010/03/15	<2		mg/kg	
			Available Boron (B)	2010/03/15	<5		mg/kg	
			Available Cadmium (Cd)	2010/03/15	<0.3		mg/kg	
			Available Chromium (Cr)	2010/03/15	<2		mg/kg	
			Available Cobalt (Co)	2010/03/15	<1		mg/kg	
			Available Copper (Cu)	2010/03/15	<2		mg/kg	
			Available Iron (Fe)	2010/03/15	<50		mg/kg	

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Conestoga-Rovers and Associates Ltd
Attention: Neil Brodie
Client Project #: 059570
P.O. #:
Project name: NORTH HEAD HARBOUR

Quality Assurance Report (Continued)

Maxxam Job Number: DB029595

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2101055	KGU	Method Blank	Available Lead (Pb)	2010/03/15	<0.5		mg/kg	
			Available Lithium (Li)	2010/03/15	<2		mg/kg	
			Available Manganese (Mn)	2010/03/15	<2		mg/kg	
			Available Molybdenum (Mo)	2010/03/15	<2		mg/kg	
			Available Nickel (Ni)	2010/03/15	<2		mg/kg	
			Available Rubidium (Rb)	2010/03/15	<2		mg/kg	
			Available Selenium (Se)	2010/03/15	<2		mg/kg	
			Available Silver (Ag)	2010/03/15	<0.5		mg/kg	
			Available Strontium (Sr)	2010/03/15	<5		mg/kg	
			Available Thallium (Tl)	2010/03/15	<0.1		mg/kg	
			Available Tin (Sn)	2010/03/15	<2		mg/kg	
			Available Uranium (U)	2010/03/15	<0.1		mg/kg	
			Available Vanadium (V)	2010/03/15	<2		mg/kg	
			Available Zinc (Zn)	2010/03/15	<5		mg/kg	
		RPD [FH6871-01]	Available Aluminum (Al)	2010/03/15	12.7		%	35
			Available Antimony (Sb)	2010/03/15	NC		%	35
			Available Arsenic (As)	2010/03/15	8.8		%	35
			Available Barium (Ba)	2010/03/15	8.5		%	35
			Available Beryllium (Be)	2010/03/15	NC		%	35
			Available Bismuth (Bi)	2010/03/15	NC		%	35
			Available Boron (B)	2010/03/15	9.8		%	35
			Available Cadmium (Cd)	2010/03/15	NC		%	35
			Available Chromium (Cr)	2010/03/15	14.8		%	35
			Available Cobalt (Co)	2010/03/15	7.8		%	35
			Available Copper (Cu)	2010/03/15	10		%	35
			Available Iron (Fe)	2010/03/15	11.6		%	35
			Available Lead (Pb)	2010/03/15	29.2 (5)		%	35
			Available Lithium (Li)	2010/03/15	12.8		%	35
			Available Manganese (Mn)	2010/03/15	14.1		%	35
			Available Molybdenum (Mo)	2010/03/15	NC		%	35
			Available Nickel (Ni)	2010/03/15	12.2		%	35
			Available Rubidium (Rb)	2010/03/15	8.1		%	35
			Available Selenium (Se)	2010/03/15	NC (6)		%	35
			Available Silver (Ag)	2010/03/15	NC		%	35
			Available Strontium (Sr)	2010/03/15	19.2		%	35
			Available Thallium (Tl)	2010/03/15	NC		%	35
			Available Tin (Sn)	2010/03/15	24.2		%	35
			Available Uranium (U)	2010/03/15	18.1		%	35
			Available Vanadium (V)	2010/03/15	11.6		%	35
			Available Zinc (Zn)	2010/03/15	24.8		%	35
2101222	KGU	Matrix Spike [FH6926-01]	Available Aluminum (Al)	2010/03/16		NC	%	75 - 125
			Available Antimony (Sb)	2010/03/16		81	%	75 - 125
			Available Arsenic (As)	2010/03/16		96	%	75 - 125
			Available Barium (Ba)	2010/03/16		NC	%	75 - 125
			Available Beryllium (Be)	2010/03/16		98	%	75 - 125
			Available Bismuth (Bi)	2010/03/16		100	%	75 - 125
			Available Boron (B)	2010/03/16		NC	%	75 - 125
			Available Cadmium (Cd)	2010/03/16		98	%	75 - 125
			Available Chromium (Cr)	2010/03/16		NC	%	75 - 125
			Available Cobalt (Co)	2010/03/16		99	%	75 - 125
			Available Copper (Cu)	2010/03/16		NC	%	75 - 125
			Available Iron (Fe)	2010/03/16		NC	%	75 - 125
			Available Lead (Pb)	2010/03/16		NC	%	75 - 125
			Available Lithium (Li)	2010/03/16		NC	%	75 - 125

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Conestoga-Rovers and Associates Ltd
Attention: Neil Brodie
Client Project #: 059570
P.O. #:
Project name: NORTH HEAD HARBOUR

Quality Assurance Report (Continued)

Maxxam Job Number: DB029595

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2101222	KGU	Matrix Spike						
		[FH6926-01]	Available Manganese (Mn)	2010/03/16		NC	%	75 - 125
			Available Molybdenum (Mo)	2010/03/16		102	%	75 - 125
			Available Nickel (Ni)	2010/03/16		NC	%	75 - 125
			Available Rubidium (Rb)	2010/03/16		96	%	75 - 125
			Available Selenium (Se)	2010/03/16		94	%	75 - 125
			Available Silver (Ag)	2010/03/16		94	%	75 - 125
			Available Strontium (Sr)	2010/03/16		NC	%	75 - 125
			Available Thallium (Tl)	2010/03/16		101	%	75 - 125
			Available Tin (Sn)	2010/03/16		113	%	75 - 125
			Available Uranium (U)	2010/03/16		105	%	75 - 125
			Available Vanadium (V)	2010/03/16		NC	%	75 - 125
			Available Zinc (Zn)	2010/03/16		93	%	75 - 125
		QC Standard	Available Aluminum (Al)	2010/03/16		80	%	75 - 125
			Available Arsenic (As)	2010/03/16		112	%	75 - 125
			Available Barium (Ba)	2010/03/16		110	%	75 - 125
			Available Chromium (Cr)	2010/03/16		89	%	75 - 125
			Available Cobalt (Co)	2010/03/16		99	%	75 - 125
			Available Copper (Cu)	2010/03/16		94	%	75 - 125
			Available Iron (Fe)	2010/03/16		92	%	75 - 125
			Available Lead (Pb)	2010/03/16		103	%	75 - 125
			Available Manganese (Mn)	2010/03/16		102	%	75 - 125
			Available Nickel (Ni)	2010/03/16		100	%	75 - 125
			Available Strontium (Sr)	2010/03/16		91	%	75 - 125
			Available Vanadium (V)	2010/03/16		105	%	75 - 125
			Available Zinc (Zn)	2010/03/16		101	%	75 - 125
		Spiked Blank	Available Aluminum (Al)	2010/03/16		91	%	75 - 125
			Available Antimony (Sb)	2010/03/16		96	%	75 - 125
			Available Arsenic (As)	2010/03/16		89	%	75 - 125
			Available Barium (Ba)	2010/03/16		92	%	75 - 125
			Available Beryllium (Be)	2010/03/16		90	%	75 - 125
			Available Bismuth (Bi)	2010/03/16		99	%	75 - 125
			Available Boron (B)	2010/03/16		91	%	75 - 125
			Available Cadmium (Cd)	2010/03/16		90	%	75 - 125
			Available Chromium (Cr)	2010/03/16		100	%	75 - 125
			Available Cobalt (Co)	2010/03/16		98	%	75 - 125
			Available Copper (Cu)	2010/03/16		97	%	75 - 125
			Available Iron (Fe)	2010/03/16		88	%	75 - 125
			Available Lead (Pb)	2010/03/16		98	%	75 - 125
			Available Lithium (Li)	2010/03/16		93	%	75 - 125
			Available Manganese (Mn)	2010/03/16		98	%	75 - 125
			Available Molybdenum (Mo)	2010/03/16		93	%	75 - 125
			Available Nickel (Ni)	2010/03/16		97	%	75 - 125
			Available Rubidium (Rb)	2010/03/16		94	%	75 - 125
			Available Selenium (Se)	2010/03/16		89	%	75 - 125
			Available Silver (Ag)	2010/03/16		96	%	75 - 125
			Available Strontium (Sr)	2010/03/16		96	%	75 - 125
			Available Thallium (Tl)	2010/03/16		96	%	75 - 125
			Available Tin (Sn)	2010/03/16		95	%	75 - 125
			Available Uranium (U)	2010/03/16		99	%	75 - 125
			Available Vanadium (V)	2010/03/16		107	%	75 - 125
			Available Zinc (Zn)	2010/03/16		88	%	75 - 125
		Method Blank	Available Aluminum (Al)	2010/03/16	<10		mg/kg	
			Available Antimony (Sb)	2010/03/16	<2		mg/kg	
			Available Arsenic (As)	2010/03/16	<2		mg/kg	

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Attention: Neil Brodie
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Quality Assurance Report (Continued)

Maxxam Job Number: DB029595

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2101222	KGU	Method Blank	Available Barium (Ba)	2010/03/16	<5		mg/kg	
			Available Beryllium (Be)	2010/03/16	<2		mg/kg	
			Available Bismuth (Bi)	2010/03/16	<2		mg/kg	
			Available Boron (B)	2010/03/16	<5		mg/kg	
			Available Cadmium (Cd)	2010/03/16	<0.3		mg/kg	
			Available Chromium (Cr)	2010/03/16	<2		mg/kg	
			Available Cobalt (Co)	2010/03/16	<1		mg/kg	
			Available Copper (Cu)	2010/03/16	<2		mg/kg	
			Available Iron (Fe)	2010/03/16	<50		mg/kg	
			Available Lead (Pb)	2010/03/16	<0.5		mg/kg	
			Available Lithium (Li)	2010/03/16	<2		mg/kg	
			Available Manganese (Mn)	2010/03/16	<2		mg/kg	
			Available Molybdenum (Mo)	2010/03/16	<2		mg/kg	
			Available Nickel (Ni)	2010/03/16	<2		mg/kg	
			Available Rubidium (Rb)	2010/03/16	<2		mg/kg	
			Available Selenium (Se)	2010/03/16	<2		mg/kg	
			Available Silver (Ag)	2010/03/16	<0.5		mg/kg	
			Available Strontium (Sr)	2010/03/16	<5		mg/kg	
			Available Thallium (Tl)	2010/03/16	<0.1		mg/kg	
			Available Tin (Sn)	2010/03/16	<2		mg/kg	
			Available Uranium (U)	2010/03/16	<0.1		mg/kg	
			Available Vanadium (V)	2010/03/16	<2		mg/kg	
			Available Zinc (Zn)	2010/03/16	<5		mg/kg	
		RPD [FH6926-01]	Available Aluminum (Al)	2010/03/16	3.2		%	35
			Available Antimony (Sb)	2010/03/16	NC		%	35
			Available Arsenic (As)	2010/03/16	NC		%	35
			Available Barium (Ba)	2010/03/16	6.8		%	35
			Available Beryllium (Be)	2010/03/16	NC		%	35
			Available Bismuth (Bi)	2010/03/16	NC		%	35
			Available Boron (B)	2010/03/16	NC		%	35
			Available Cadmium (Cd)	2010/03/16	NC		%	35
			Available Chromium (Cr)	2010/03/16	0.8		%	35
			Available Cobalt (Co)	2010/03/16	2.3		%	35
			Available Copper (Cu)	2010/03/16	4.0		%	35
			Available Iron (Fe)	2010/03/16	0.6		%	35
			Available Lead (Pb)	2010/03/16	6.2		%	35
			Available Lithium (Li)	2010/03/16	3.7		%	35
			Available Manganese (Mn)	2010/03/16	1.5		%	35
			Available Molybdenum (Mo)	2010/03/16	NC		%	35
			Available Nickel (Ni)	2010/03/16	4.7		%	35
			Available Rubidium (Rb)	2010/03/16	NC		%	35
			Available Selenium (Se)	2010/03/16	NC		%	35
			Available Silver (Ag)	2010/03/16	NC		%	35
			Available Strontium (Sr)	2010/03/16	26.4		%	35
			Available Thallium (Tl)	2010/03/16	NC		%	35
			Available Tin (Sn)	2010/03/16	NC		%	35
			Available Uranium (U)	2010/03/16	9.2		%	35
			Available Vanadium (V)	2010/03/16	1.6		%	35
			Available Zinc (Zn)	2010/03/16	3.2		%	35
2101250	KGU	Matrix Spike [FH6935-01]	Available Aluminum (Al)	2010/03/16		NC	%	75 - 125
			Available Antimony (Sb)	2010/03/16		81	%	75 - 125
			Available Arsenic (As)	2010/03/16		102	%	75 - 125
			Available Barium (Ba)	2010/03/16		NC	%	75 - 125
			Available Beryllium (Be)	2010/03/16		98	%	75 - 125

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Conestoga-Rovers and Associates Ltd
Attention: Neil Brodie
Client Project #: 059570
P.O. #:
Project name: NORTH HEAD HARBOUR

Quality Assurance Report (Continued)

Maxxam Job Number: DB029595

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2101250	KGU	Matrix Spike						
		[FH6935-01]	Available Bismuth (Bi)	2010/03/16		96	%	75 - 125
			Available Boron (B)	2010/03/16		NC	%	75 - 125
			Available Cadmium (Cd)	2010/03/16		100	%	75 - 125
			Available Chromium (Cr)	2010/03/16		NC	%	75 - 125
			Available Cobalt (Co)	2010/03/16		94	%	75 - 125
			Available Copper (Cu)	2010/03/16		NC	%	75 - 125
			Available Iron (Fe)	2010/03/16		NC	%	75 - 125
			Available Lead (Pb)	2010/03/16		NC	%	75 - 125
			Available Lithium (Li)	2010/03/16		NC	%	75 - 125
			Available Manganese (Mn)	2010/03/16		NC	%	75 - 125
			Available Molybdenum (Mo)	2010/03/16		99	%	75 - 125
			Available Nickel (Ni)	2010/03/16		NC	%	75 - 125
			Available Rubidium (Rb)	2010/03/16		99	%	75 - 125
			Available Selenium (Se)	2010/03/16		95	%	75 - 125
			Available Silver (Ag)	2010/03/16		97	%	75 - 125
			Available Strontium (Sr)	2010/03/16		NC	%	75 - 125
			Available Thallium (Tl)	2010/03/16		96	%	75 - 125
			Available Tin (Sn)	2010/03/16		84	%	75 - 125
			Available Uranium (U)	2010/03/16		98	%	75 - 125
			Available Vanadium (V)	2010/03/16		NC	%	75 - 125
			Available Zinc (Zn)	2010/03/16		94	%	75 - 125
		QC Standard	Available Aluminum (Al)	2010/03/16		81	%	75 - 125
			Available Arsenic (As)	2010/03/16		111	%	75 - 125
			Available Barium (Ba)	2010/03/16		112	%	75 - 125
			Available Chromium (Cr)	2010/03/16		94	%	75 - 125
			Available Cobalt (Co)	2010/03/16		99	%	75 - 125
			Available Copper (Cu)	2010/03/16		93	%	75 - 125
			Available Iron (Fe)	2010/03/16		90	%	75 - 125
			Available Lead (Pb)	2010/03/16		102	%	75 - 125
			Available Manganese (Mn)	2010/03/16		100	%	75 - 125
			Available Nickel (Ni)	2010/03/16		103	%	75 - 125
			Available Strontium (Sr)	2010/03/16		90	%	75 - 125
			Available Vanadium (V)	2010/03/16		113	%	75 - 125
			Available Zinc (Zn)	2010/03/16		102	%	75 - 125
		Spiked Blank	Available Aluminum (Al)	2010/03/16		95	%	75 - 125
			Available Antimony (Sb)	2010/03/16		96	%	75 - 125
			Available Arsenic (As)	2010/03/16		91	%	75 - 125
			Available Barium (Ba)	2010/03/16		101	%	75 - 125
			Available Beryllium (Be)	2010/03/16		97	%	75 - 125
			Available Bismuth (Bi)	2010/03/16		99	%	75 - 125
			Available Boron (B)	2010/03/16		98	%	75 - 125
			Available Cadmium (Cd)	2010/03/16		97	%	75 - 125
			Available Chromium (Cr)	2010/03/16		95	%	75 - 125
			Available Cobalt (Co)	2010/03/16		98	%	75 - 125
			Available Copper (Cu)	2010/03/16		96	%	75 - 125
			Available Iron (Fe)	2010/03/16		95	%	75 - 125
			Available Lead (Pb)	2010/03/16		101	%	75 - 125
			Available Lithium (Li)	2010/03/16		97	%	75 - 125
			Available Manganese (Mn)	2010/03/16		101	%	75 - 125
			Available Molybdenum (Mo)	2010/03/16		97	%	75 - 125
			Available Nickel (Ni)	2010/03/16		97	%	75 - 125
			Available Rubidium (Rb)	2010/03/16		97	%	75 - 125
			Available Selenium (Se)	2010/03/16		99	%	75 - 125
			Available Silver (Ag)	2010/03/16		96	%	75 - 125

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Attention: Neil Brodie
Client Project #: 059570
P.O. #:
Project name: NORTH HEAD HARBOUR

Quality Assurance Report (Continued)

Maxxam Job Number: DB029595

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2101250	KGU	Spiked Blank	Available Strontium (Sr)	2010/03/16		100	%	75 - 125
			Available Thallium (Tl)	2010/03/16		97	%	75 - 125
			Available Tin (Sn)	2010/03/16		96	%	75 - 125
			Available Uranium (U)	2010/03/16		99	%	75 - 125
			Available Vanadium (V)	2010/03/16		96	%	75 - 125
			Available Zinc (Zn)	2010/03/16		92	%	75 - 125
		Method Blank	Available Aluminum (Al)	2010/03/16	<10		mg/kg	
			Available Antimony (Sb)	2010/03/16	<2		mg/kg	
			Available Arsenic (As)	2010/03/16	<2		mg/kg	
			Available Barium (Ba)	2010/03/16	<5		mg/kg	
			Available Beryllium (Be)	2010/03/16	<2		mg/kg	
			Available Bismuth (Bi)	2010/03/16	<2		mg/kg	
			Available Boron (B)	2010/03/16	<5		mg/kg	
			Available Cadmium (Cd)	2010/03/16	<0.3		mg/kg	
			Available Chromium (Cr)	2010/03/16	<2		mg/kg	
			Available Cobalt (Co)	2010/03/16	<1		mg/kg	
			Available Copper (Cu)	2010/03/16	<2		mg/kg	
			Available Iron (Fe)	2010/03/16	<50		mg/kg	
			Available Lead (Pb)	2010/03/16	<0.5		mg/kg	
			Available Lithium (Li)	2010/03/16	<2		mg/kg	
			Available Manganese (Mn)	2010/03/16	<2		mg/kg	
			Available Molybdenum (Mo)	2010/03/16	<2		mg/kg	
			Available Nickel (Ni)	2010/03/16	<2		mg/kg	
			Available Rubidium (Rb)	2010/03/16	<2		mg/kg	
			Available Selenium (Se)	2010/03/16	<2		mg/kg	
			Available Silver (Ag)	2010/03/16	<0.5		mg/kg	
			Available Strontium (Sr)	2010/03/16	<5		mg/kg	
			Available Thallium (Tl)	2010/03/16	<0.1		mg/kg	
			Available Tin (Sn)	2010/03/16	<2		mg/kg	
			Available Uranium (U)	2010/03/16	<0.1		mg/kg	
			Available Vanadium (V)	2010/03/16	<2		mg/kg	
			Available Zinc (Zn)	2010/03/16	<5		mg/kg	
		RPD [FH6935-01]	Available Aluminum (Al)	2010/03/16	2.6		%	35
			Available Antimony (Sb)	2010/03/16	NC		%	35
			Available Arsenic (As)	2010/03/16	NC		%	35
			Available Barium (Ba)	2010/03/16	4.1		%	35
			Available Beryllium (Be)	2010/03/16	NC		%	35
			Available Bismuth (Bi)	2010/03/16	NC		%	35
			Available Boron (B)	2010/03/16	NC		%	35
			Available Cadmium (Cd)	2010/03/16	NC		%	35
			Available Chromium (Cr)	2010/03/16	9.2		%	35
			Available Cobalt (Co)	2010/03/16	3.6		%	35
			Available Copper (Cu)	2010/03/16	5.4		%	35
			Available Iron (Fe)	2010/03/16	1.6		%	35
			Available Lead (Pb)	2010/03/16	7.5		%	35
			Available Lithium (Li)	2010/03/16	1.9		%	35
			Available Manganese (Mn)	2010/03/16	0.7		%	35
			Available Molybdenum (Mo)	2010/03/16	NC		%	35
			Available Nickel (Ni)	2010/03/16	6.5		%	35
			Available Rubidium (Rb)	2010/03/16	NC		%	35
			Available Selenium (Se)	2010/03/16	NC		%	35
			Available Silver (Ag)	2010/03/16	NC		%	35
			Available Strontium (Sr)	2010/03/16	1.3		%	35
			Available Thallium (Tl)	2010/03/16	NC		%	35
			Available Tin (Sn)	2010/03/16	NC		%	35

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Attention: Neil Brodie
Client Project #: 059570
P.O. #:
Project name: NORTH HEAD HARBOUR

Quality Assurance Report (Continued)

Maxxam Job Number: DB029595

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2101250	KGU	RPD [FH6935-01]	Available Uranium (U)	2010/03/16	8.8		%	35
			Available Vanadium (V)	2010/03/16	10.0		%	35
			Available Zinc (Zn)	2010/03/16	6.3		%	35
2101459	GTH	Matrix Spike [FH6930-01]	Isobutylbenzene - Volatile	2010/03/16		82	%	60 - 140
			Benzene	2010/03/16		70	%	60 - 140
			Toluene	2010/03/16		94	%	60 - 140
			Ethylbenzene	2010/03/16		83	%	60 - 140
			Xylene (Total)	2010/03/16		92	%	60 - 140
		Spiked Blank	Isobutylbenzene - Volatile	2010/03/16		102	%	60 - 140
			Benzene	2010/03/16		91	%	60 - 140
			Toluene	2010/03/16		90	%	60 - 140
			Ethylbenzene	2010/03/16		92	%	60 - 140
			Xylene (Total)	2010/03/16		93	%	60 - 140
		Method Blank	Isobutylbenzene - Volatile	2010/03/16		106	%	60 - 140
			Benzene	2010/03/16	<0.003		mg/kg	
			Toluene	2010/03/16	<0.03		mg/kg	
			Ethylbenzene	2010/03/16	<0.01		mg/kg	
			Xylene (Total)	2010/03/16	<0.05		mg/kg	
			C6 - C10 (less BTEX)	2010/03/16	<3		mg/kg	
		RPD [FH6930-01]	Benzene	2010/03/16	NC		%	50
			Toluene	2010/03/16	NC		%	50
			Ethylbenzene	2010/03/16	NC		%	50
			Xylene (Total)	2010/03/16	NC		%	50
			C6 - C10 (less BTEX)	2010/03/16	NC		%	50
2101574	KGU	Matrix Spike [FH6921-02]	Total Aluminum (Al)	2010/03/16		NC	%	75 - 125
			Total Antimony (Sb)	2010/03/16		94	%	75 - 125
			Total Arsenic (As)	2010/03/16		NC	%	75 - 125
			Total Barium (Ba)	2010/03/16		NC	%	75 - 125
			Total Beryllium (Be)	2010/03/16		91	%	75 - 125
			Total Cadmium (Cd)	2010/03/16		96	%	75 - 125
			Total Chromium (Cr)	2010/03/16		NC	%	75 - 125
			Total Cobalt (Co)	2010/03/16		NC	%	75 - 125
			Total Copper (Cu)	2010/03/16		NC	%	75 - 125
			Total Iron (Fe)	2010/03/16		NC	%	75 - 125
			Total Lead (Pb)	2010/03/16		NC	%	75 - 125
			Total Manganese (Mn)	2010/03/16		NC	%	75 - 125
			Total Molybdenum (Mo)	2010/03/16		101	%	75 - 125
			Total Nickel (Ni)	2010/03/16		NC	%	75 - 125
			Total Selenium (Se)	2010/03/16		93	%	75 - 125
			Total Strontium (Sr)	2010/03/16		NC	%	75 - 125
			Total Thallium (Tl)	2010/03/16		95	%	75 - 125
			Total Tin (Sn)	2010/03/16		NC	%	75 - 125
			Total Uranium (U)	2010/03/16		87	%	75 - 125
			Total Vanadium (V)	2010/03/16		NC	%	75 - 125
			Total Zinc (Zn)	2010/03/16		88	%	75 - 125
		QC Standard	Total Aluminum (Al)	2010/03/16		91	%	75 - 125
			Total Arsenic (As)	2010/03/16		93	%	75 - 125
			Total Beryllium (Be)	2010/03/16		90	%	75 - 125
			Total Chromium (Cr)	2010/03/16		88	%	75 - 125
			Total Cobalt (Co)	2010/03/16		88	%	75 - 125
			Total Copper (Cu)	2010/03/16		86	%	75 - 125
			Total Iron (Fe)	2010/03/16		77	%	75 - 125
			Total Lead (Pb)	2010/03/16		98	%	75 - 125

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Quality Assurance Report (Continued)

Maxxam Job Number: DB029595

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2101574	KGU	QC Standard	Total Manganese (Mn)	2010/03/16		86	%	75 - 125
			Total Molybdenum (Mo)	2010/03/16		100	%	75 - 125
			Total Nickel (Ni)	2010/03/16		89	%	75 - 125
			Total Strontium (Sr)	2010/03/16		81	%	75 - 125
			Total Thallium (Tl)	2010/03/16		100	%	75 - 125
			Total Tin (Sn)	2010/03/16		121	%	75 - 125
			Total Vanadium (V)	2010/03/16		93	%	75 - 125
			Total Zinc (Zn)	2010/03/16		92	%	75 - 125
		Spiked Blank	Total Aluminum (Al)	2010/03/16		95	%	75 - 125
			Total Antimony (Sb)	2010/03/16		93	%	75 - 125
			Total Arsenic (As)	2010/03/16		87	%	75 - 125
			Total Barium (Ba)	2010/03/16		95	%	75 - 125
			Total Beryllium (Be)	2010/03/16		93	%	75 - 125
			Total Cadmium (Cd)	2010/03/16		93	%	75 - 125
			Total Chromium (Cr)	2010/03/16		96	%	75 - 125
			Total Cobalt (Co)	2010/03/16		96	%	75 - 125
			Total Copper (Cu)	2010/03/16		94	%	75 - 125
			Total Iron (Fe)	2010/03/16		97	%	75 - 125
			Total Lead (Pb)	2010/03/16		95	%	75 - 125
			Total Manganese (Mn)	2010/03/16		97	%	75 - 125
			Total Molybdenum (Mo)	2010/03/16		94	%	75 - 125
			Total Nickel (Ni)	2010/03/16		98	%	75 - 125
			Total Selenium (Se)	2010/03/16		86	%	75 - 125
			Total Strontium (Sr)	2010/03/16		98	%	75 - 125
			Total Thallium (Tl)	2010/03/16		94	%	75 - 125
			Total Tin (Sn)	2010/03/16		95	%	75 - 125
			Total Uranium (U)	2010/03/16		94	%	75 - 125
			Total Vanadium (V)	2010/03/16		98	%	75 - 125
			Total Zinc (Zn)	2010/03/16		90	%	75 - 125
		Method Blank	Total Aluminum (Al)	2010/03/16	<10		mg/kg	
			Total Antimony (Sb)	2010/03/16	<2.0		mg/kg	
			Total Arsenic (As)	2010/03/16	<2.0		mg/kg	
			Total Barium (Ba)	2010/03/16	<5.0		mg/kg	
			Total Beryllium (Be)	2010/03/16	<2.0		mg/kg	
			Total Cadmium (Cd)	2010/03/16	<0.15		mg/kg	
			Total Chromium (Cr)	2010/03/16	<2.0		mg/kg	
			Total Cobalt (Co)	2010/03/16	<1.0		mg/kg	
			Total Copper (Cu)	2010/03/16	<2.0		mg/kg	
			Total Iron (Fe)	2010/03/16	<50		mg/kg	
			Total Lead (Pb)	2010/03/16	<0.50		mg/kg	
			Total Manganese (Mn)	2010/03/16	<2.0		mg/kg	
			Total Molybdenum (Mo)	2010/03/16	<2.0		mg/kg	
			Total Nickel (Ni)	2010/03/16	<2.0		mg/kg	
			Total Selenium (Se)	2010/03/16	<2.0		mg/kg	
			Total Strontium (Sr)	2010/03/16	<5.0		mg/kg	
			Total Thallium (Tl)	2010/03/16	<0.10		mg/kg	
			Total Tin (Sn)	2010/03/16	<2.0		mg/kg	
			Total Uranium (U)	2010/03/16	<0.10		mg/kg	
			Total Vanadium (V)	2010/03/16	<2.0		mg/kg	
			Total Zinc (Zn)	2010/03/16	<5.0		mg/kg	
		RPD [FH6921-02]	Total Aluminum (Al)	2010/03/16	11.0		%	25
			Total Antimony (Sb)	2010/03/16	NC		%	25
			Total Arsenic (As)	2010/03/16	7.8		%	25
			Total Barium (Ba)	2010/03/16	24.0		%	25
			Total Beryllium (Be)	2010/03/16	NC		%	25

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Quality Assurance Report (Continued)

Maxxam Job Number: DB029595

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2101574	KGU	RPD [FH6921-02]	Total Cadmium (Cd)	2010/03/16	NC		%	25
			Total Chromium (Cr)	2010/03/16	2.0		%	25
			Total Cobalt (Co)	2010/03/16	2.8		%	25
			Total Copper (Cu)	2010/03/16	NC		%	25
			Total Iron (Fe)	2010/03/16	3.9		%	25
			Total Lead (Pb)	2010/03/16	2.0		%	25
			Total Manganese (Mn)	2010/03/16	6.1		%	25
			Total Molybdenum (Mo)	2010/03/16	NC		%	25
			Total Nickel (Ni)	2010/03/16	0.4		%	25
			Total Selenium (Se)	2010/03/16	NC		%	25
			Total Strontium (Sr)	2010/03/16	10.6		%	25
			Total Thallium (Tl)	2010/03/16	1.9		%	25
			Total Tin (Sn)	2010/03/16	24.2		%	25
			Total Uranium (U)	2010/03/16	3.6		%	25
			Total Vanadium (V)	2010/03/16	0.5		%	25
			Total Zinc (Zn)	2010/03/16	0.8		%	25
2101863	JPU	QC Standard	Total Carbon-combustion IR	2010/03/16		103	%	75 - 125
		Method Blank	Total Carbon-combustion IR	2010/03/16	<0.2		g/kg	
		RPD [FH6871-01]	Total Carbon-combustion IR	2010/03/16	4.6		%	35
2101869	JPU	QC Standard	Total Carbon-combustion IR	2010/03/16		101	%	75 - 125
		Method Blank	Total Carbon-combustion IR	2010/03/16	<0.2		g/kg	
		RPD [FH6930-01]	Total Carbon-combustion IR	2010/03/16	4.2		%	35
2102059	JRC	Matrix Spike						
		[FH6923-01]	Mercury (Hg)	2010/03/17		NC	%	75 - 125
		QC Standard	Mercury (Hg)	2010/03/17		94	%	N/A
		Spiked Blank	Mercury (Hg)	2010/03/17		99	%	N/A
		Method Blank	Mercury (Hg)	2010/03/17	<0.01		mg/kg	
		RPD [FH6923-01]	Mercury (Hg)	2010/03/17	20.6		%	35
2102060	JRC	Matrix Spike						
		[FH6943-01]	Mercury (Hg)	2010/03/17		NC	%	75 - 125
		QC Standard	Mercury (Hg)	2010/03/17		80	%	N/A
		Spiked Blank	Mercury (Hg)	2010/03/17		104	%	N/A
		Method Blank	Mercury (Hg)	2010/03/17	<0.01		mg/kg	
		RPD [FH6943-01]	Mercury (Hg)	2010/03/17	NC		%	35
2102278	VRO	Matrix Spike						
		[FH6939-03]	Chromium (VI)	2010/03/18		21 (7)	%	75 - 125
		QC Standard	Chromium (VI)	2010/03/18		96	%	85 - 115
		Spiked Blank	Chromium (VI)	2010/03/18		101	%	75 - 125
		Method Blank	Chromium (VI)	2010/03/18	<0.2		ug/g	
		RPD [FH6939-03]	Chromium (VI)	2010/03/18	NC (8)		%	35
2102328	VRO	Matrix Spike						
		[FH6941-03]	Chromium (VI)	2010/03/18		17 (7)	%	75 - 125
		QC Standard	Chromium (VI)	2010/03/18		93	%	85 - 115
		Spiked Blank	Chromium (VI)	2010/03/18		102	%	75 - 125
		Method Blank	Chromium (VI)	2010/03/18	<0.2		ug/g	
		RPD [FH6941-03]	Chromium (VI)	2010/03/18	NC		%	35
2102878	JPU	QC Standard	Organic Carbon (TOC)	2010/03/18		105	%	75 - 125
		Method Blank	Organic Carbon (TOC)	2010/03/18	<0.2		g/kg	
		RPD [FH6935-01]	Organic Carbon (TOC)	2010/03/18	3.1		%	35
2103058	KGU	Matrix Spike						
		[FH6942-02]	Total Aluminum (Al)	2010/03/17		NC	%	75 - 125
			Total Antimony (Sb)	2010/03/17		101	%	75 - 125
			Total Arsenic (As)	2010/03/17		NC	%	75 - 125
			Total Barium (Ba)	2010/03/17		NC	%	75 - 125
			Total Beryllium (Be)	2010/03/17		95	%	75 - 125

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Conestoga-Rovers and Associates Ltd
Attention: Neil Brodie
Client Project #: 059570
P.O. #:
Project name: NORTH HEAD HARBOUR

Quality Assurance Report (Continued)

Maxxam Job Number: DB029595

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2103058	KGU	Matrix Spike						
		[FH6942-02]	Total Cadmium (Cd)	2010/03/17		98	%	75 - 125
			Total Chromium (Cr)	2010/03/17		NC	%	75 - 125
			Total Cobalt (Co)	2010/03/17		NC	%	75 - 125
			Total Copper (Cu)	2010/03/17		NC	%	75 - 125
			Total Iron (Fe)	2010/03/17		NC	%	75 - 125
			Total Lead (Pb)	2010/03/17		NC	%	75 - 125
			Total Manganese (Mn)	2010/03/17		NC	%	75 - 125
			Total Molybdenum (Mo)	2010/03/17		102	%	75 - 125
			Total Nickel (Ni)	2010/03/17		NC	%	75 - 125
			Total Selenium (Se)	2010/03/17		102	%	75 - 125
			Total Strontium (Sr)	2010/03/17		NC	%	75 - 125
			Total Thallium (Tl)	2010/03/17		91	%	75 - 125
			Total Tin (Sn)	2010/03/17		NC	%	75 - 125
			Total Uranium (U)	2010/03/17		101	%	75 - 125
			Total Vanadium (V)	2010/03/17		NC	%	75 - 125
			Total Zinc (Zn)	2010/03/17		91	%	75 - 125
		QC Standard	Total Aluminum (Al)	2010/03/17		92	%	75 - 125
			Total Arsenic (As)	2010/03/17		94	%	75 - 125
			Total Beryllium (Be)	2010/03/17		97	%	75 - 125
			Total Chromium (Cr)	2010/03/17		90	%	75 - 125
			Total Cobalt (Co)	2010/03/17		92	%	75 - 125
			Total Copper (Cu)	2010/03/17		95	%	75 - 125
			Total Iron (Fe)	2010/03/17		82	%	75 - 125
			Total Lead (Pb)	2010/03/17		100	%	75 - 125
			Total Manganese (Mn)	2010/03/17		88	%	75 - 125
			Total Molybdenum (Mo)	2010/03/17		104	%	75 - 125
			Total Nickel (Ni)	2010/03/17		89	%	75 - 125
			Total Strontium (Sr)	2010/03/17		76	%	75 - 125
			Total Thallium (Tl)	2010/03/17		105	%	75 - 125
			Total Tin (Sn)	2010/03/17		120	%	75 - 125
			Total Vanadium (V)	2010/03/17		97	%	75 - 125
			Total Zinc (Zn)	2010/03/17		92	%	75 - 125
		Spiked Blank	Total Aluminum (Al)	2010/03/17		100	%	75 - 125
			Total Antimony (Sb)	2010/03/17		99	%	75 - 125
			Total Arsenic (As)	2010/03/17		84	%	75 - 125
			Total Barium (Ba)	2010/03/17		97	%	75 - 125
			Total Beryllium (Be)	2010/03/17		99	%	75 - 125
			Total Cadmium (Cd)	2010/03/17		98	%	75 - 125
			Total Chromium (Cr)	2010/03/17		96	%	75 - 125
			Total Cobalt (Co)	2010/03/17		98	%	75 - 125
			Total Copper (Cu)	2010/03/17		97	%	75 - 125
			Total Iron (Fe)	2010/03/17		99	%	75 - 125
			Total Lead (Pb)	2010/03/17		99	%	75 - 125
			Total Manganese (Mn)	2010/03/17		101	%	75 - 125
			Total Molybdenum (Mo)	2010/03/17		100	%	75 - 125
			Total Nickel (Ni)	2010/03/17		98	%	75 - 125
			Total Selenium (Se)	2010/03/17		94	%	75 - 125
			Total Strontium (Sr)	2010/03/17		98	%	75 - 125
			Total Thallium (Tl)	2010/03/17		98	%	75 - 125
			Total Tin (Sn)	2010/03/17		98	%	75 - 125
			Total Uranium (U)	2010/03/17		104	%	75 - 125
			Total Vanadium (V)	2010/03/17		100	%	75 - 125
			Total Zinc (Zn)	2010/03/17		92	%	75 - 125
		Method Blank	Total Aluminum (Al)	2010/03/17	<10		mg/kg	

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Conestoga-Rovers and Associates Ltd
Attention: Neil Brodie
Client Project #: 059570
P.O. #:
Project name: NORTH HEAD HARBOUR

Quality Assurance Report (Continued)

Maxxam Job Number: DB029595

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2103058	KGU	Method Blank	Total Antimony (Sb)	2010/03/17	<2.0		mg/kg	
			Total Arsenic (As)	2010/03/17	<2.0		mg/kg	
			Total Barium (Ba)	2010/03/17	<5.0		mg/kg	
			Total Beryllium (Be)	2010/03/17	<2.0		mg/kg	
			Total Cadmium (Cd)	2010/03/17	<0.15		mg/kg	
			Total Chromium (Cr)	2010/03/17	<2.0		mg/kg	
			Total Cobalt (Co)	2010/03/17	<1.0		mg/kg	
			Total Copper (Cu)	2010/03/17	<2.0		mg/kg	
			Total Iron (Fe)	2010/03/17	<50		mg/kg	
			Total Lead (Pb)	2010/03/17	<0.50		mg/kg	
			Total Manganese (Mn)	2010/03/17	<2.0		mg/kg	
			Total Molybdenum (Mo)	2010/03/17	<2.0		mg/kg	
			Total Nickel (Ni)	2010/03/17	<2.0		mg/kg	
			Total Selenium (Se)	2010/03/17	<2.0		mg/kg	
			Total Strontium (Sr)	2010/03/17	<5.0		mg/kg	
			Total Thallium (Tl)	2010/03/17	<0.10		mg/kg	
			Total Tin (Sn)	2010/03/17	<2.0		mg/kg	
			Total Uranium (U)	2010/03/17	<0.10		mg/kg	
			Total Vanadium (V)	2010/03/17	<2.0		mg/kg	
			Total Zinc (Zn)	2010/03/17	<5.0		mg/kg	
		RPD [FH6942-02]	Total Aluminum (Al)	2010/03/17	2.1		%	25
			Total Antimony (Sb)	2010/03/17	NC		%	25
			Total Arsenic (As)	2010/03/17	6.9		%	25
			Total Barium (Ba)	2010/03/17	0.8		%	25
			Total Beryllium (Be)	2010/03/17	NC		%	25
			Total Cadmium (Cd)	2010/03/17	NC (9)		%	25
			Total Chromium (Cr)	2010/03/17	0.5		%	25
			Total Cobalt (Co)	2010/03/17	2.7		%	25
			Total Copper (Cu)	2010/03/17	NC		%	25
			Total Iron (Fe)	2010/03/17	3.3		%	25
			Total Lead (Pb)	2010/03/17	1.2		%	25
			Total Manganese (Mn)	2010/03/17	1.7		%	25
			Total Molybdenum (Mo)	2010/03/17	NC		%	25
			Total Nickel (Ni)	2010/03/17	0.6		%	25
			Total Selenium (Se)	2010/03/17	NC		%	25
			Total Strontium (Sr)	2010/03/17	NC		%	25
			Total Thallium (Tl)	2010/03/17	1.0		%	25
			Total Tin (Sn)	2010/03/17	8.4		%	25
			Total Uranium (U)	2010/03/17	2.7		%	25
			Total Vanadium (V)	2010/03/17	0.09		%	25
			Total Zinc (Zn)	2010/03/17	17.0		%	25
2103067	SBK	RPD [FH6922-01]	< -4 Phi (16 mm)	2010/03/18	0		%	25
			< -3 Phi (8 mm)	2010/03/18	0		%	25
			< -2 Phi (4 mm)	2010/03/18	0		%	25
			< -1 Phi (2 mm)	2010/03/18	0.08		%	25
			< 0 Phi (1 mm)	2010/03/18	0.3		%	25
			< +1 Phi (0.5 mm)	2010/03/18	0.4		%	25
			< +2 Phi (0.25 mm)	2010/03/18	0.8		%	25
			< +3 Phi (0.12 mm)	2010/03/18	0.8		%	25
			< +4 Phi (0.062 mm)	2010/03/18	0.2		%	25
			< +5 Phi (0.031 mm)	2010/03/18	3.7		%	25
			< +6 Phi (0.016 mm)	2010/03/18	5.7		%	25
			< +7 Phi (0.0078 mm)	2010/03/18	1.3		%	25
			< +8 Phi (0.0039 mm)	2010/03/18	1.8		%	25
			< +9 Phi (0.0020 mm)	2010/03/18	2.3		%	25

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Conestoga-Rovers and Associates Ltd
Attention: Neil Brodie
Client Project #: 059570
P.O. #:
Project name: NORTH HEAD HARBOUR

Quality Assurance Report (Continued)

Maxxam Job Number: DB029595

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2103067	SBK	RPD [FH6922-01]	Gravel	2010/03/18	NC		%	25
			Sand	2010/03/18	0.2		%	25
			Silt	2010/03/18	1.4		%	25
			Clay	2010/03/18	1.8		%	25
2105727	BAN	RPD [FH6942-01]	< -4 Phi (16 mm)	2010/03/22	0		%	25
			< -3 Phi (8 mm)	2010/03/22	0		%	25
			< -2 Phi (4 mm)	2010/03/22	0		%	25
			< -1 Phi (2 mm)	2010/03/22	4.5		%	25
			< 0 Phi (1 mm)	2010/03/22	4.9		%	25
			< +1 Phi (0.5 mm)	2010/03/22	4.4		%	25
			< +2 Phi (0.25 mm)	2010/03/22	4.5		%	25
			< +3 Phi (0.12 mm)	2010/03/22	5.6		%	25
			< +4 Phi (0.062 mm)	2010/03/22	8.4		%	25
			< +5 Phi (0.031 mm)	2010/03/22	8.9		%	25
			< +6 Phi (0.016 mm)	2010/03/22	3.3		%	25
			< +7 Phi (0.0078 mm)	2010/03/22	5.9		%	25
			< +8 Phi (0.0039 mm)	2010/03/22	3.7		%	25
			< +9 Phi (0.0020 mm)	2010/03/22	1.5		%	25
			Gravel	2010/03/22	NC (10)		%	25
			Sand	2010/03/22	3.8		%	25
			Silt	2010/03/22	11.2		%	25
			Clay	2010/03/22	3.7		%	25

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.
(1) Spike: < 10 % of compounds in multi-component analysis in violation.
(2) Duplicate: sample results are within 5x RDL.
(3) Duplicate: < 10 % of compounds in multi-component analysis in violation.
(4) Matrix Spike: < 10 % of compounds in multi-component analysis in violation.
(5) Poor duplicate agreement due to sample inhomogeneity.
(6) Elevated reporting limit due to sample matrix.
(7) The recovery was below the lower control limit. This may be due in part to the reducing environment of the sample.
(8) Sample contained a high amount of moisture. Reporting limits were adjusted for dry weight of sample.
(9) Poor RPD due to sample inhomogeneity.
(10) %RPD violation not applicable. Absolute values agree within 10%.

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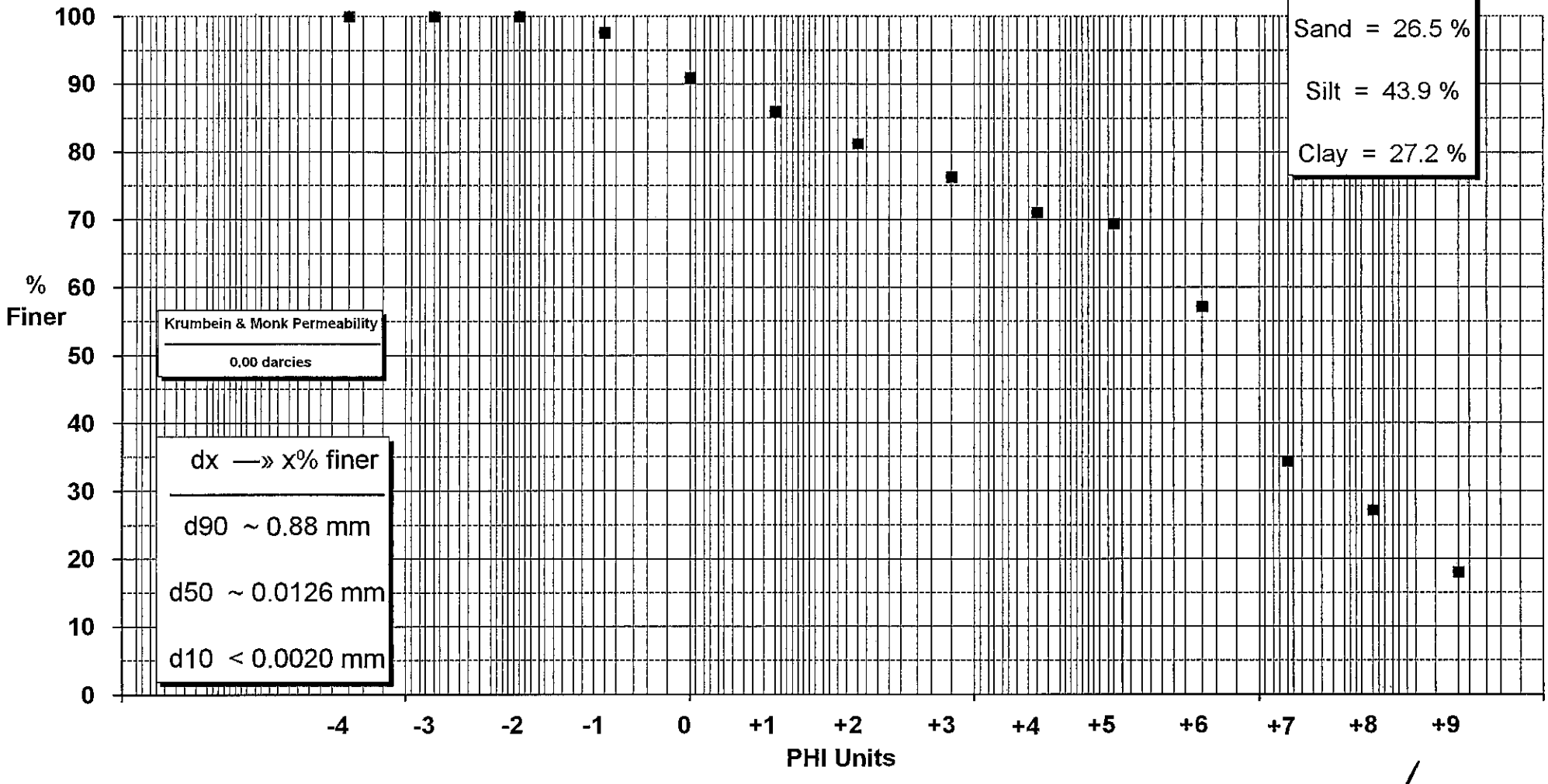
Maxxam Analytics

Maxxam ID: FH6871-01

10SED-1 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
27.5 %	29.4 %

Wentworth	
Gravel	2.4 %
Sand	26.5 %
Silt	43.9 %
Clay	27.2 %



Krumbein & Monk Permeability
0.00 darcies

dx —» x% finer
d90 ~ 0.88 mm
d50 ~ 0.0126 mm
d10 < 0.0020 mm

Approved

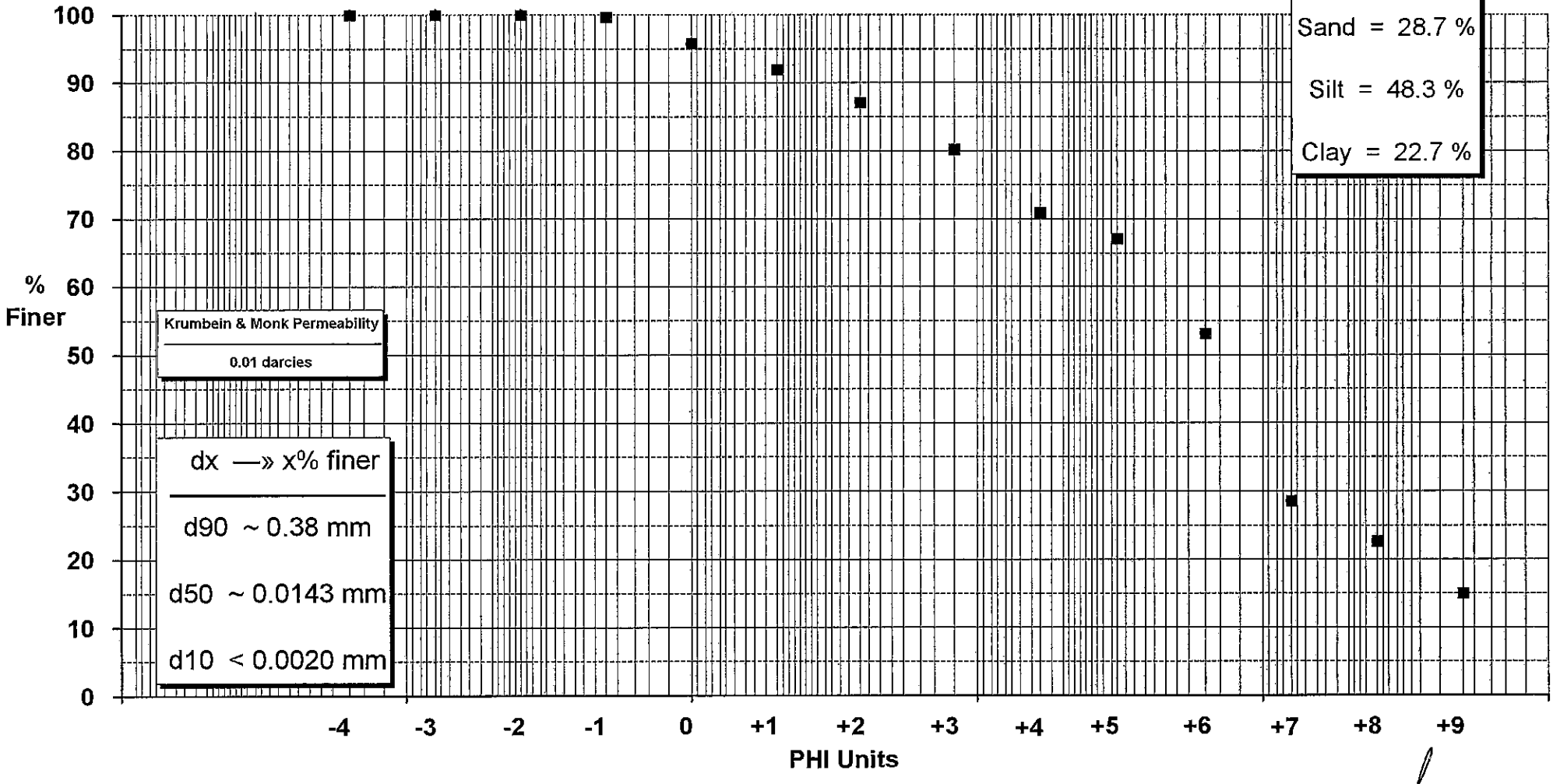
Maxxam Analytics

Maxxam ID: FH6911-01

10SED-2 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
26.6 %	30.3 %

Wentworth	
Gravel	0.4 %
Sand	28.7 %
Silt	48.3 %
Clay	22.7 %



Krumbein & Monk Permeability
0.01 darcies

dx —» x% finer
d90 ~ 0.38 mm
d50 ~ 0.0143 mm
d10 < 0.0020 mm

Approved

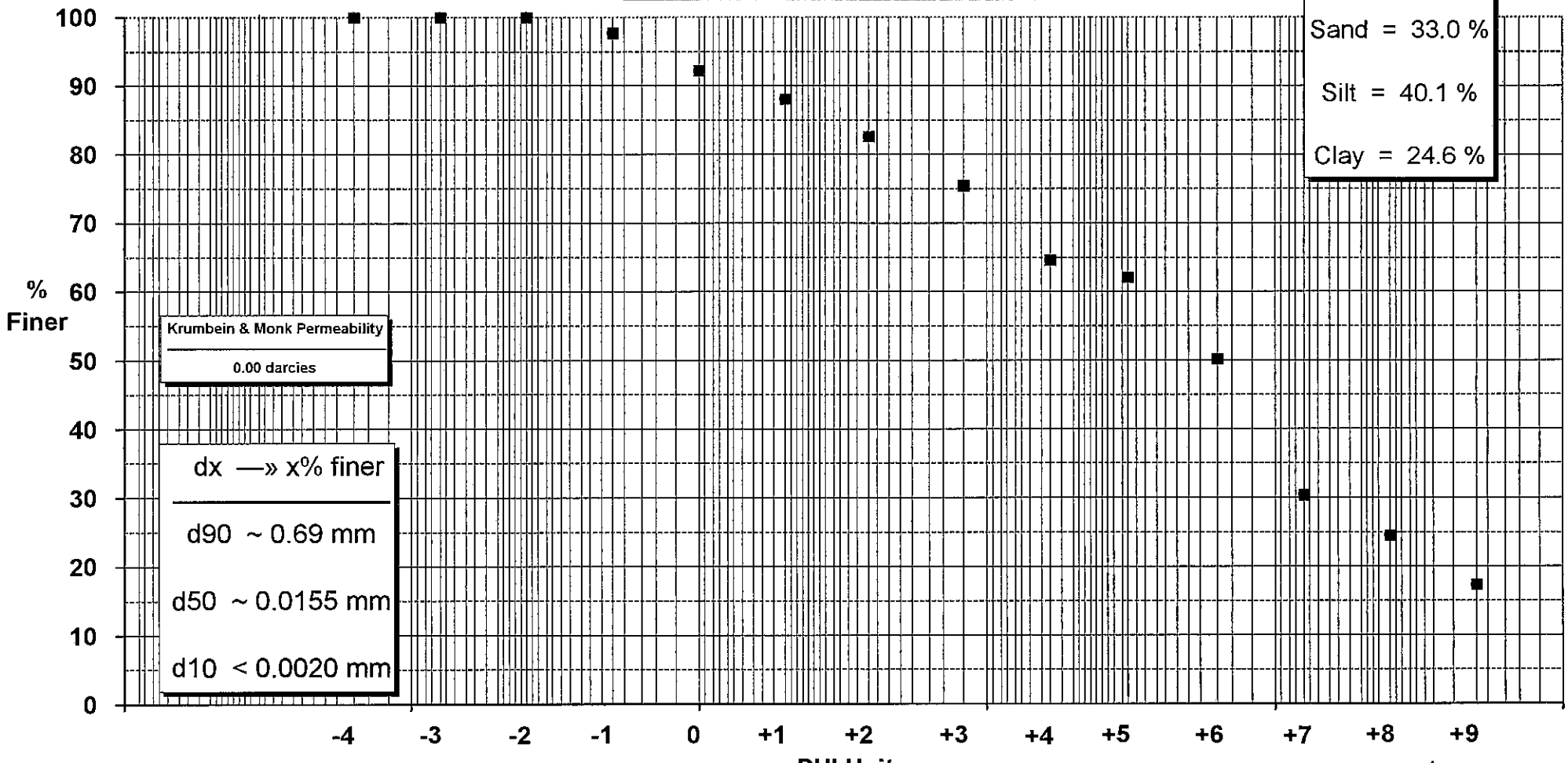
Maxxam Analytics

Maxxam ID: FH6912-01

10SED-2 (30-45CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
32.5 %	36.2 %

Wentworth	
Gravel	2.3 %
Sand	33.0 %
Silt	40.1 %
Clay	24.6 %



Krumbein & Monk Permeability
0.00 darcies

dx —» x% finer
d90 ~ 0.69 mm
d50 ~ 0.0155 mm
d10 < 0.0020 mm

Approved

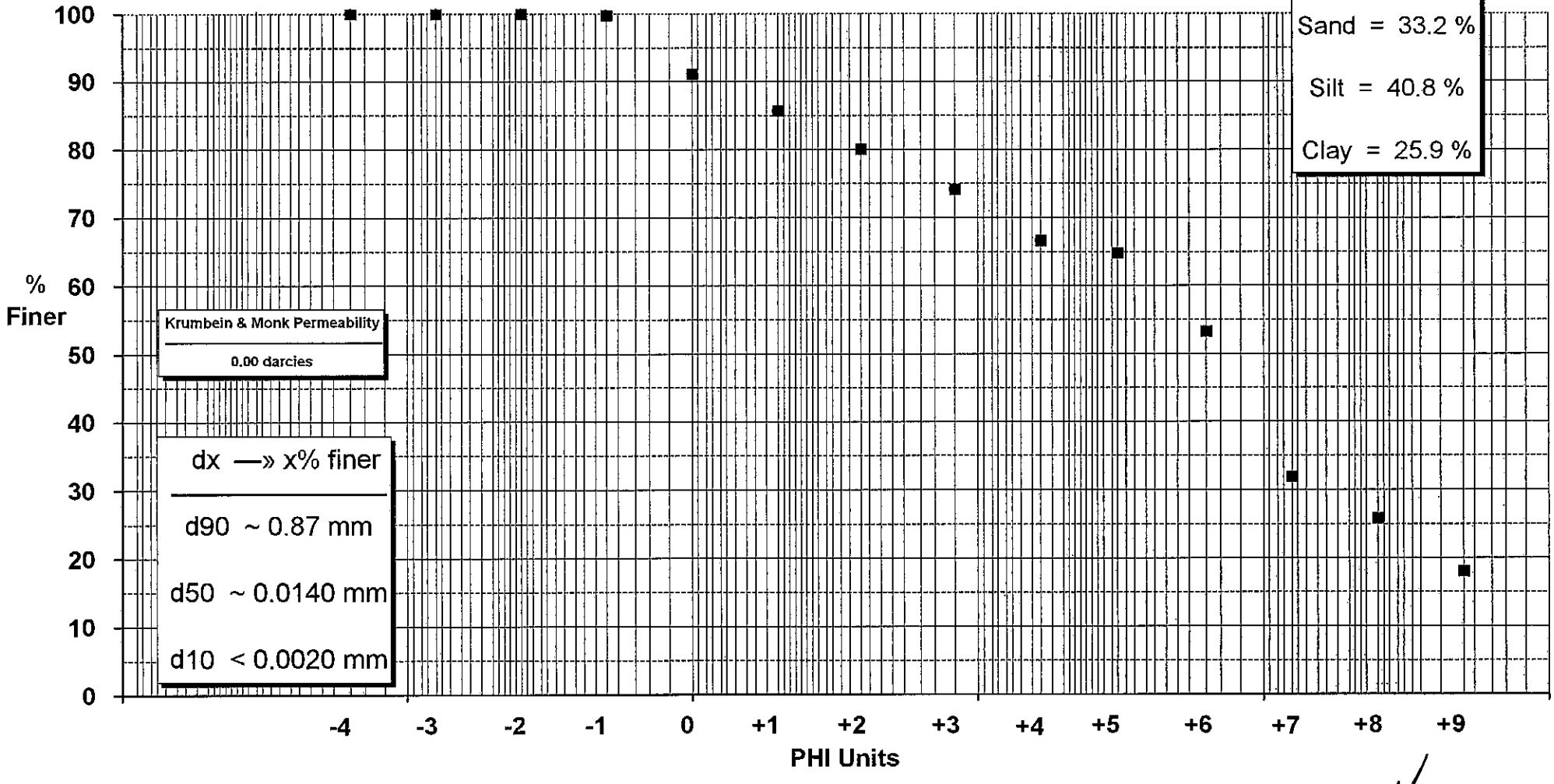
Maxxam Analytics

Maxxam ID: FH6913-01

10SED-3 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
31.4 %	33.9 %

Wentworth	
Gravel	0.2 %
Sand	33.2 %
Silt	40.8 %
Clay	25.9 %



Krumbein & Monk Permeability
0.00 darcies

dx —» x% finer
d90 ~ 0.87 mm
d50 ~ 0.0140 mm
d10 < 0.0020 mm

Approved

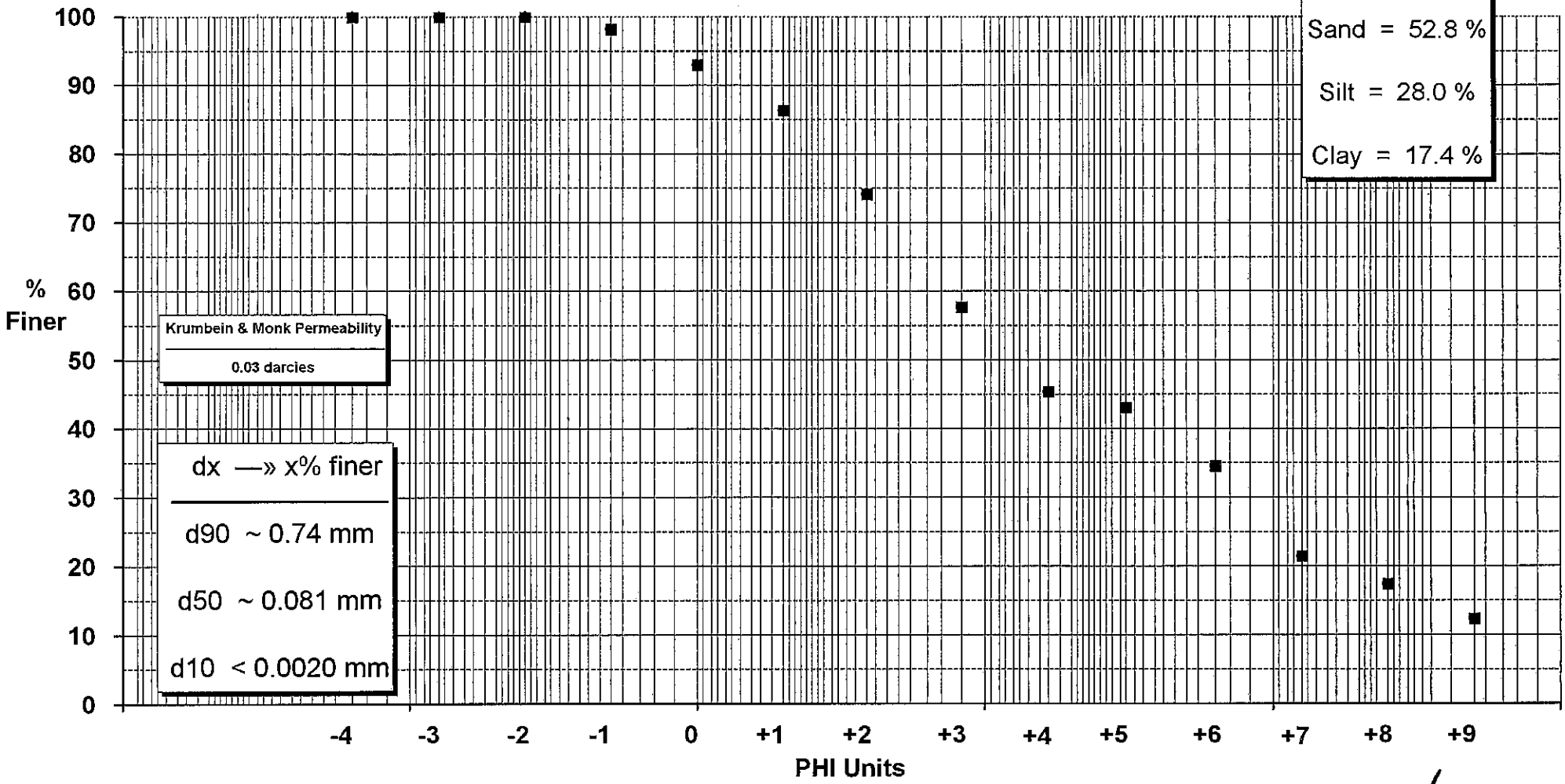
Maxxam Analytics

Maxxam ID: FH6914-01

10SED-3 (40-50CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
51.4 %	55.4 %

Wentworth	
Gravel	1.8 %
Sand	52.8 %
Silt	28.0 %
Clay	17.4 %



Krumbein & Monk Permeability
0.03 darcies

dx —» x% finer
d90 ~ 0.74 mm
d50 ~ 0.081 mm
d10 < 0.0020 mm

Approved

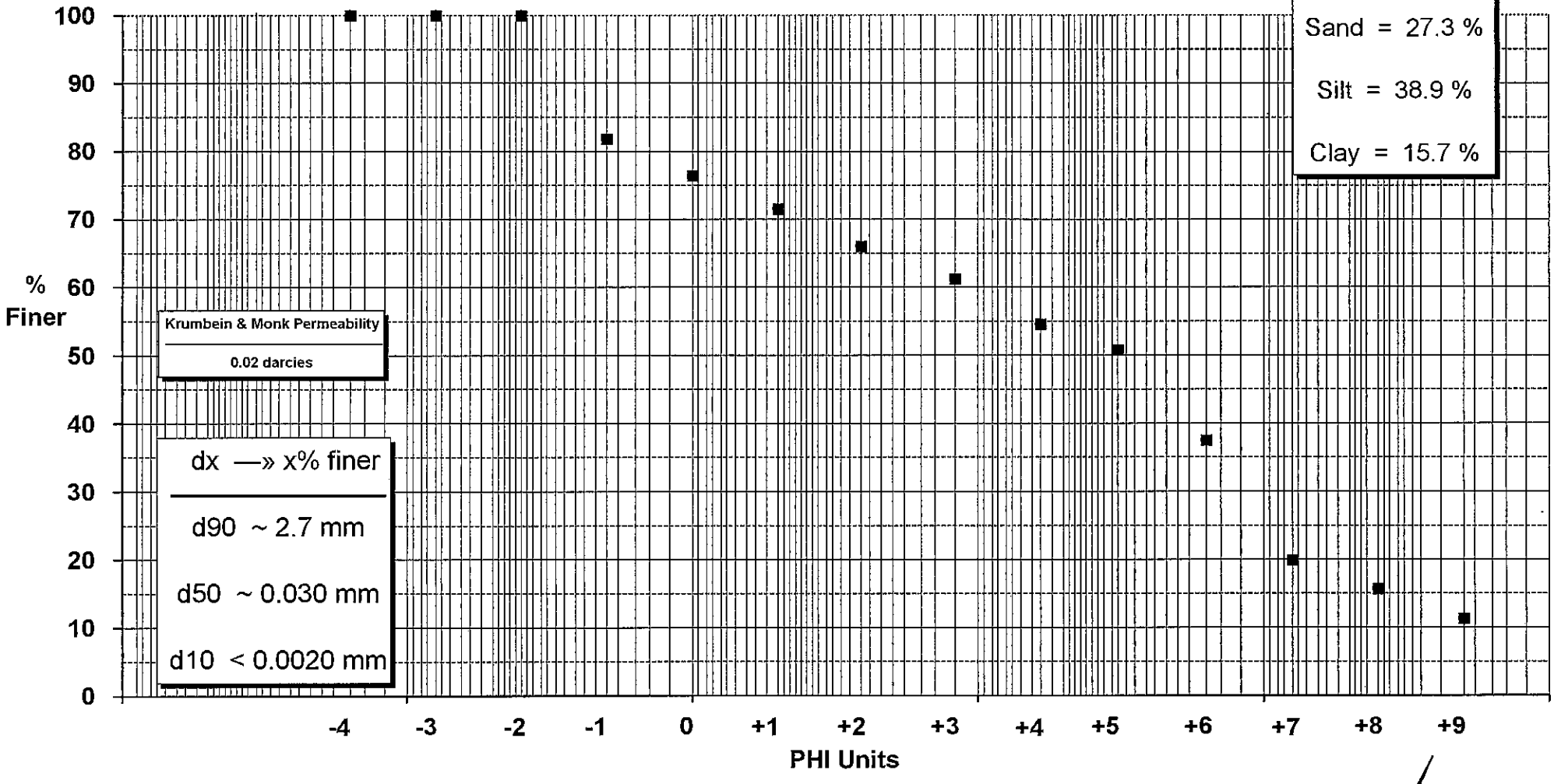
Maxxam Analytics

Maxxam ID: FH6915-01

10SED-4 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
43.7 %	46.7 %

Wentworth	
Gravel	18.2 %
Sand	27.3 %
Silt	38.9 %
Clay	15.7 %



Krumbein & Monk Permeability
0.02 darcies

dx —» x% finer
d90 ~ 2.7 mm
d50 ~ 0.030 mm
d10 < 0.0020 mm

Approved

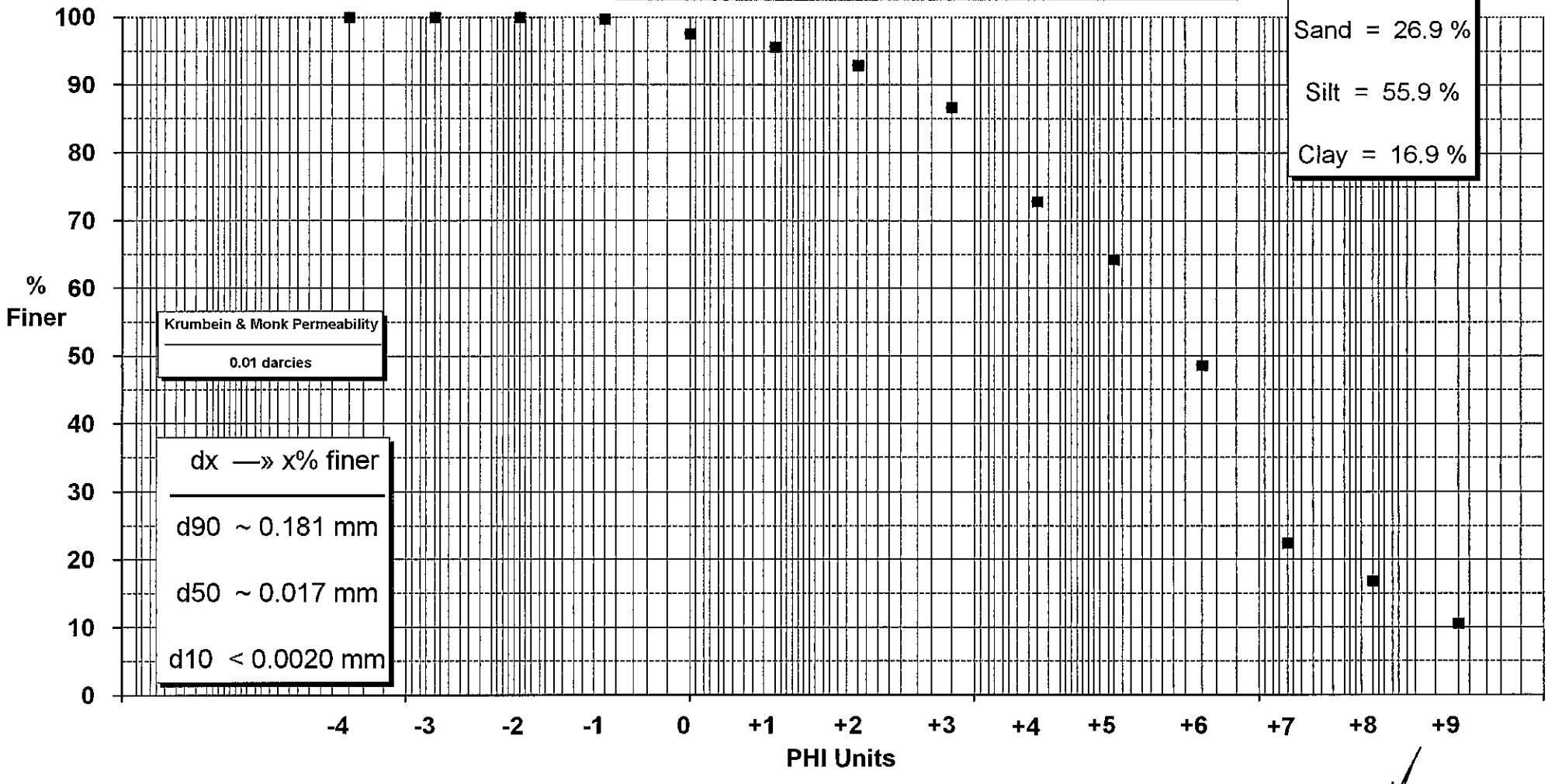
Maxxam Analytics

Maxxam ID: FH6916-01

10SED-5 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
23.6 %	30.0 %

Wentworth	
Gravel	0.3 %
Sand	26.9 %
Silt	55.9 %
Clay	16.9 %



Krumbein & Monk Permeability
0.01 darcies

dx —» x% finer
d90 ~ 0.181 mm
d50 ~ 0.017 mm
d10 < 0.0020 mm

Approved

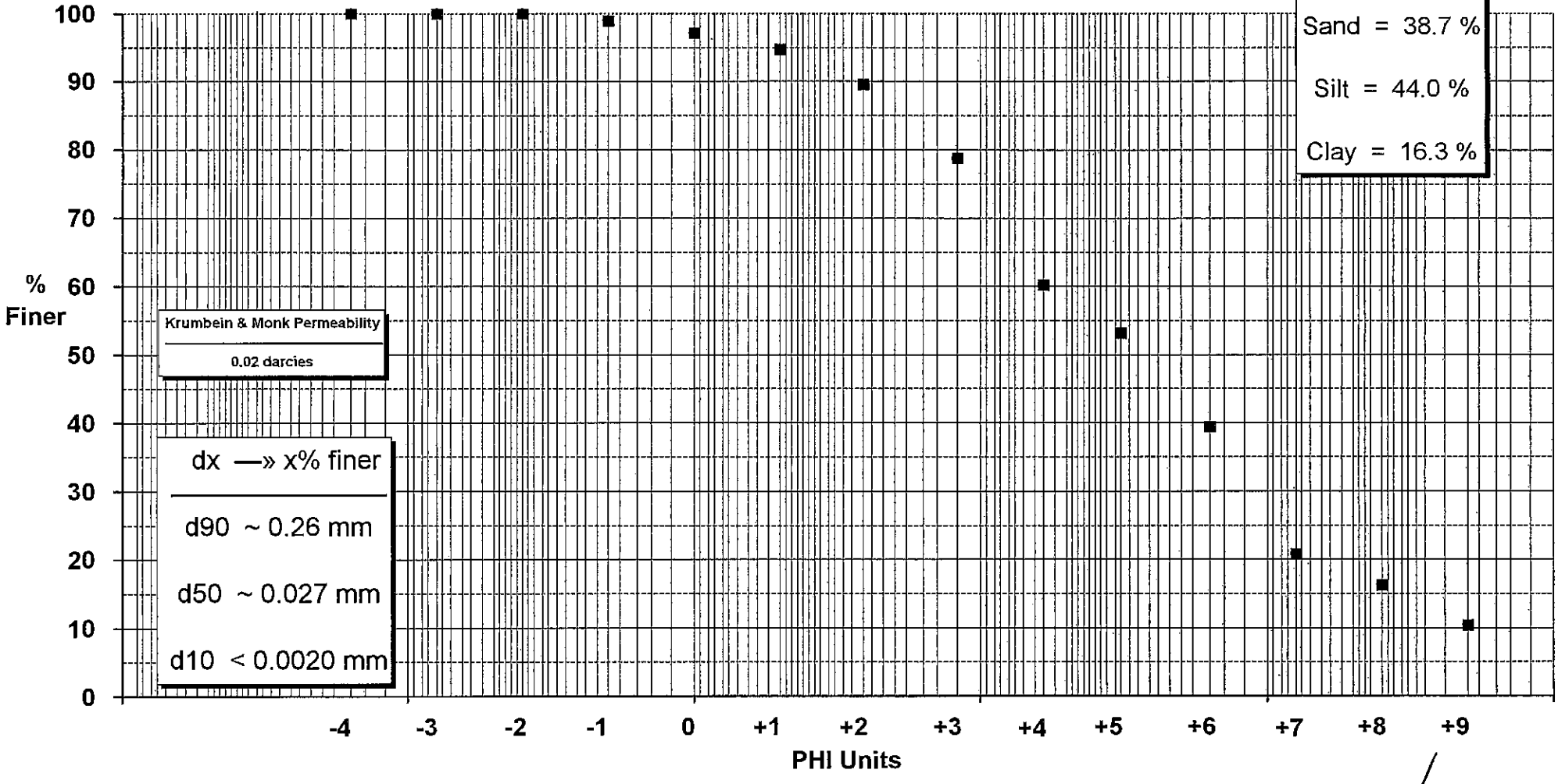
Maxxam Analytics

Maxxam ID: FH6917-01

10SED-6 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
34.9 %	42.0 %

Wentworth	
Gravel	1.0 %
Sand	38.7 %
Silt	44.0 %
Clay	16.3 %



Approved

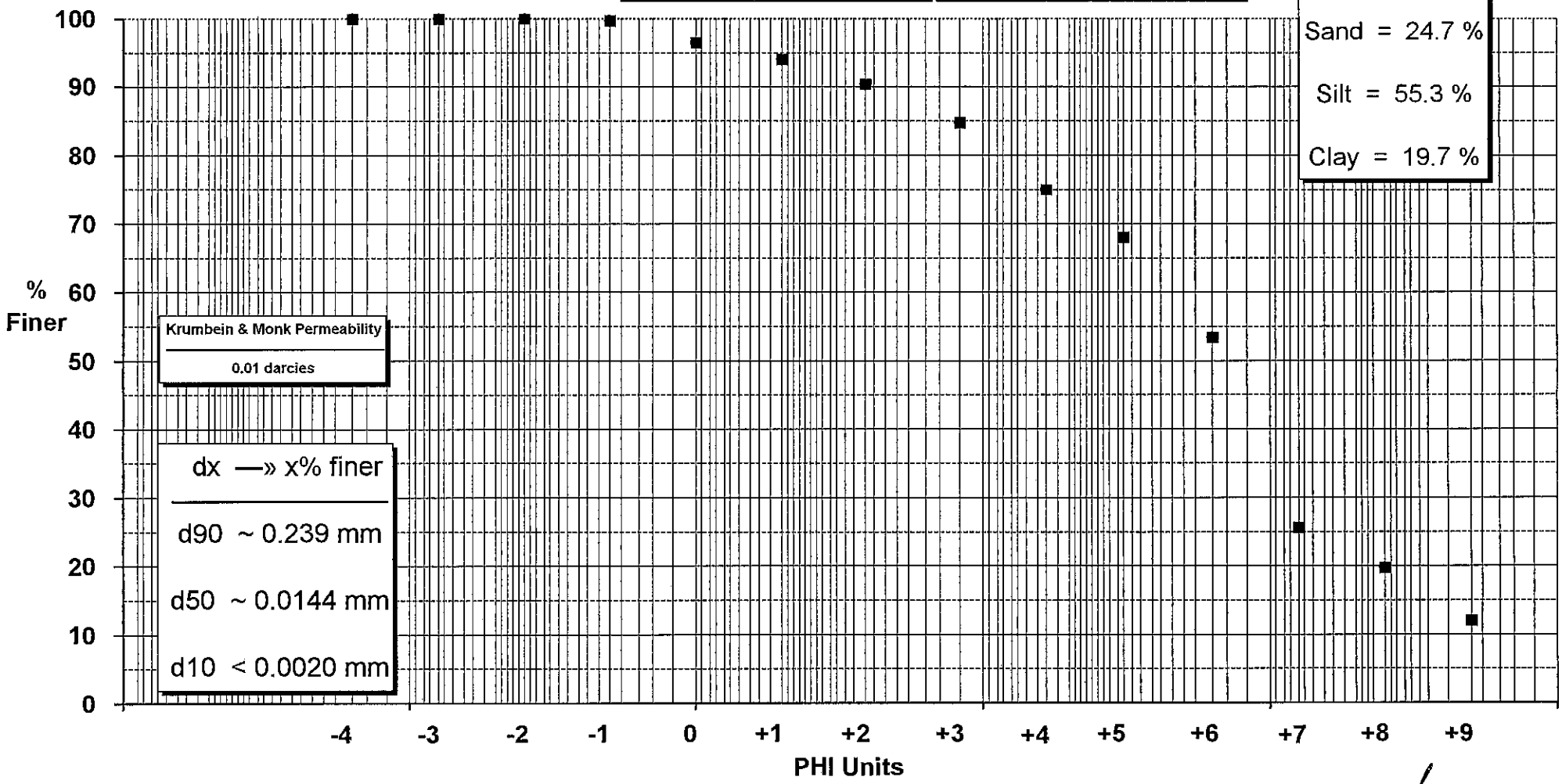
Maxxam Analytics

Maxxam ID: FH6918-01

10SED-7 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
22.4 %	27.2 %

Wentworth	
Gravel	0.3 %
Sand	24.7 %
Silt	55.3 %
Clay	19.7 %



Krumbein & Monk Permeability
0.01 darcies

dx —» x% finer
d90 ~ 0.239 mm
d50 ~ 0.0144 mm
d10 < 0.0020 mm

Approved

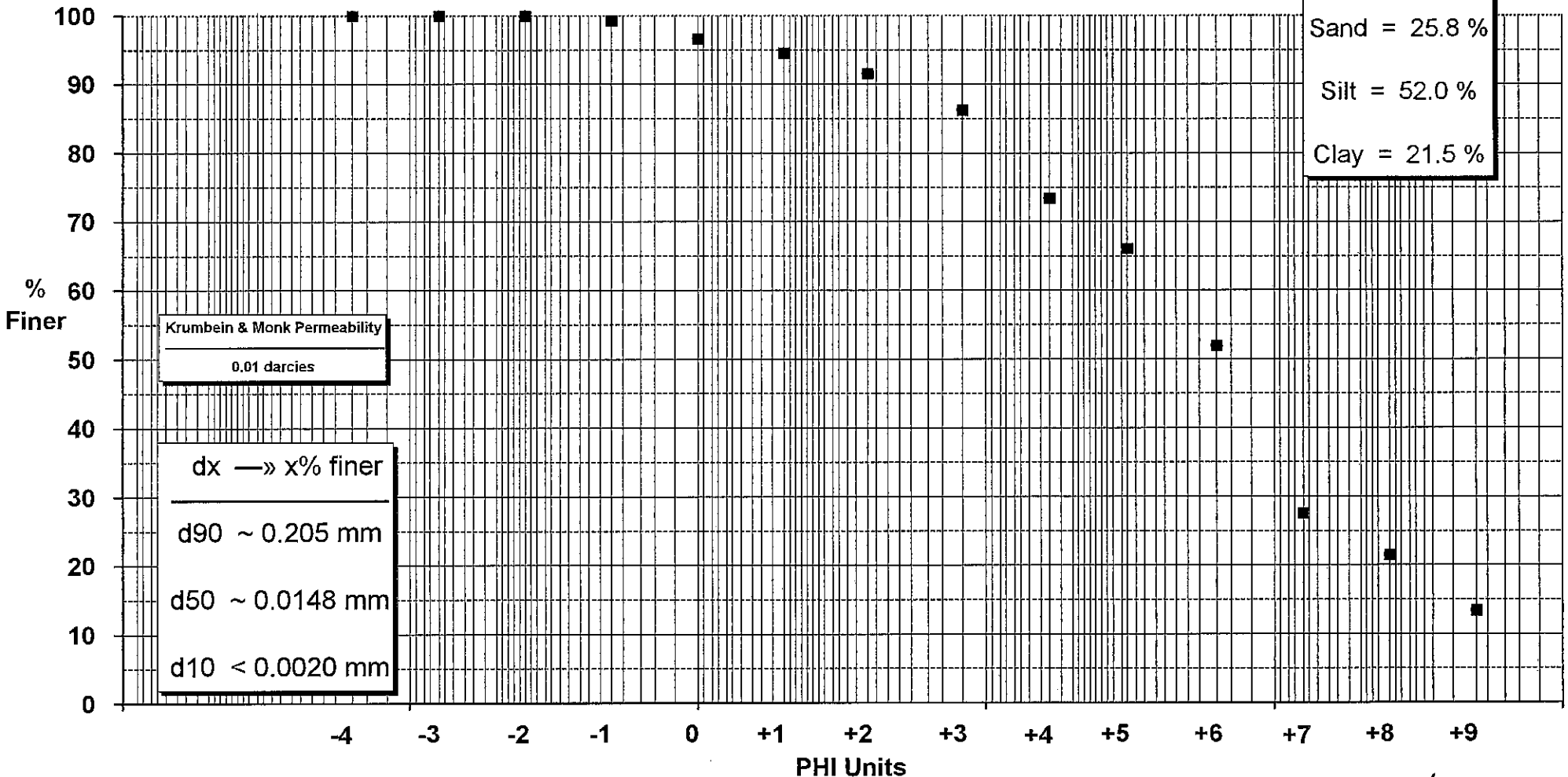
Maxxam Analytics

Maxxam ID: FH6919-01

10SED-7 (40-54CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
23.2 %	28.9 %

Wentworth
Gravel = 0.7 %
Sand = 25.8 %
Silt = 52.0 %
Clay = 21.5 %



Krumbein & Monk Permeability
0.01 darcies

dx —» x% finer
d90 ~ 0.205 mm
d50 ~ 0.0148 mm
d10 < 0.0020 mm

Approved

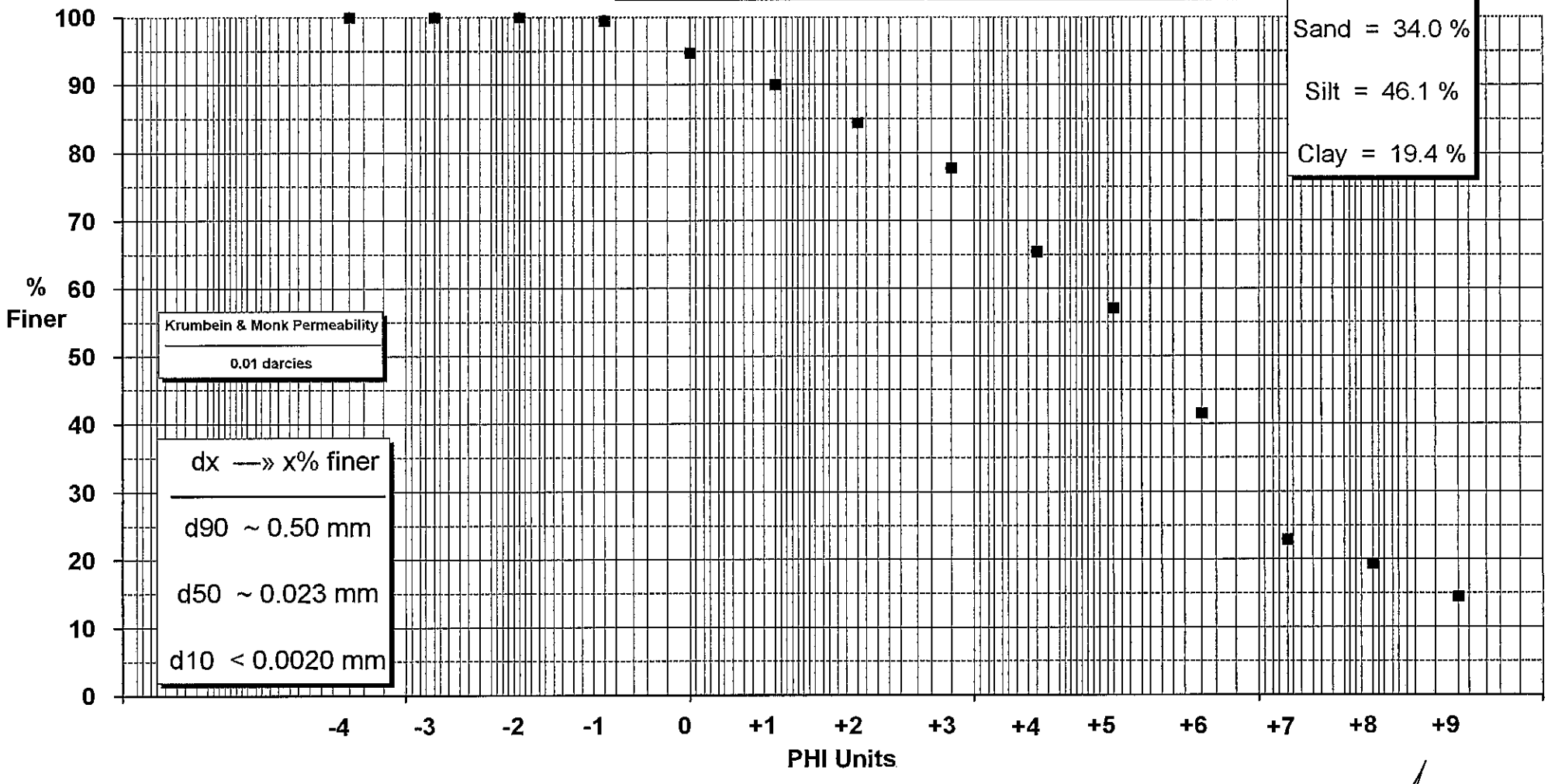
Maxxam Analytics

Maxxam ID: FH6920-01

10SED-8 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
31.3 %	37.3 %

Wentworth	
Gravel	0.5 %
Sand	34.0 %
Silt	46.1 %
Clay	19.4 %



Approved

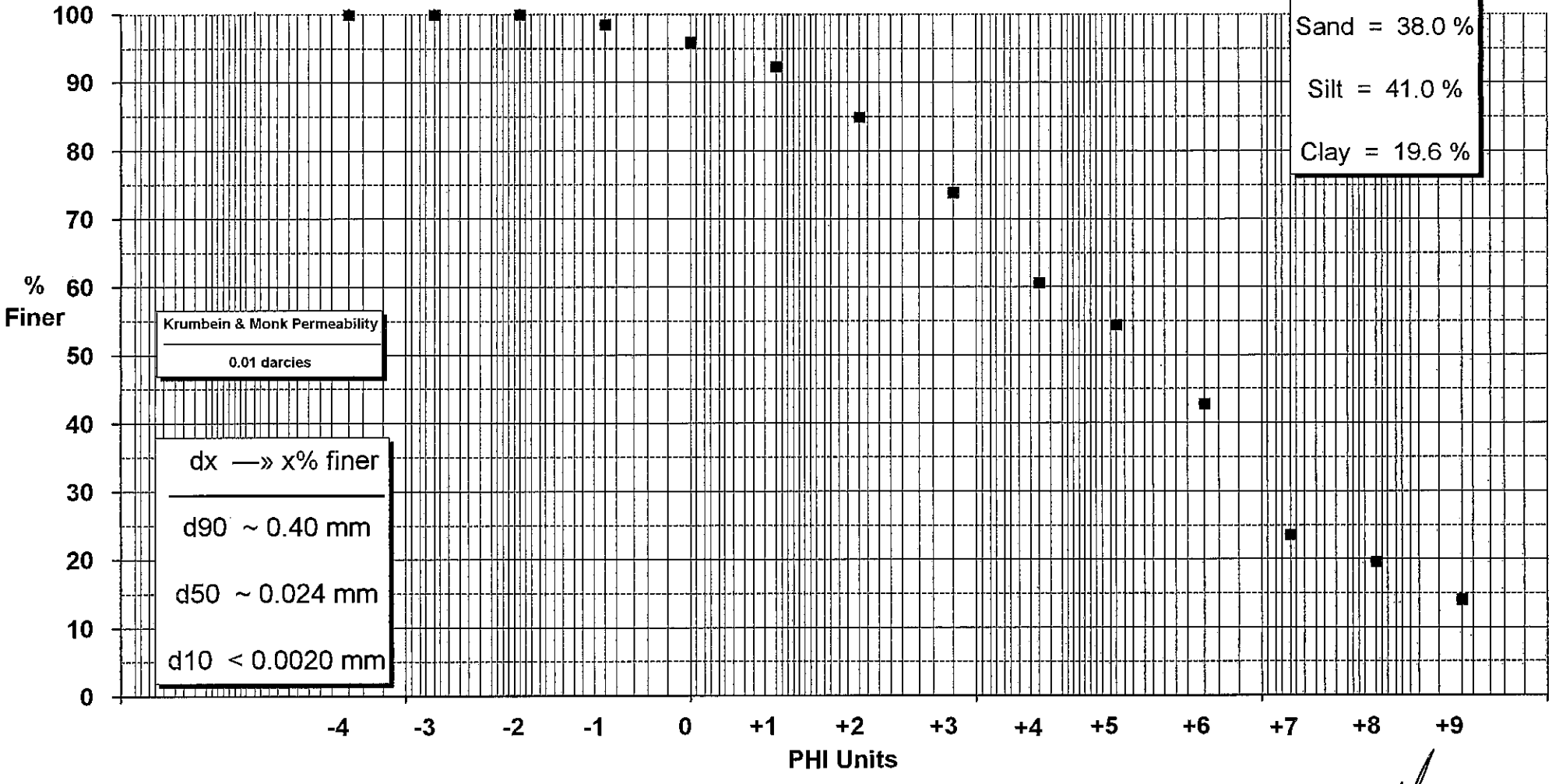
Maxxam Analytics

Maxxam ID: FH6921-01

10SED-9 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
35.9 %	41.4 %

Wentworth	
Gravel	1.4 %
Sand	38.0 %
Silt	41.0 %
Clay	19.6 %



Krumbein & Monk Permeability
0.01 darcies

dx —» x% finer
d90 ~ 0.40 mm
d50 ~ 0.024 mm
d10 < 0.0020 mm

Approved

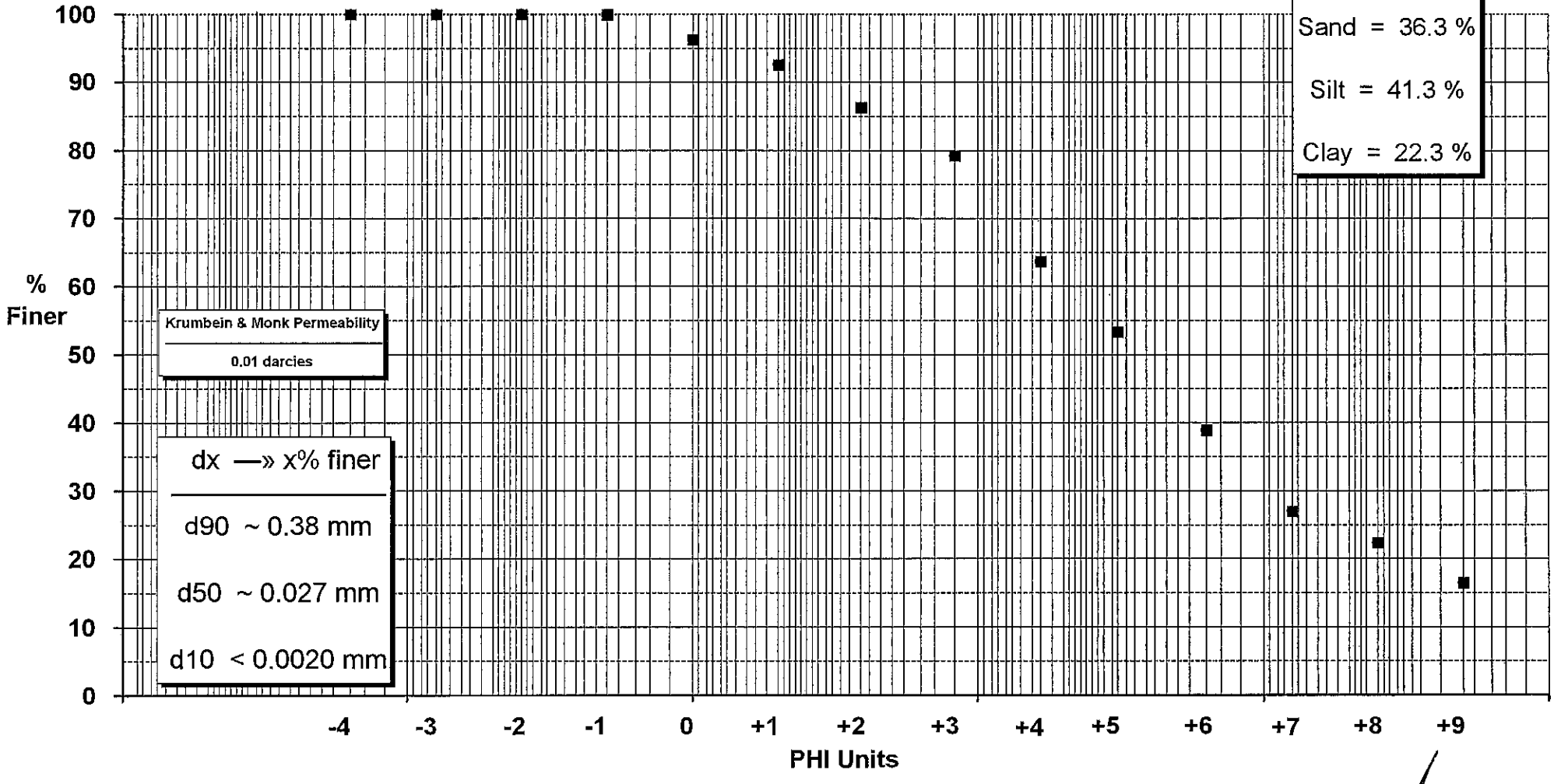
Maxxam Analytics

Maxxam ID: FH6922-01

10SED-10 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
32.3 %	39.7 %

Wentworth	
Gravel	0.0 %
Sand	36.3 %
Silt	41.3 %
Clay	22.3 %



Krumbein & Monk Permeability
0.01 darcies

dx —» x% finer
d90 ~ 0.38 mm
d50 ~ 0.027 mm
d10 < 0.0020 mm

Approved

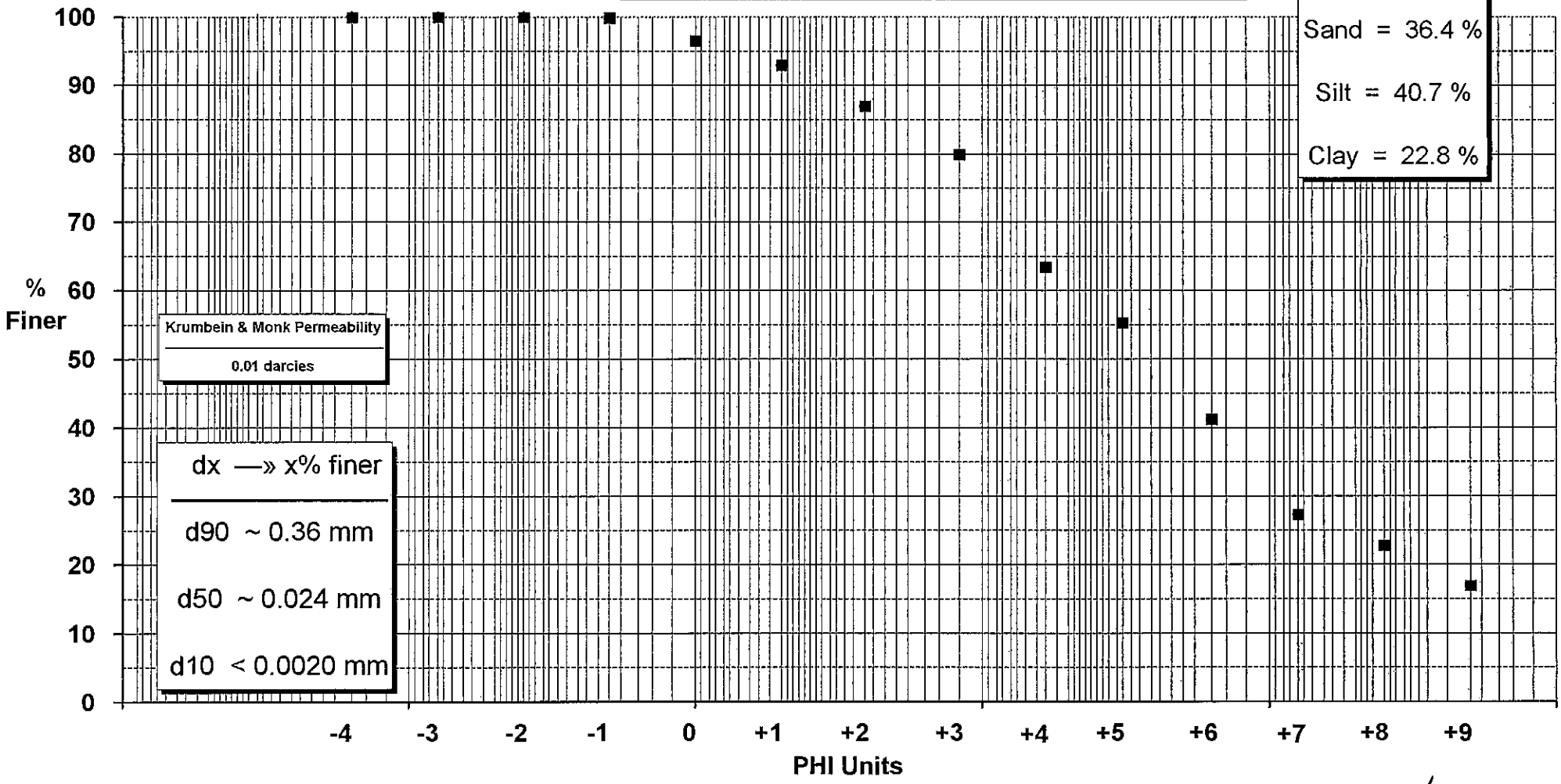
Maxxam Analytics

Maxxam ID: FH6922-01:D1

10SED-10 (0-15CM) :D1

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
32.2 %	39.2 %

Wentworth	
Gravel	0.1 %
Sand	36.4 %
Silt	40.7 %
Clay	22.8 %



Krumbein & Monk Permeability
0.01 darcies

dx —» x% finer
d90 ~ 0.36 mm
d50 ~ 0.024 mm
d10 < 0.0020 mm

Approved

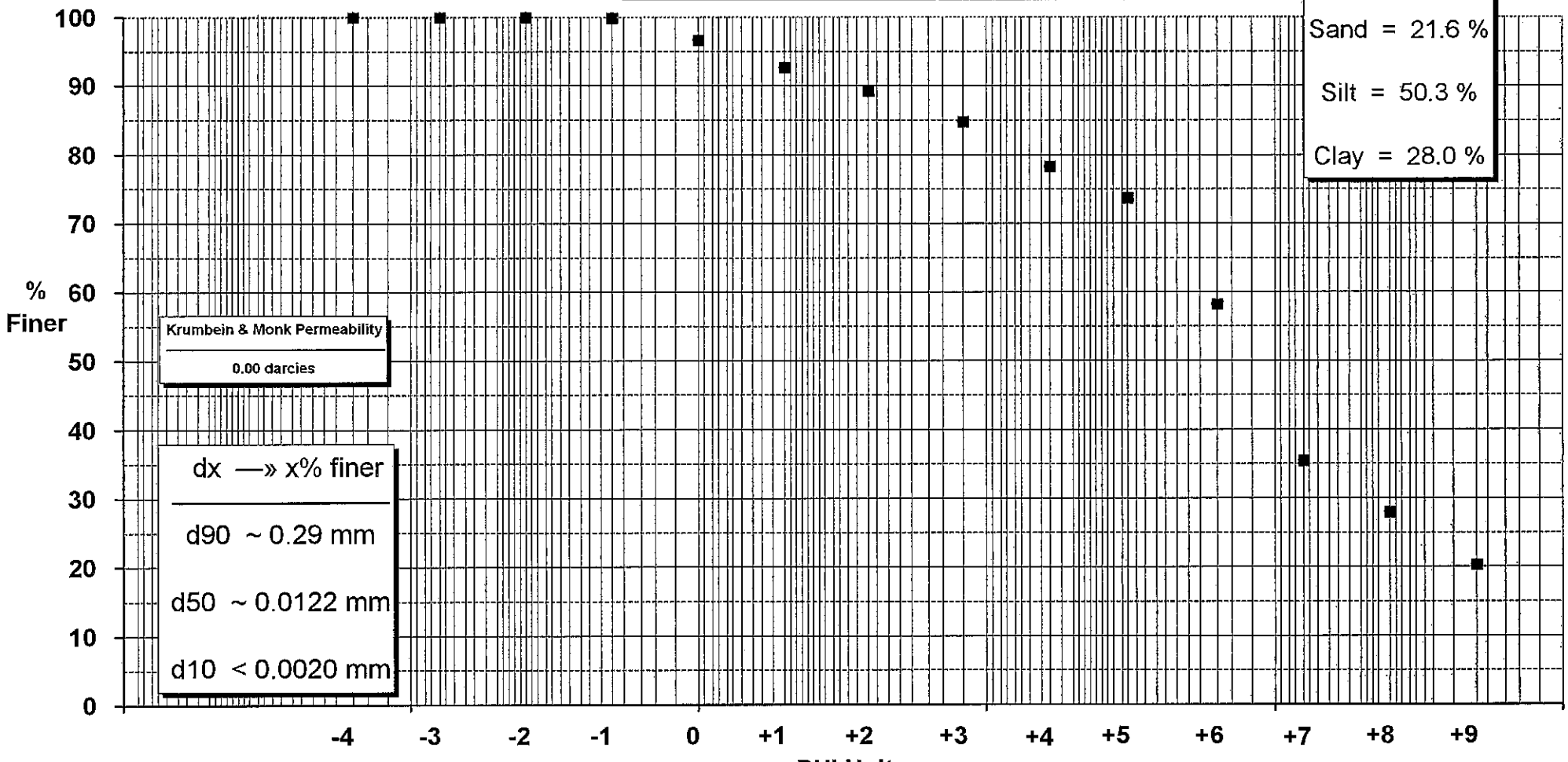
Maxxam Analytics

Maxxam ID: FH6923-01

10SED-11 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
20.0 %	23.2 %

Wentworth	
Gravel	0.2 %
Sand	21.6 %
Silt	50.3 %
Clay	28.0 %



Krumbein & Monk Permeability
0.00 darcies

dx —» x% finer
d90 ~ 0.29 mm
d50 ~ 0.0122 mm
d10 < 0.0020 mm

Approved

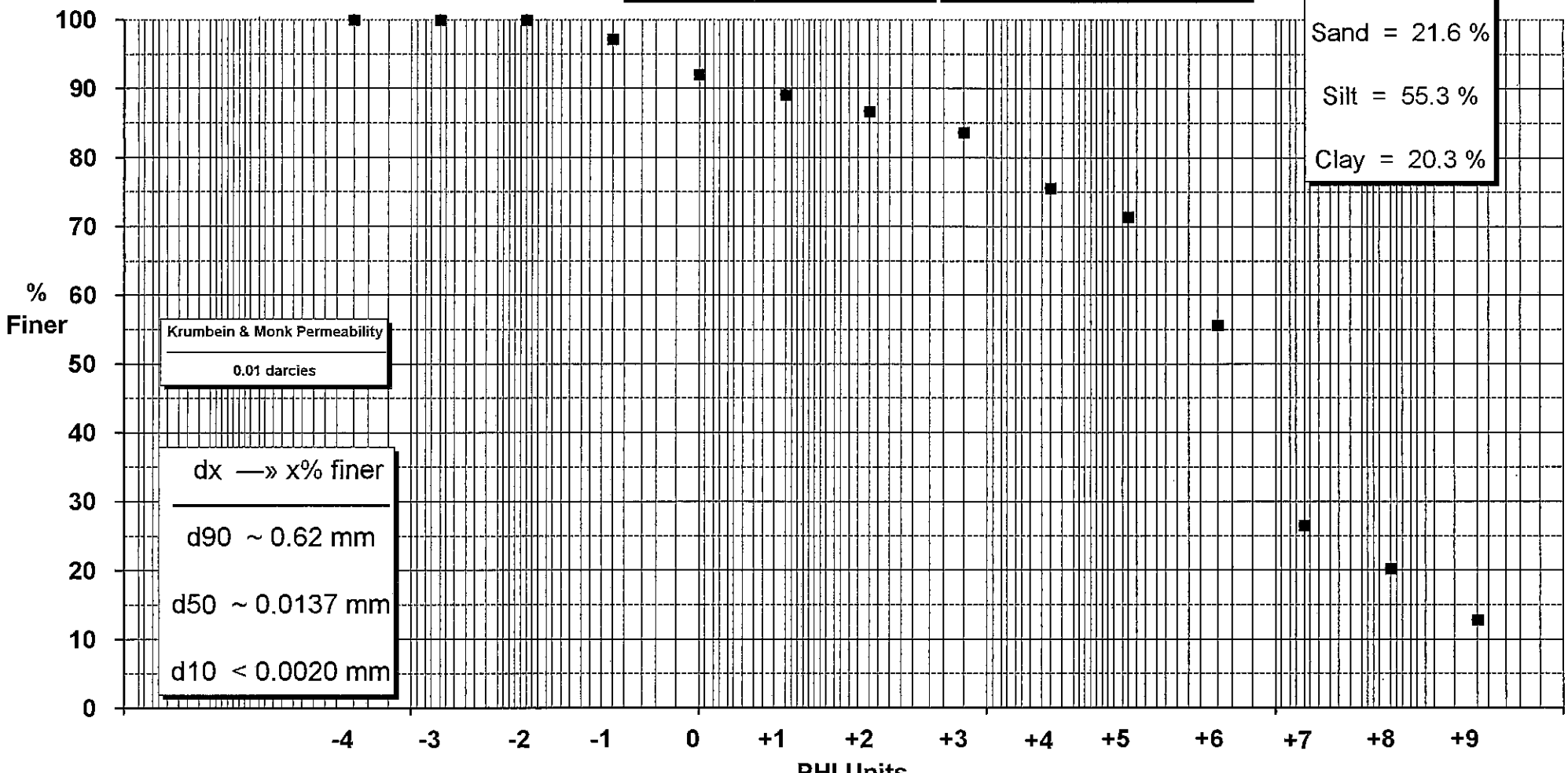
Maxxam Analytics

Maxxam ID: FH6924-01

10SED-11 (45-60CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
22.3 %	25.8 %

Wentworth	
Gravel	2.9 %
Sand	21.6 %
Silt	55.3 %
Clay	20.3 %



Approved

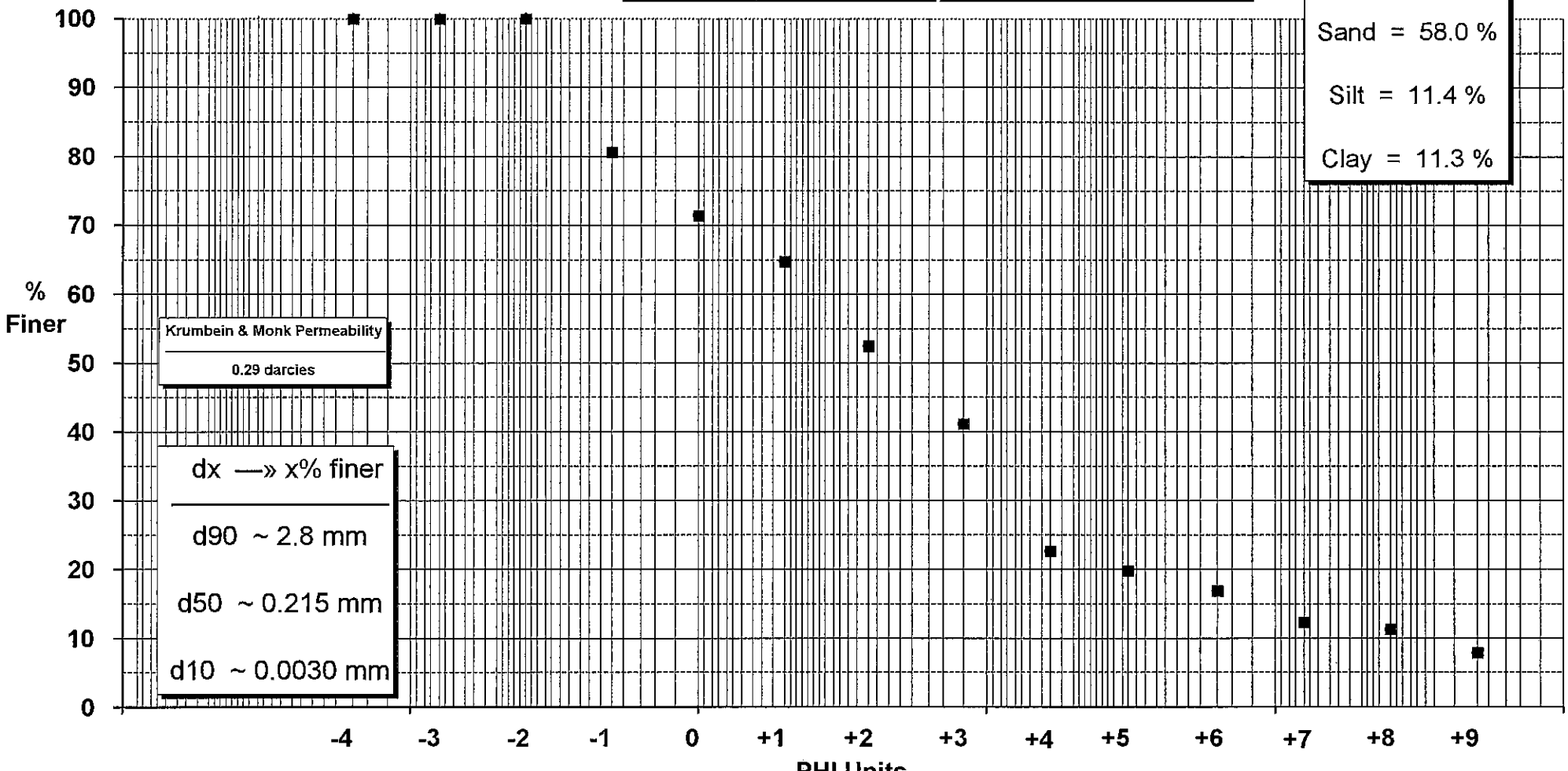
Maxxam Analytics

Maxxam ID: FH6925-01

10SED-12 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
72.5 %	78.3 %

Wentworth	
Gravel	19.3 %
Sand	58.0 %
Silt	11.4 %
Clay	11.3 %



Approved

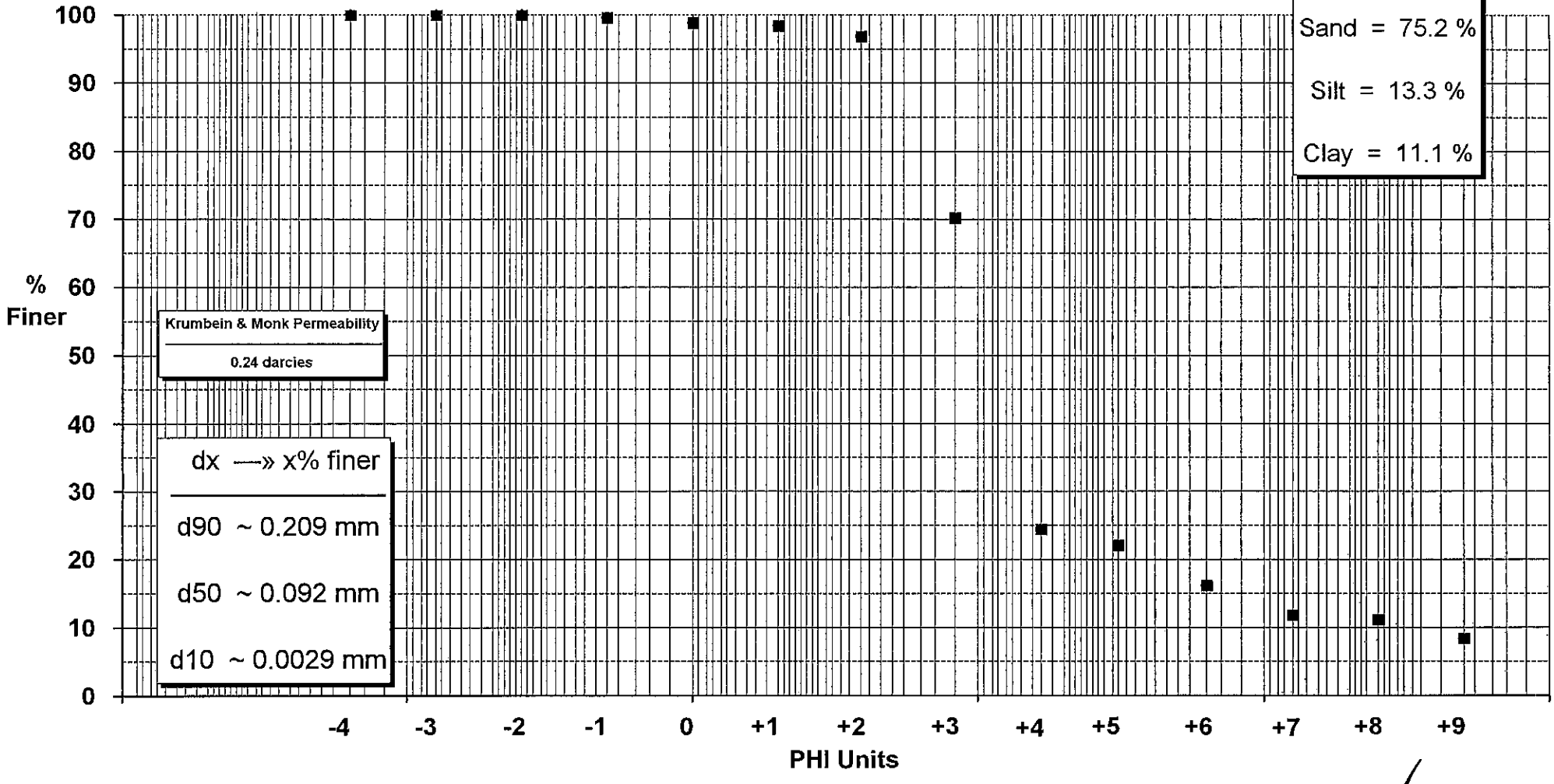
Maxxam Analytics

Maxxam ID: FH6926-01

10SED-13 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
63.6 %	76.4 %

Wentworth	
Gravel	0.4 %
Sand	75.2 %
Silt	13.3 %
Clay	11.1 %



Krumbein & Monk Permeability
0.24 darcies

dx —» x% finer	
d90	~ 0.209 mm
d50	~ 0.092 mm
d10	~ 0.0029 mm

Approved

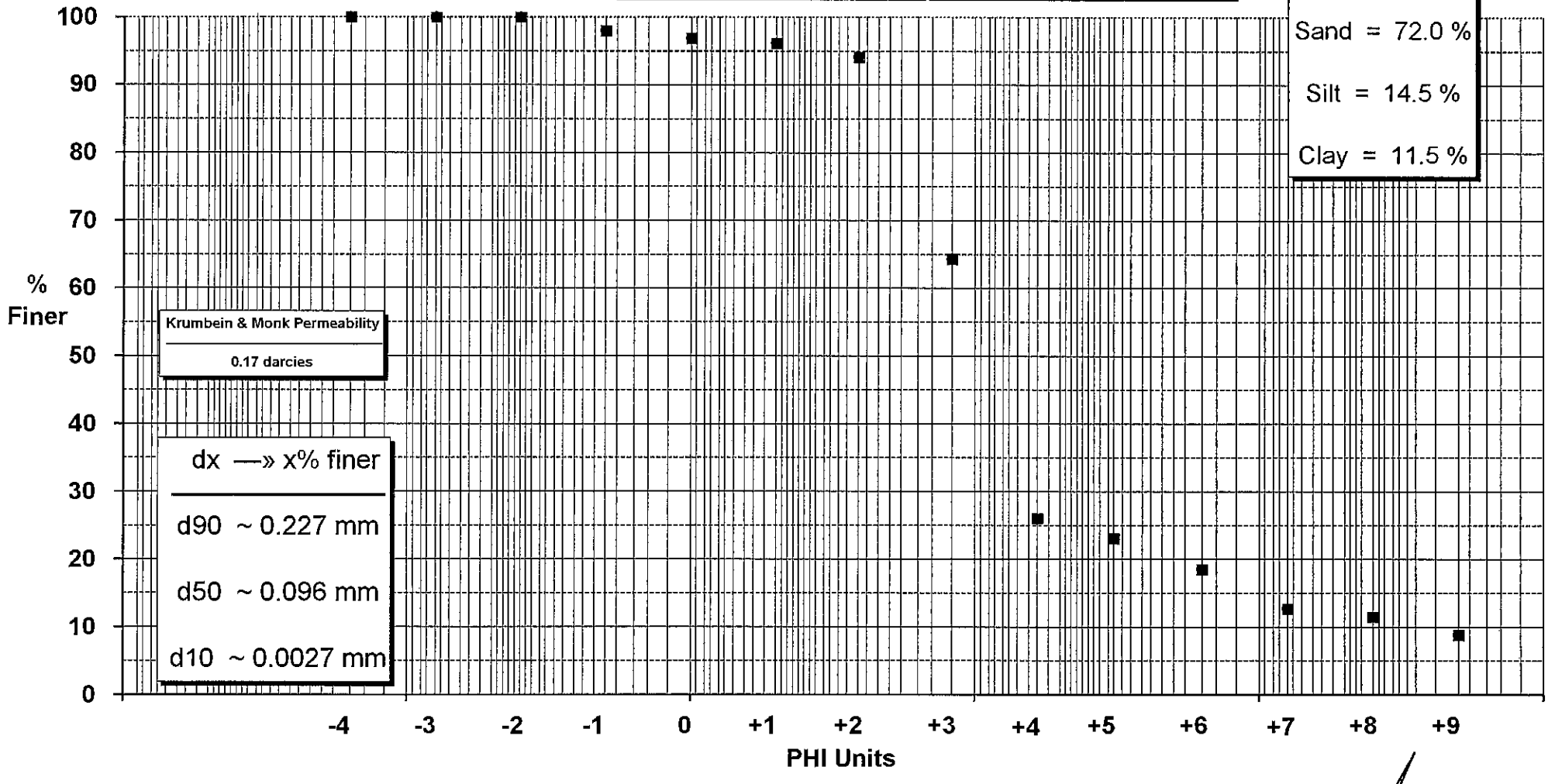
Maxxam Analytics

Maxxam ID: FH6927-01

10SED-13 (30-41CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
63.9 %	74.9 %

Wentworth
Gravel = 2.0 %
Sand = 72.0 %
Silt = 14.5 %
Clay = 11.5 %



Krumbein & Monk Permeability
0.17 darcies

dx —» x% finer
d90 ~ 0.227 mm
d50 ~ 0.096 mm
d10 ~ 0.0027 mm

Approved

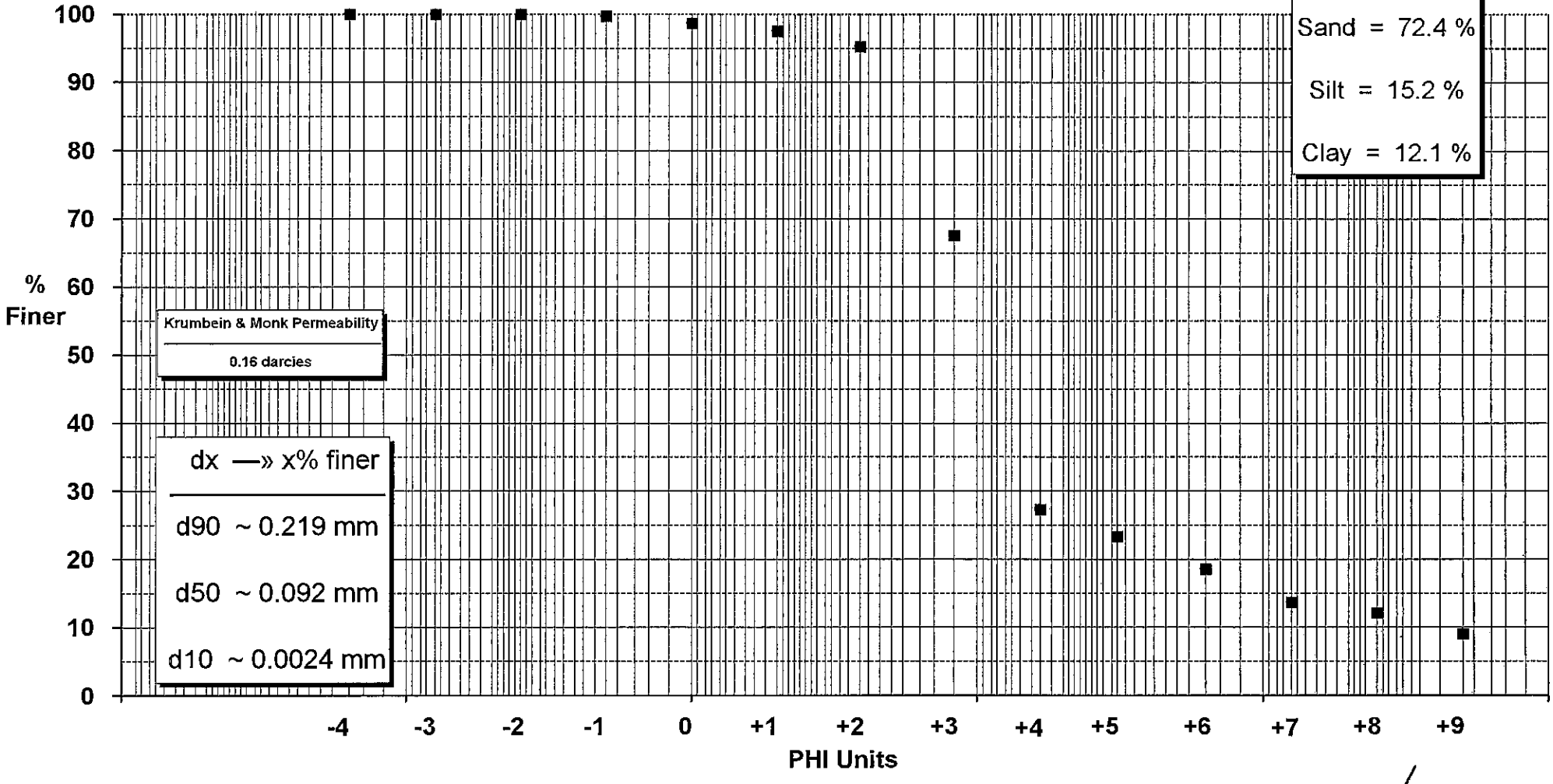
Maxxam Analytics

Maxxam ID: FH6928-01

10SED-14 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
62.1 %	73.9 %

Wentworth	
Gravel	0.3 %
Sand	72.4 %
Silt	15.2 %
Clay	12.1 %



Approved

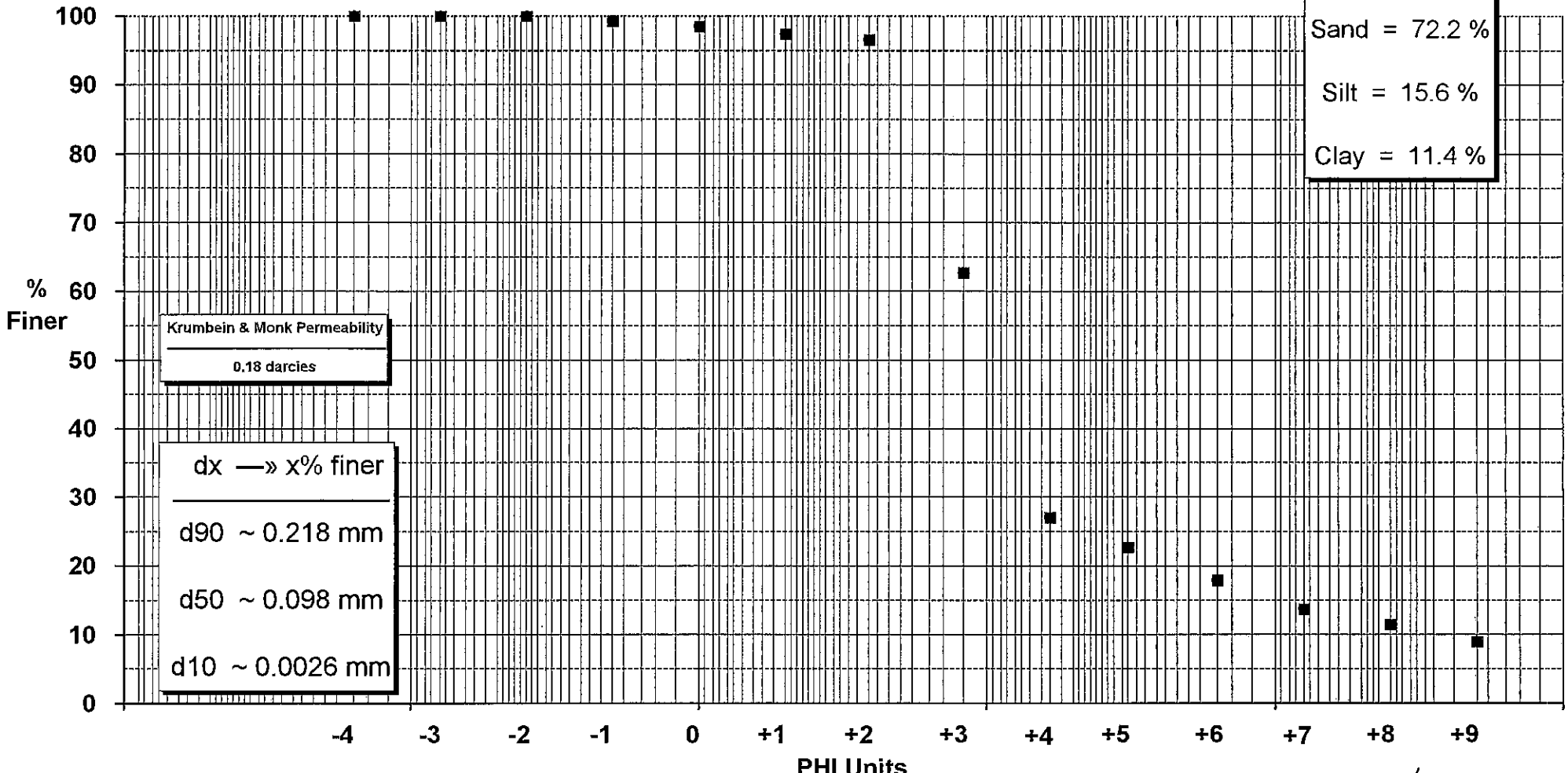
Maxxam Analytics

Maxxam ID: FH6929-01

10SED-15 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
63.6 %	74.3 %

Wentworth
Gravel = 0.7 %
Sand = 72.2 %
Silt = 15.6 %
Clay = 11.4 %



Krumbein & Monk Permeability
0.18 darcies

dx —» x% finer
d90 ~ 0.218 mm
d50 ~ 0.098 mm
d10 ~ 0.0026 mm

Approved

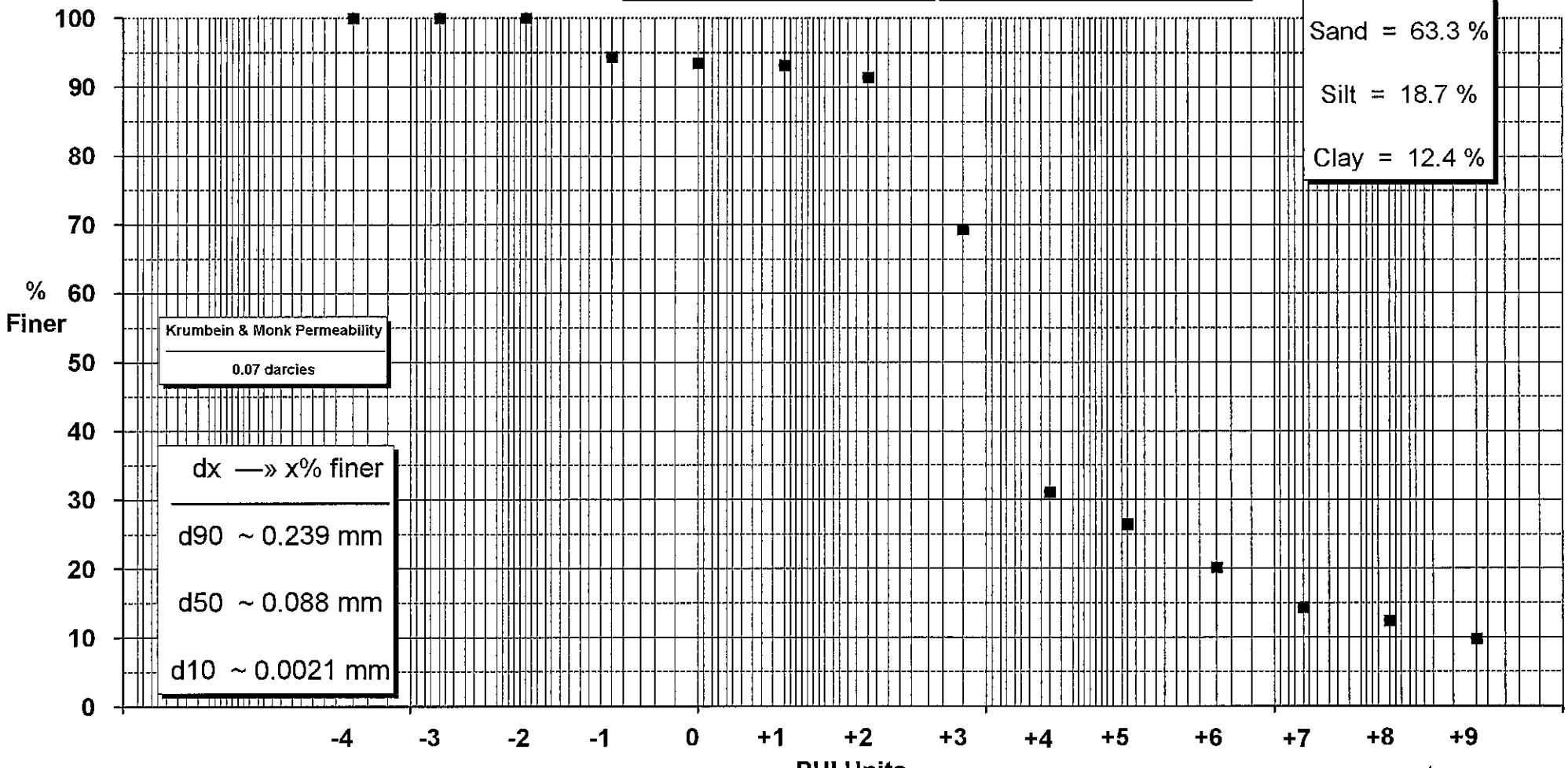
Maxxam Analytics

Maxxam ID: FH6930-01

10SED-16 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
58.8 %	70.4 %

Wentworth	
Gravel	5.6 %
Sand	63.3 %
Silt	18.7 %
Clay	12.4 %



Krumbein & Monk Permeability
0.07 darcies

dx —» x% finer	
d90	~ 0.239 mm
d50	~ 0.088 mm
d10	~ 0.0021 mm

Approved

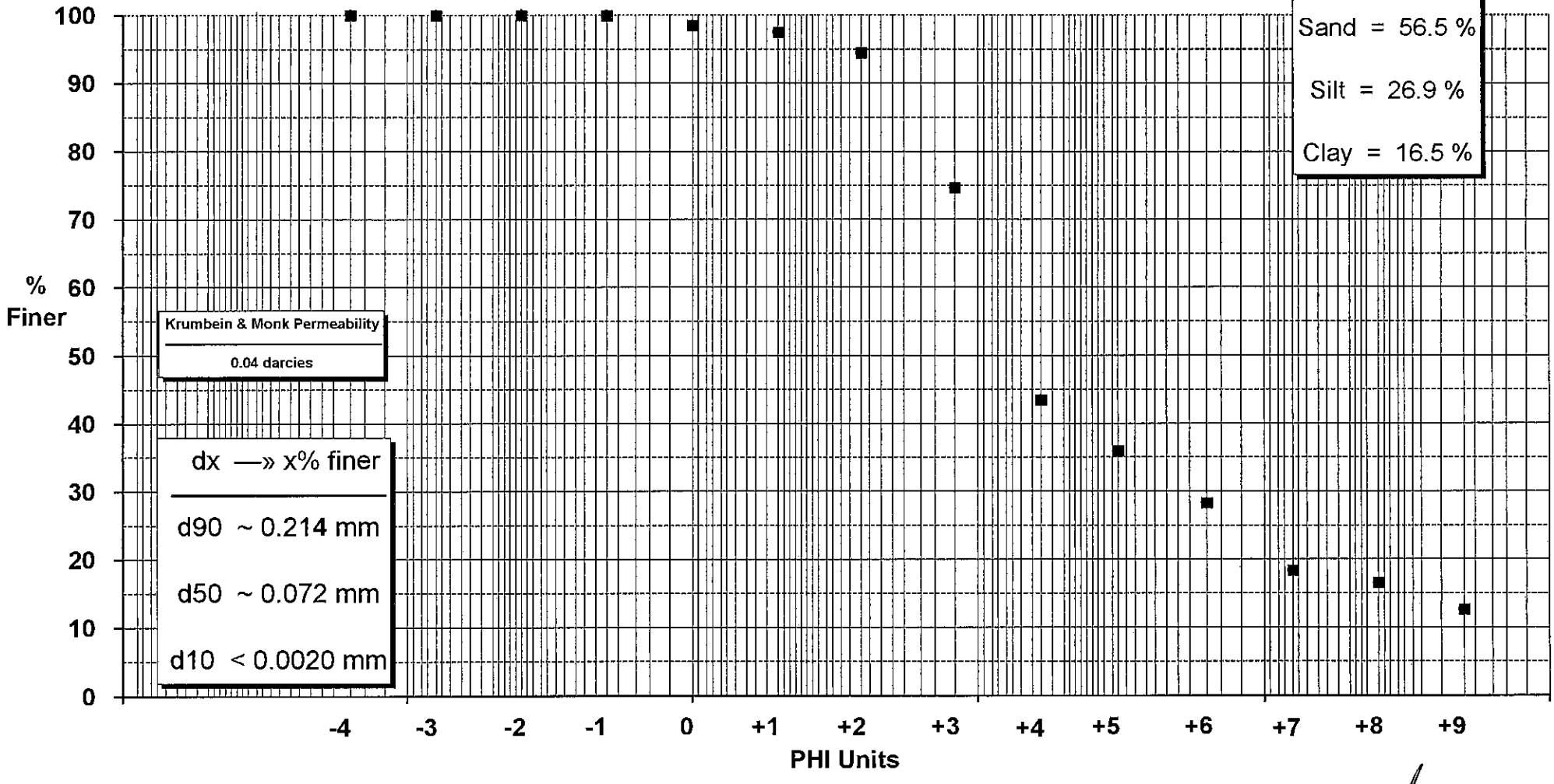
Maxxam Analytics

Maxxam ID: FH6931-01

10SED-17 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
48.3 %	59.0 %

Wentworth
Gravel = 0.0 %
Sand = 56.5 %
Silt = 26.9 %
Clay = 16.5 %



Krumbein & Monk Permeability
0.04 darcies

dx —» x% finer
d90 ~ 0.214 mm
d50 ~ 0.072 mm
d10 < 0.0020 mm

Approved

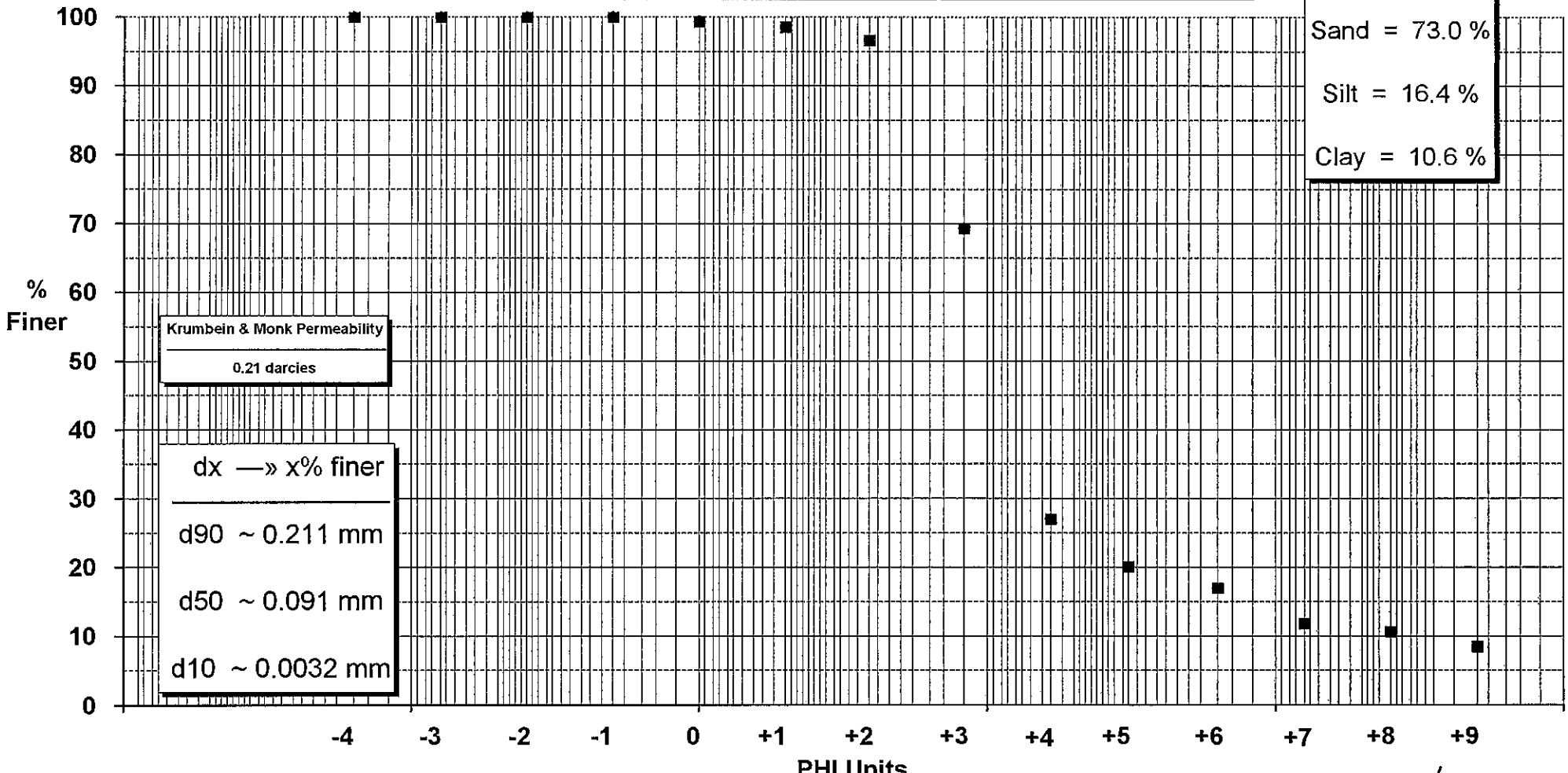
Maxxam Analytics

Maxxam ID: FH6932-01

10SED-18 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
61.9 %	75.2 %

Wentworth	
Gravel	0.0 %
Sand	73.0 %
Silt	16.4 %
Clay	10.6 %



Krumbein & Monk Permeability
0.21 darcies

dx —» x% finer	
d90	~ 0.211 mm
d50	~ 0.091 mm
d10	~ 0.0032 mm

Approved

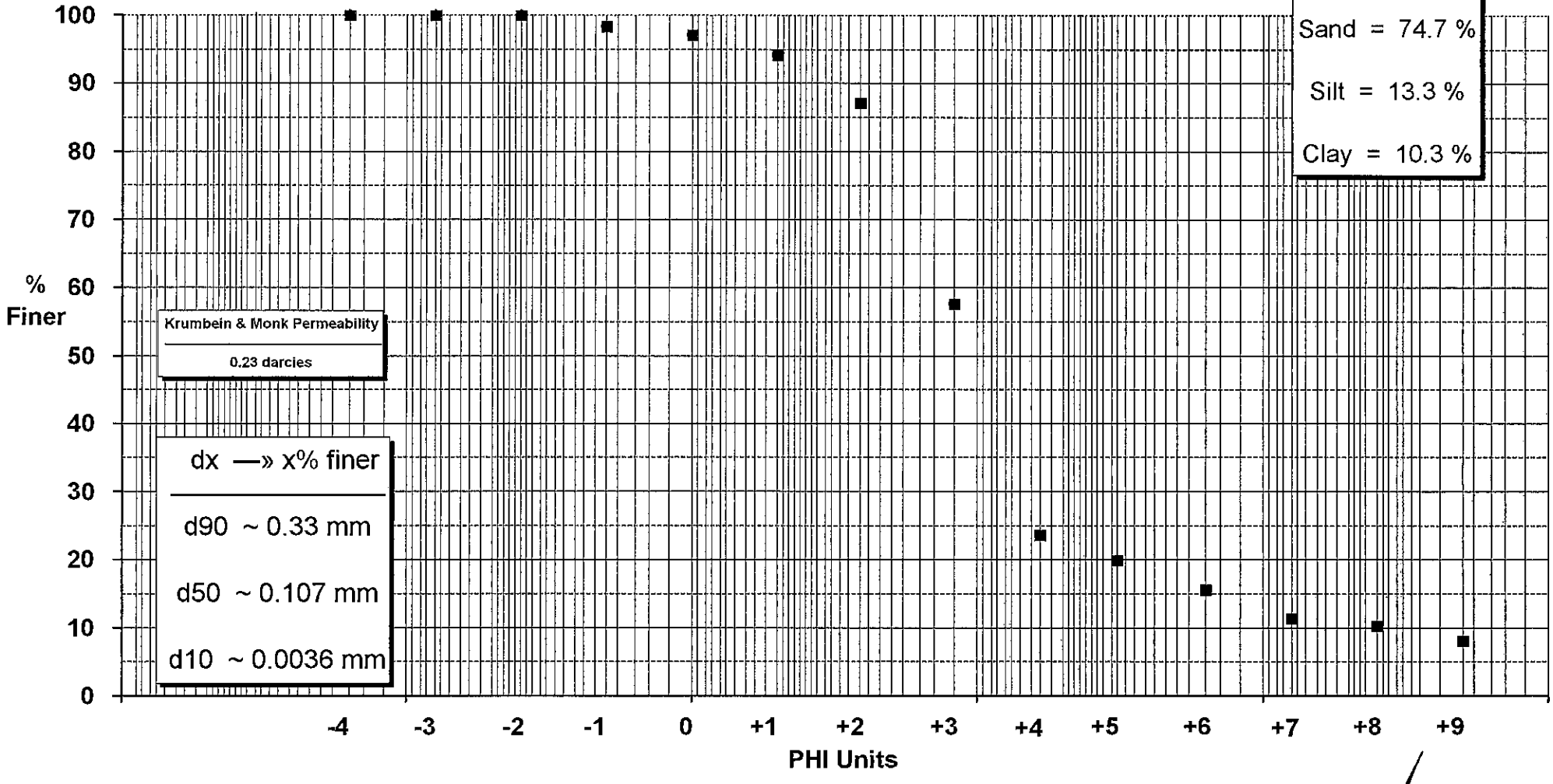
Maxxam Analytics

Maxxam ID: FH6933-01

10SED-19 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
67.5 %	77.6 %

Wentworth	
Gravel	1.7 %
Sand	74.7 %
Silt	13.3 %
Clay	10.3 %



Krumbein & Monk Permeability
0.23 darcies

dx —» x% finer
d90 ~ 0.33 mm
d50 ~ 0.107 mm
d10 ~ 0.0036 mm

Approved

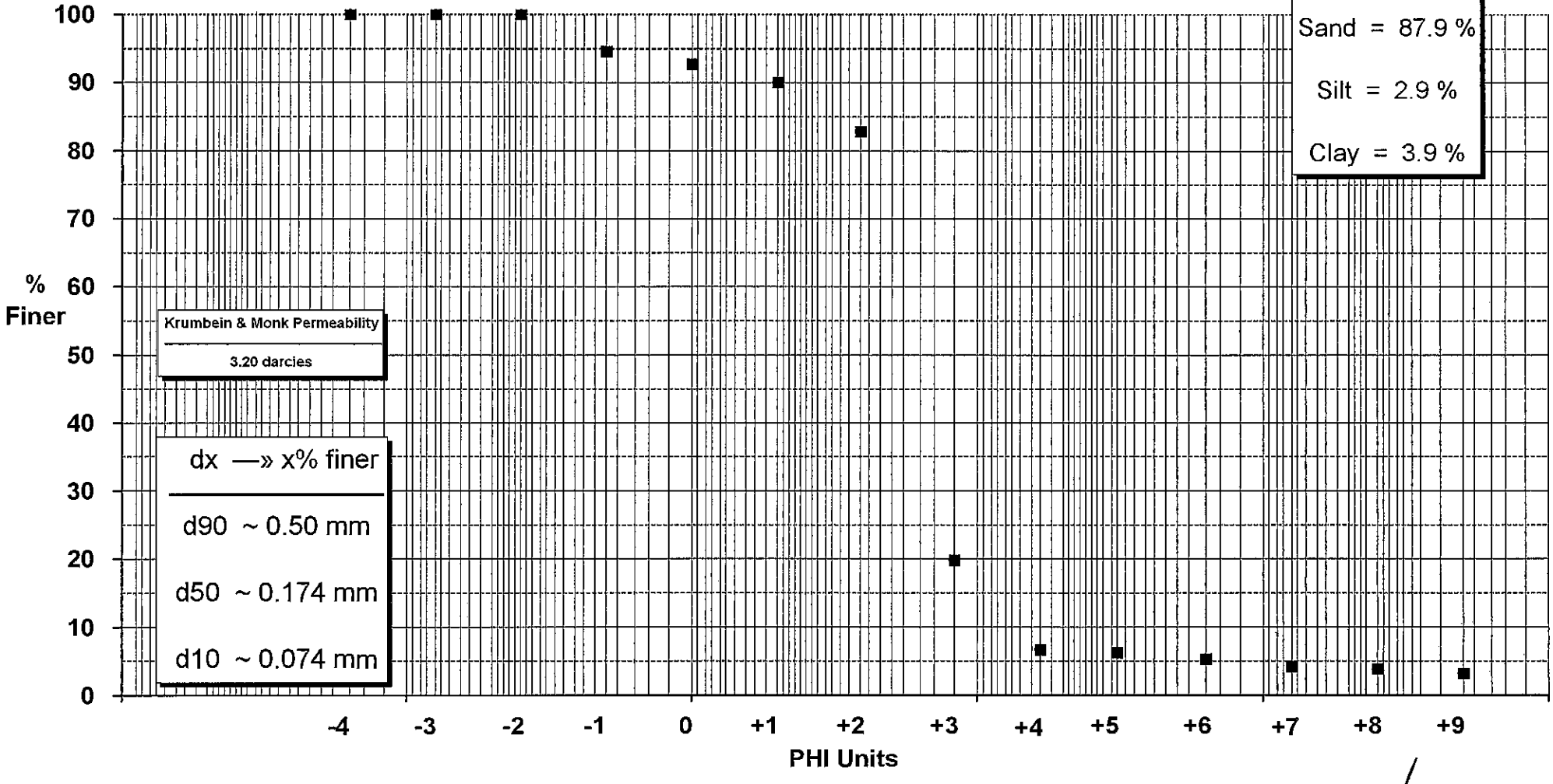
Maxxam Analytics

Maxxam ID: FH6934-01

10SED-20 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
89.8 %	93.4 %

Wentworth
Gravel = 5.4 %
Sand = 87.9 %
Silt = 2.9 %
Clay = 3.9 %



Krumbein & Monk Permeability
3.20 darcies

dx —» x% finer
d90 ~ 0.50 mm
d50 ~ 0.174 mm
d10 ~ 0.074 mm

Approved

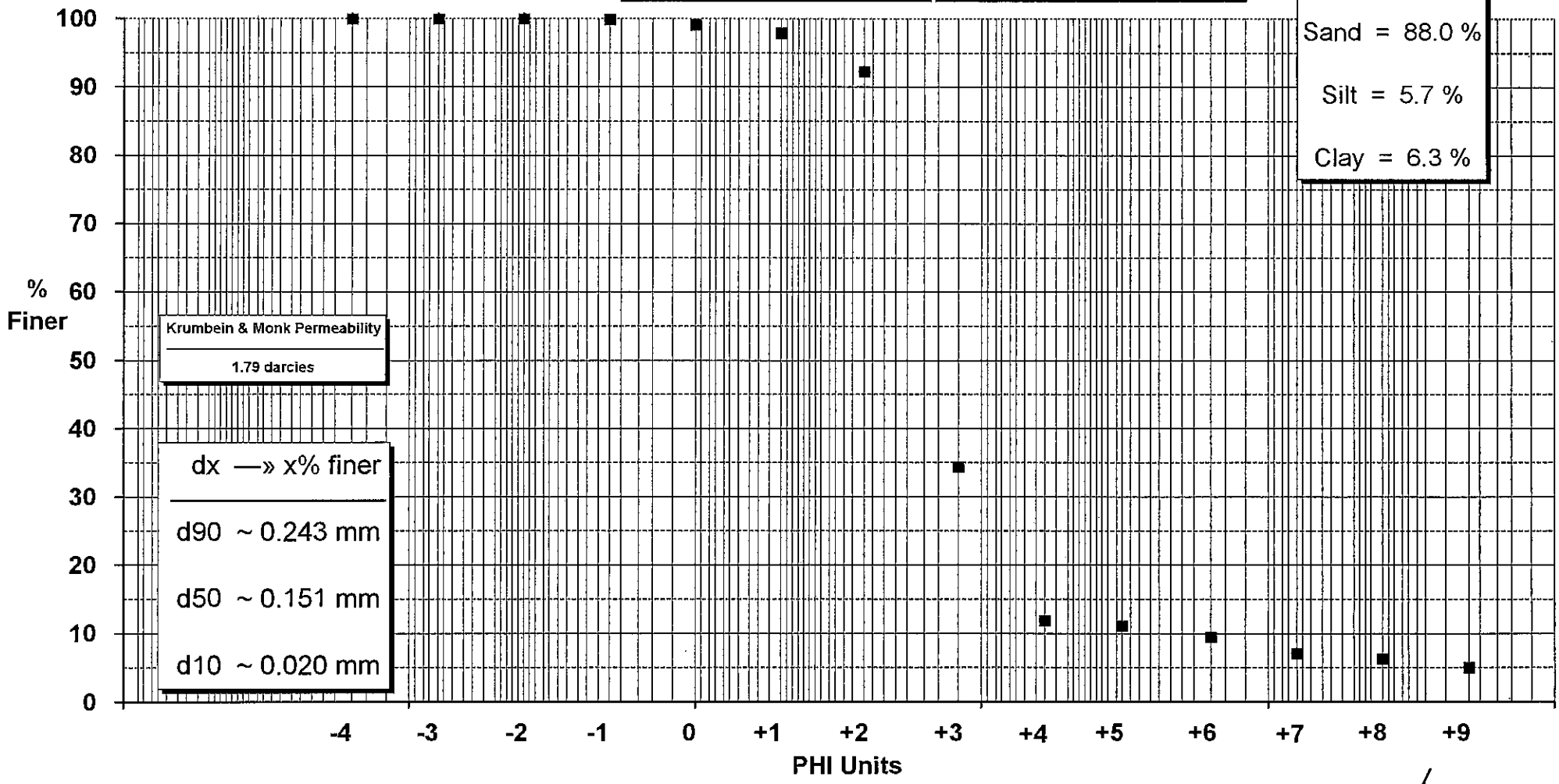
Maxxam Analytics

Maxxam ID: FH6935-01

10SED-21 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
82.2 %	88.4 %

Wentworth
Gravel = 0.1 %
Sand = 88.0 %
Silt = 5.7 %
Clay = 6.3 %



Krumbein & Monk Permeability
1.79 darcies

dx —» x% finer
d90 ~ 0.243 mm
d50 ~ 0.151 mm
d10 ~ 0.020 mm

Approved

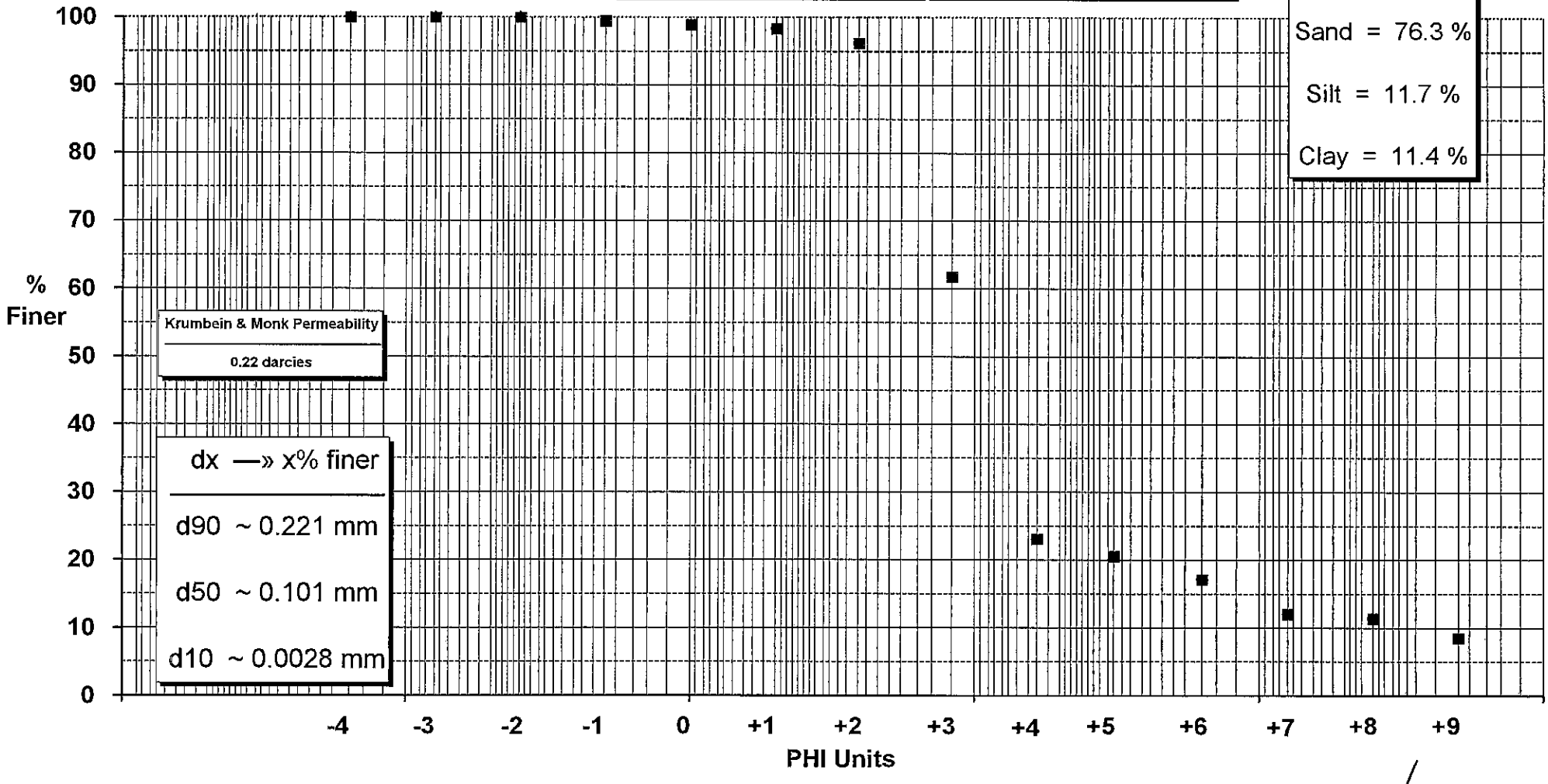
Maxxam Analytics

Maxxam ID: FH6936-01

10SED-22 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
66.7 %	77.7 %

Wentworth
Gravel = 0.6 %
Sand = 76.3 %
Silt = 11.7 %
Clay = 11.4 %



Krumbein & Monk Permeability
0.22 darcies

dx —» x% finer
d90 ~ 0.221 mm
d50 ~ 0.101 mm
d10 ~ 0.0028 mm

Approved

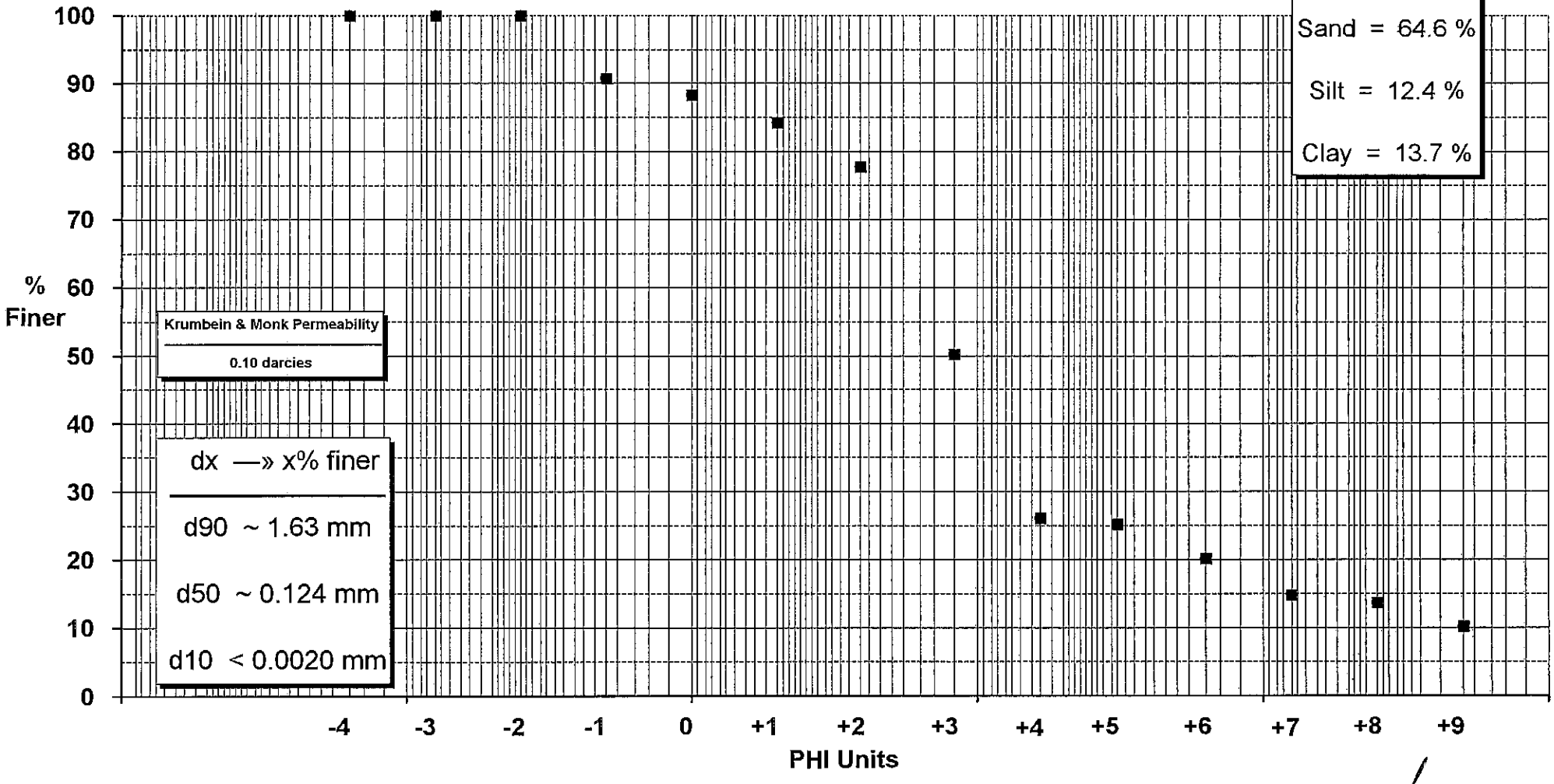
Maxxam Analytics

Maxxam ID: FH6937-01

10SED-23 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
67.6 %	74.2 %

Wentworth	
Gravel	9.3 %
Sand	64.6 %
Silt	12.4 %
Clay	13.7 %



Krumbein & Monk Permeability
0.10 darcies

dx —» x% finer
d90 ~ 1.63 mm
d50 ~ 0.124 mm
d10 < 0.0020 mm

Approved

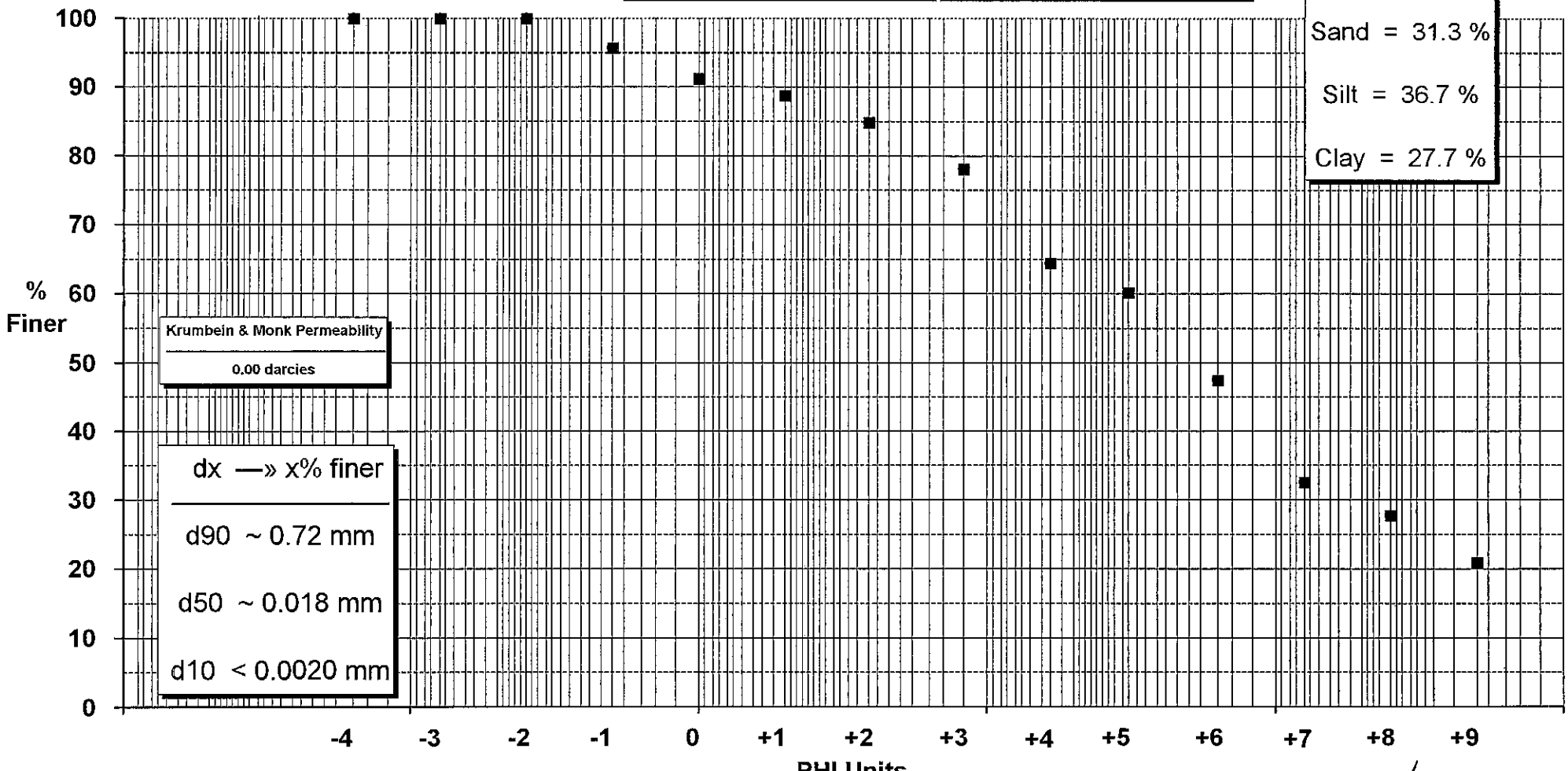
Maxxam Analytics

Maxxam ID: FH6938-01

10SED-24 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
32.0 %	37.0 %

Wentworth	
Gravel	4.3 %
Sand	31.3 %
Silt	36.7 %
Clay	27.7 %



Krumbein & Monk Permeability
0.00 darcies

dx —» x% finer
d90 ~ 0.72 mm
d50 ~ 0.018 mm
d10 < 0.0020 mm

Approved

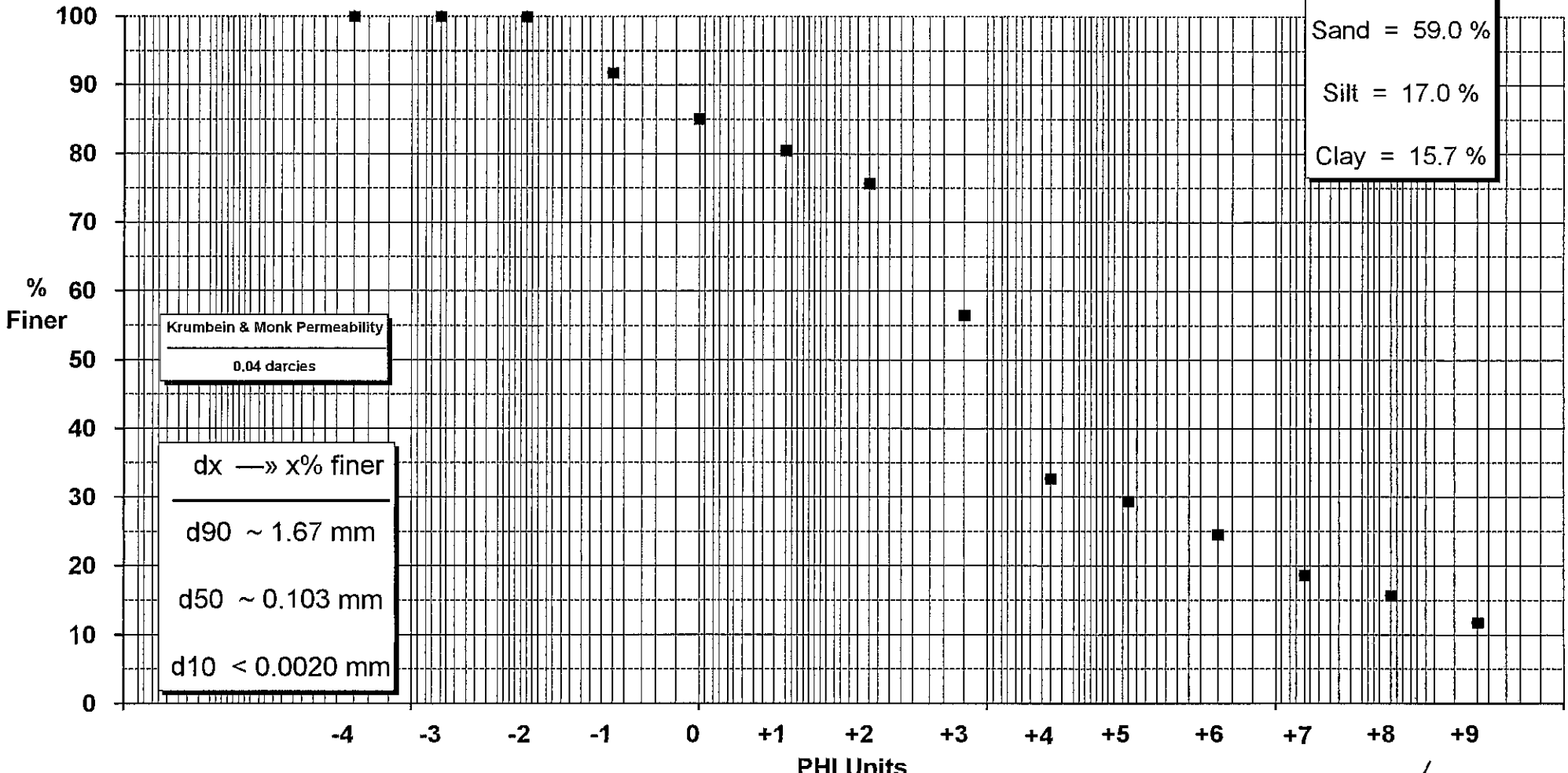
Maxxam Analytics

Maxxam ID: FH6939-01

10SED-25 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
61.0 %	68.3 %

Wentworth	
Gravel	8.2 %
Sand	59.0 %
Silt	17.0 %
Clay	15.7 %



Krumbein & Monk Permeability
0.04 darcies

dx —» x% finer
d90 ~ 1.67 mm
d50 ~ 0.103 mm
d10 < 0.0020 mm

Approved

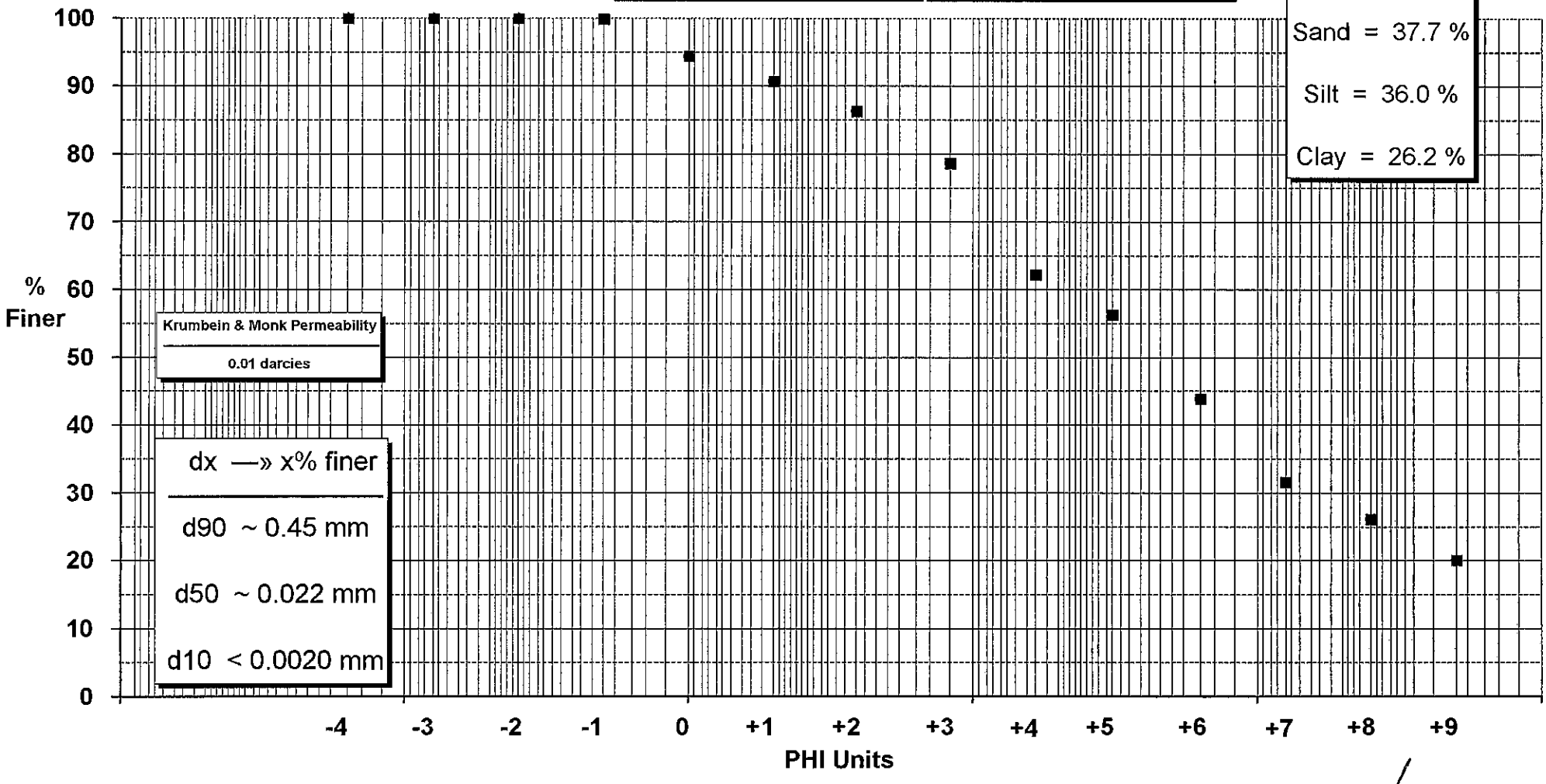
Maxxam Analytics

Maxxam ID: FH6940-01

10SED-26 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
33.5 %	39.7 %

Wentworth
Gravel = 0.1 %
Sand = 37.7 %
Silt = 36.0 %
Clay = 26.2 %



Krumbein & Monk Permeability
0.01 darcies

dx —» x% finer
d90 ~ 0.45 mm
d50 ~ 0.022 mm
d10 < 0.0020 mm

Approved

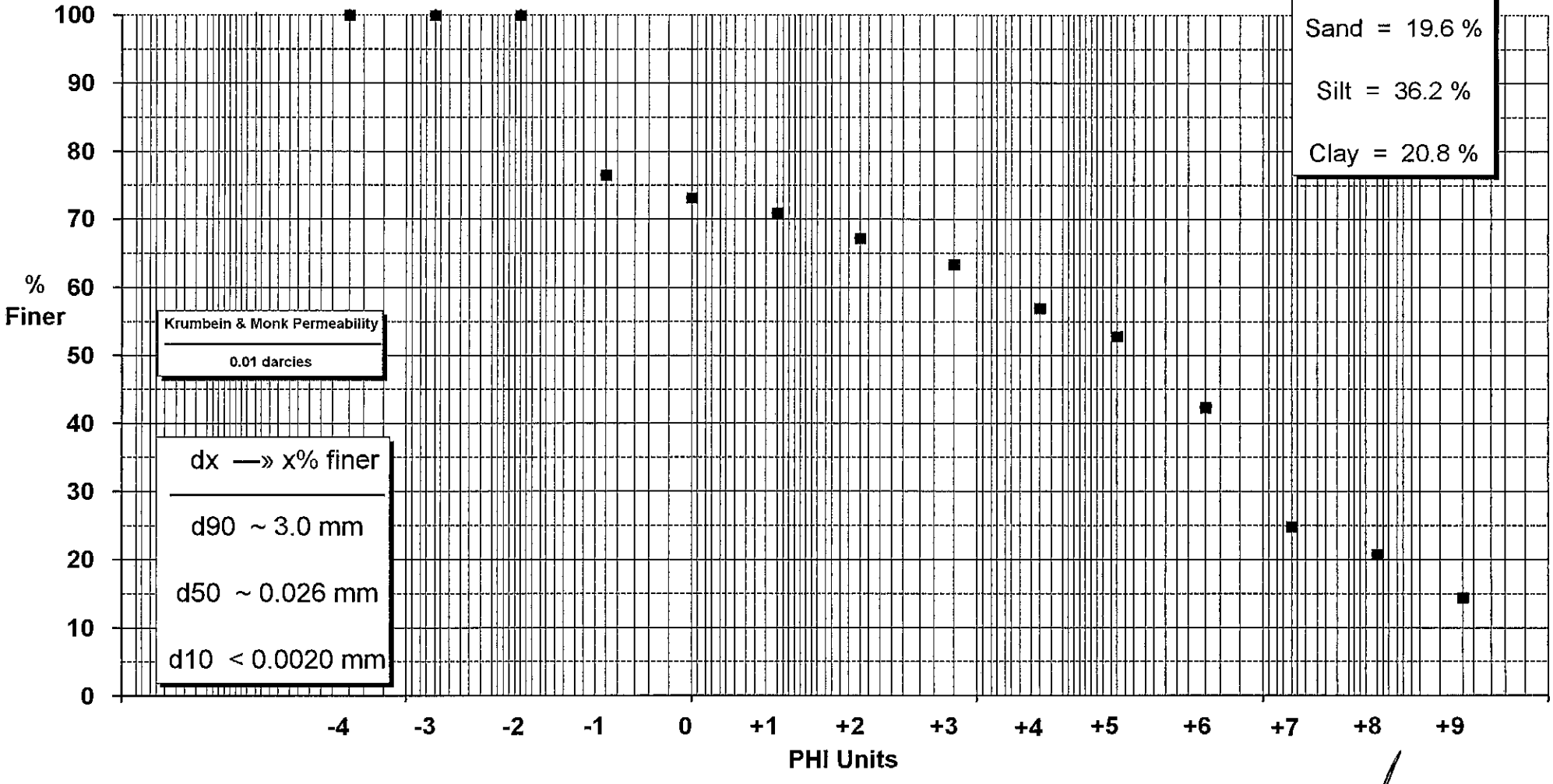
Maxxam Analytics

Maxxam ID: FH6941-01

QA/QC-1 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
41.4 %	44.4 %

Wentworth	
Gravel	23.5 %
Sand	19.6 %
Silt	36.2 %
Clay	20.8 %



Approved

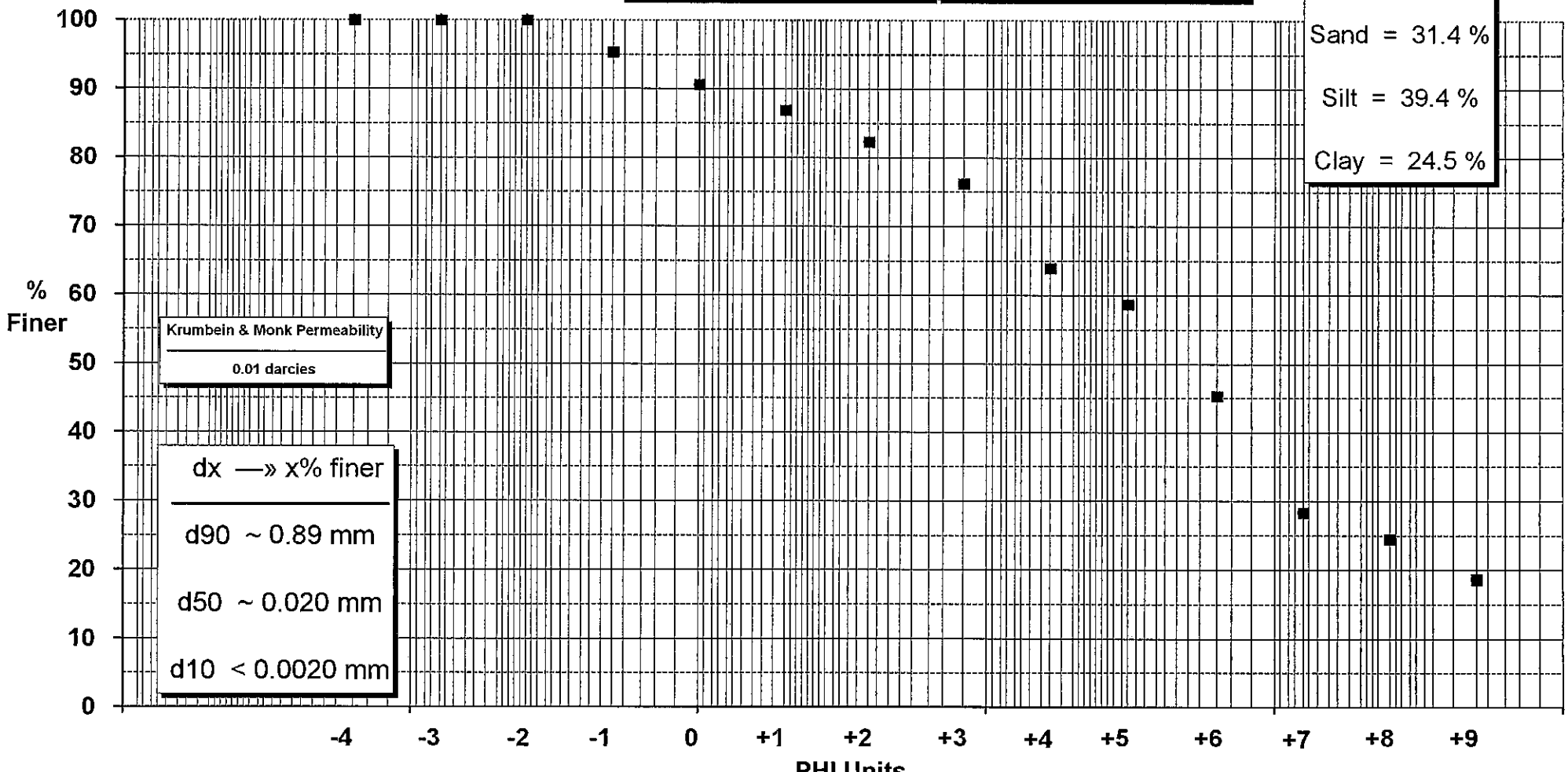
Maxxam Analytics

Maxxam ID: FH6942-01

QA/QC-2 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
32.9 %	37.8 %

Wentworth	
Gravel	4.6 %
Sand	31.4 %
Silt	39.4 %
Clay	24.5 %



Approved

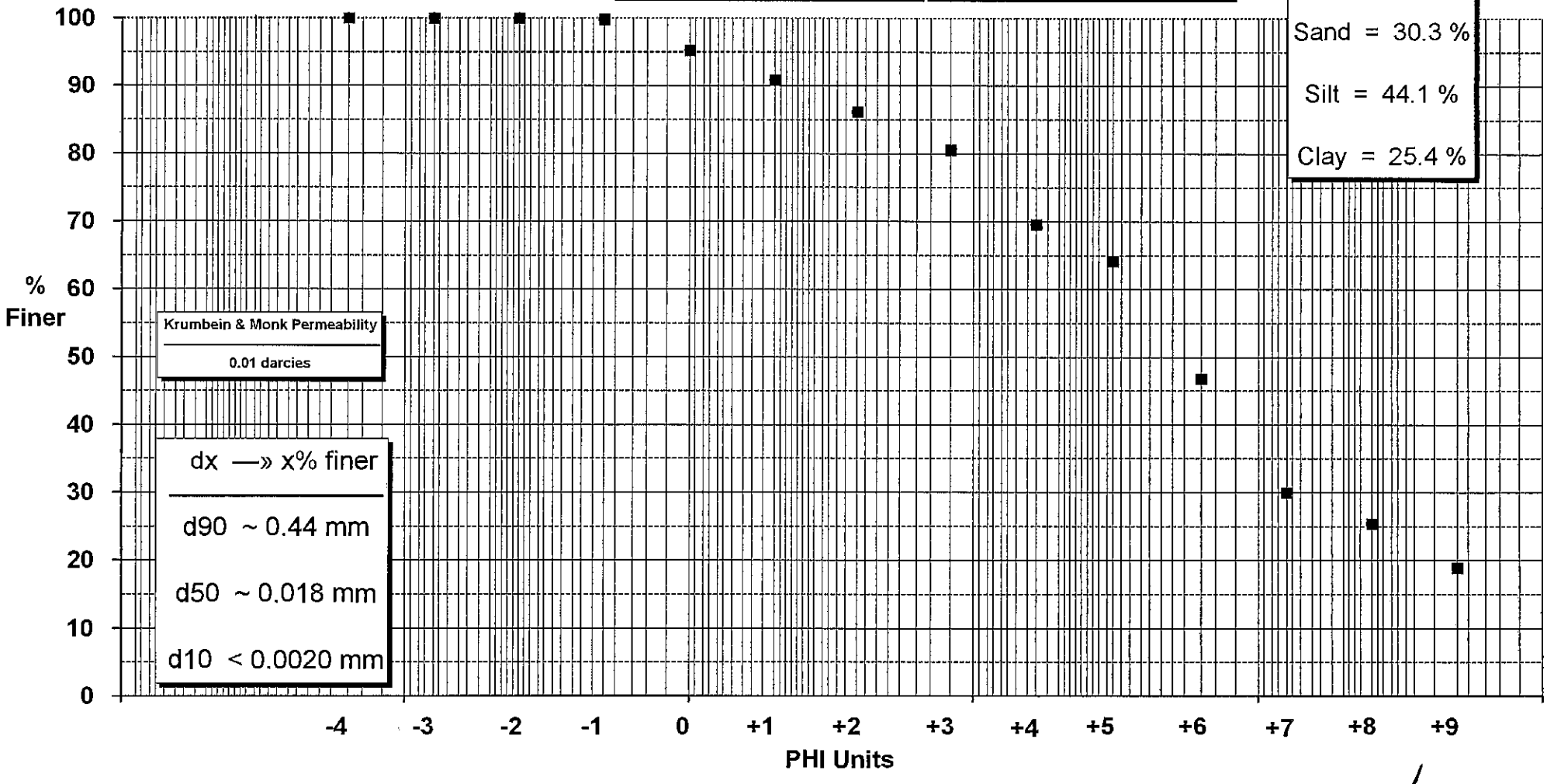
Maxxam Analytics

Maxxam ID: FH6942-01:D1

QA/QC-2 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
27.6 %	32.2 %

Wentworth	
Gravel	0.2 %
Sand	30.3 %
Silt	44.1 %
Clay	25.4 %



Approved

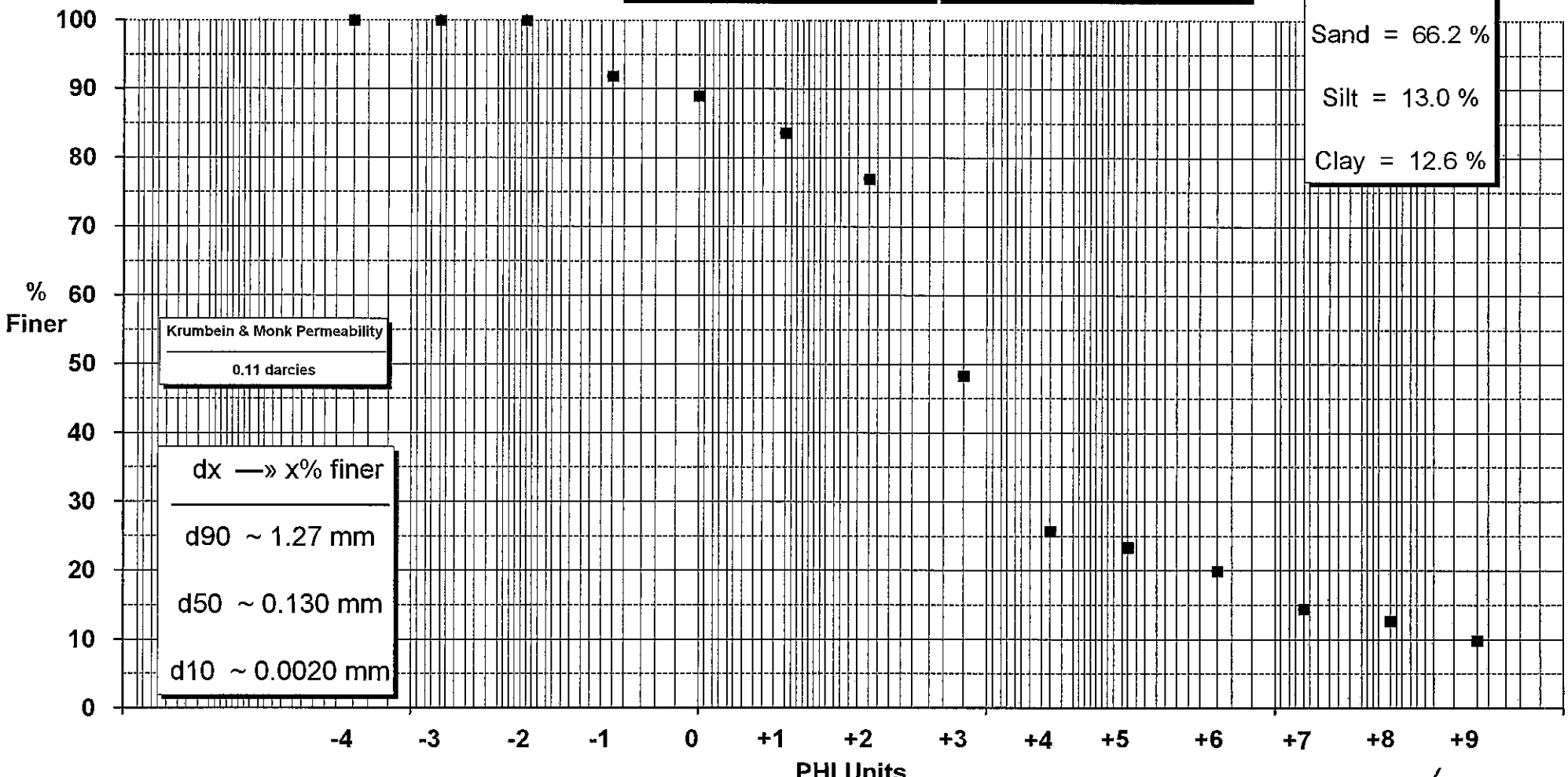
Maxxam Analytics

Maxxam ID: FH6943-01

QA/QC-3 (0-15CM)

Percent Coarser than 75 µm (PHI = 3.737)	Percent Coarser than 50 µm (PHI = 4.322)
68.4 %	75.1 %

Wentworth	
Gravel	8.2 %
Sand	66.2 %
Silt	13.0 %
Clay	12.6 %



Krumbein & Monk Permeability
0.11 darcies

dx —» x% finer
d90 ~ 1.27 mm
d50 ~ 0.130 mm
d10 ~ 0.0020 mm

Approved